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NMED Hazardous Waste Bureau

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

Subject: Final Audit Report for the Argonne National Laboratory Central Characterization Program Recertification Audit A-13-24

Dear Mr. Kieling:

This letter transmits the Final Audit Report for the Carlsbad Field Office (CBFO) Audit A-13-24 of the Argonne National Laboratory Central Characterization Program performing characterization and certification activities as required by Part 2, Section 2.3.2.3 of the Waste Isolation Pilot Plant (WIPP) Hazardous Waste Facility Permit. The audit was conducted August 27 – 29, 2013. The report contains the results of audit activities performed for recertification of remote-handled Summary Category Group S5000 debris waste.

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

If you have any questions, please contact the CBFO Acting Quality Assurance Director, Oba Vincent, at (575) 234-7525.

Sincerely,

Jose R. Franco, Manager
Carlsbad Field Office

Enclosure

CBFO:OQA:MN:CC:13-2083:UFC 2300.00

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cc: w/Report Narrative

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WIPP Operating Record	
CBFO QA File	
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*ED denotes electronic distribution

U.S. Department of Energy
Carlsbad Field Office

CONTENT MAP

Final Audit Report of Argonne National Laboratory/ Central Characterization Project

Audit Number A-13-24
August 27-29, 2013

CONTENT MAP

This box contains the Final Audit Report of CBFO Audit A-13-24 of The Argonne National Laboratory Central Characterization Project (ANL/CCP) conducted August 27 - 29, 2013. The box also contains a list of objective evidence used to conduct the audit. The documents have been organized into color-coded folders, one each for the ANL/CCP Procedures (Purple Folder), Final Audit Report (manila folder), the C-6 Checklist (brown folder), CDA Documentation (Teal folder), Waste Analysis Plan (WAP) (green folder), Acceptable Knowledge (dark blue folder), and Visual Examination (yellow folder). The list below identifies each document by name and number and indicates where each may be found.

CONTENT MAP	**Black Folder**
Final Audit Report	**Manila Folder**
Final Audit Report	
Attachment 1:	Personnel Contacted During Audit A-13-24
Attachment 2:	Personnel Contacted During Audit A-13-24 by Area
Attachment 3:	CDA Supporting Documentation
Attachment 4:	Objective Evidence Reviewed During the Audit
Attachment 5:	Listing of Audited Procedures
Attachment 6:	Implementing Procedure Change Matrix
Attachment 7:	WAP related Processes and Equipment Evaluated During Audit A-13-24

C6 Checklist	**Brown Folder**
C6-1	Table C6-1 Waste Analysis Plan (WAP) Checklist
C6-2	Table C6-3 Acceptable Knowledge (AK) Checklist
C6-4	Table C6-6 Visual Examination (VE) Checklist

ANL/CCP Implementing Procedures Audited	**Purple Folder**
See Final Report Attachment 4 for List of Audited ANL/CCP Procedures	
Attachment 3:	Corrected During Audit (CDA) Documentation
CDA1	Corrected During Audit #1
CDA2	Corrected During Audit #2

Attachment 4 - Objective Evidence	
General Information (Checklist C6-1)	**Green Folder**
GEN1	Batch Data Reports -ANLRHVE12019, ANLRHVE13001, and ANLRHVE13007
GEN2	CP:08:00374 – Transmittal of Waste Stream Profile Form, Attachment 2, for Remote Handled Waste Stream AERHDM at the Argonne National Laboratory
GEN3	CP:13:01016 – Fourth Quarter 2012 Visual Examination Quarterly Repeat of Data Generation Level Review at the Argonne National

	Laboratory – Remote Handled – January 10, 2013
	CP:13:01087 – Results of Visual Examination Quarterly Repeat of Data Generation Level Review: Argonne National Laboratory – Remote Handled Fourth Calendar Quarter 2012 – February 19, 2013
	CP:13:01128 – First Quarter 2013 Visual Examination Quarterly Repeat of Data Generation Level Review at the Argonne National Laboratory – Remote Handled – April 9, 2013
	CP:13:01373 – Results of Visual Examination Quarterly Repeat Data Generation Level Data Review: Argonne National Laboratory Remote Handled First Calendar Quarter 2013 – August 13, 2013
	CP:13:01287 – Second Quarter 2013 Visual Examination Quarterly Repeat of Data Generation Level Review at the Argonne National Laboratory – Remote Handled – July 9, 2013
	CP:13:01374 – Results of Visual Examination Quarterly Repeat Data Generation Level Data Review: Argonne National Laboratory – Remote Handled Second Calendar Quarter 2013 – August 13, 2013
GEN4	NCRs: NCR-RHANL-0509-13-R1, NCR-RHANL-1521-12-R0, NCR-RHANL-1522-12-R0, and NCR-RHANL-1523-12-R0
GEN5	RH Nonconformance Report Log for Project Level and Data Generation Level since last recertification audit
GEN6	RH Package for Container AE0130 including three canisters: 1121, 1122, and 1123; Container AE0150 including three canisters: 1148, 1150, and 1153; and Container AE0157 including three canisters: 1089, 1168, and 1169
GEN7	RH Records Inventory and Distribution Schedule (RIDS) dated 7/23/2013
GEN8	RH Program – ANLE List of Qualified Individuals dated 07/25/2013
GEN9	Qualification records for selected CCP personnel
GEN10	Acceptable Knowledge Expert (AKE) and Site Project Manager (SPM) Training files
GEN11	Hazardous Waste Manifest 010995097
Acceptable Knowledge (AK) (Checklist C6-3)	**Blue Folder**
AK1	CCP AK Summary Report for ANL RH Debris Waste, waste stream AERHDM, CCP-AK-ANLE-500 R11
AK2	Waste Stream Profile Form and attachments for waste stream AERHDM
AK3	QMIS Approval for AK Summary for waste stream AERHDM R11
AK4	AK Source Document Summaries for waste stream AERHDM
AK5	AK Documentation Checklist, Attachment 1, for waste stream AERHDM
AK6	Acceptable Knowledge Information List for waste stream AERHDM
AK7	K Att. 5, Hazardous Constituents, for waste stream AERHDM
AK8	AK Att. 6, Waste Form, Waste Material Parameters, Prohibited Items and Packaging for waste stream AERHDM
AK9	AK attachment 8 container list
AK10	AK Discrepancy Resolutions
AK11	IDC Database screenshots
AK12	AK Tracking Spreadsheet
AK13	Container Input Forms
AK14	Internal Surveillance

AK15	AK Accuracy Report
AK16	Batch Data Report - ANLRHVE12011
AK17	Batch Data Report – ANLRHVE13004
AK18	Batch Data Report – ANLRHVE13007
AK19	Batch Data Report – ANLRHVE13002
AK20	Batch Data Report – ANLRHVE11010
AK21	Batch Data Report - ANLRHVE11017
AK22	Waste Stream Characterization Checklists
Visual Examination (Checklist C6-6)	**Yellow Folder**
VE1 VE2	Batch Data Reports - ANLRHVE12011, ANLRHVE12015, ANLRHVE12016, ANLRHVE12017, ANLRHVE12018, ANLRHVE12019, ANLRHVE13001, ANLRHVE13002, ANLRHVE13003, ANLRHVE13004, ANLRHVE13005, ANLRHVE13006, ANLRHVE13007, RHANLVE100015 Training Records for 5 VE operators
VE3	Training Records & VEE appointment letters for 2 VEE operators

U.S. DEPARTMENT OF ENERGY
CARLSBAD FIELD OFFICE

FINAL AUDIT REPORT

OF THE

ARGONNE NATIONAL LABORATORY
CENTRAL CHARACTERIZATION PROGRAM

LEMONT, ILLINOIS,
AND CARLSBAD, NEW MEXICO

AUDIT NUMBER A-13-24

August 27 – 29, 2013

CHARACTERIZATION AND CERTIFICATION ACTIVITIES
FOR REMOTE-HANDLED TRANSURANIC WASTE

Prepared by: _____ Date: 24 OCT 2013
Greg Knox, CTAC
Audit Team Leader

Approved by: _____ Date: 24OCT13
Oba Vincent, CBFO
Acting Quality Assurance Director

1.0 EXECUTIVE SUMMARY

Carlsbad Field Office (CBFO) Recertification Audit A-13-24 was conducted to evaluate the continued adequacy, implementation, and effectiveness of established programs for transuranic (TRU) waste characterization activities performed for the Argonne National Laboratory (ANL) by the Nuclear Waste Partnership LLC (NWP) Central Characterization Program (CCP). Characterization and certification activities for remote-handled (RH) Summary Category Group (SCG) S5000 debris waste were reviewed and evaluated for compliance to the applicable program requirements. The activities were performed consistent with the requirements described in the Waste Isolation Pilot Plant (WIPP) Hazardous Waste Facility Permit (HWFP), the *Remote-Handled TRU Waste Characterization Program Implementation Plan* (WCPIP), the *CBFO Quality Assurance Program Document* (QAPD), and the *Transuranic Waste Acceptance Criteria for the Waste Isolation Pilot Plant* (WAC).

The audit was conducted simultaneously at the ANL facilities in Lemont, Illinois, and the Skeen-Whitlock Building in Carlsbad, New Mexico, August 27–29, 2013. Overall, the audit team concluded that the ANL/CCP technical and quality assurance (QA) programs evaluated were adequately established for compliance with applicable upper-tier requirements, effectively implemented, and effective.

The Headspace Gas (HSG) Sampling element was removed from the WIPP HWFP on March 13, 2013. The last ANL/CCP HSG sampling activities were performed in May 2012 and were evaluated during CBFO Recertification Audit A-12-16. No additional samplings have been performed since the previous audit. With no relevant documentation to review, HSG Sampling was not evaluated during Audit A-13-24.

The audit team identified three concerns, two of which were corrected during the audit (CDA). One concern dealt with the departure from a requirement for the validation of a nonconforming condition by a CCP QA Engineer (CDA-1, see section 6.2). A second concern dealt with a failure to submit removable lid canister (RLC) radiological surveys and loading documentation to National TRU Program Certification (NTPC) Records (CDA-2, see section 6.2). The remaining concern was in the area of Acceptable Knowledge (AK) and a proposed improvement was offered as a Recommendation to ANL/CCP management (see section 6.4). These issues are also discussed in the associated sections of this report.

2.0 SCOPE AND PURPOSE

2.1 Scope

The audit team evaluated the following ANL/CCP programs and processes for RH TRU waste characterization and certification activities for RH SCG S5000 debris waste, as required by Attachment C6, Section C6-3 of the HWFP Waste Analysis Plan (WAP) dated March 13, 2013:

General Activities

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

Quality Assurance Activities

The following WAP-related QA elements were evaluated only to the extent needed to support the technical elements listed below:

- Control of Nonconforming Items
- Personnel Qualification and Training
- Records

Technical Activities

The following WAP-related waste characterization technical elements were audited for RH SCG S5000 debris waste:

- Project Level Data Validation and Verification (PL V&V)
- Acceptable Knowledge (AK)
- Visual Examination (VE)
- WIPP Waste Information System/Waste Data System (WWIS/WDS)

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

- Waste Isolation Pilot Plant Hazardous Waste Facility Permit, NM4890139088-TSDF, New Mexico Environment Department
- *CBFO Quality Assurance Program Document*, DOE/CBFO-94-1012
- *Remote-Handled TRU Waste Characterization Program Implementation Plan*, DOE/WIPP-02-3214
- *Transuranic Waste Acceptance Criteria for the Waste Isolation Pilot Plant*, DOE/WIPP-02-3122
- *CCP Transuranic Waste Characterization Quality Assurance Project Plan*, CCP-PO-001
- *CCP Transuranic Waste Certification Plan*, CCP-PO-002

- *CCP/ANL RH-TRU Waste Interface Document,* CCP-PO-500
- Related technical and QA implementing procedures

2.2 Purpose

Audit A-13-24 was conducted to assess sustained compliance with requirements applicable to waste characterization and certification activities for RH SCG S5000 debris waste and to determine if these activities are adequately established for compliance with upper-tier requirements, satisfactory in the implementation of those requirements, and effective in achieving the desired results.

3.0 AUDIT TEAM, MANAGEMENT REPRESENTATIVES, AND OBSERVERS

Martin Navarrete	Management Representative, CBFO Office of Quality Assurance
Dennis Miehls	Quality Assurance Representative, CBFO
Greg Knox	Audit Team Leader (ATL), CBFO Technical Assistance Contractor (CTAC)
Katie Martin	Auditor, CTAC
Porf Martinez	Auditor, CTAC
Prissy Martinez	Auditor, CTAC
Cindi Castillo	Auditor, CTAC
Dick Blauvelt	Technical Specialist, CTAC
Rhett Bradford	Technical Specialist, CTAC
Paul Gomez	Technical Specialist, CTAC
Jim Oliver	Technical Specialist, CTAC
B.J. Verret	Technical Specialist, CTAC
Joe Willis	Technical Specialist, NWP

OBSERVERS

Oba Vincent	CBFO Office of Quality Assurance, Acting Director
Courtland Fesmire	CBFO Office of the National TRU Program (NTP)
Trais Kliphuis	New Mexico Environment Department (NMED)
Connie Walker	NMED
Lindsey Bender	Environmental Protection Agency (EPA)
Patrick Kelly	EPA
Kira Darlow	EPA

4.0 AUDIT PARTICIPANTS

The ANL/CCP individuals involved in the audit process are identified in Attachment 1. Attachment 2 identifies the personnel contacted during the audit by area. A pre-audit

meeting was held at ANL in Lemont, IL, and the Skeen-Whitlock Building in Carlsbad, NM, on August 27, 2013. Daily management briefings were held with ANL/CCP management and staff to discuss issues and potential deficiencies. The audit was concluded with a post-audit meeting held at ANL in Lemont, IL, and the Skeen-Whitlock Building in Carlsbad, NM, on August 29, 2013.

5.0 SUMMARY OF AUDIT RESULTS

5.1 Program Adequacy and Implementation

The audit team concluded that the applicable ANL/CCP TRU waste characterization and certification programs for RH SCG S5000 debris waste are adequately established for compliance with upper-tier requirements, satisfactory in the implementation of these requirements, and effective in achieving the desired results.

Audit activities, including objective evidence reviewed, are described below and in checklists and/or objective evidence reviewed forms. Attachment 3 provides the documentation supporting the CDAs identified during the audit. Attachment 4 identifies the objective evidence reviewed during the audit. Attachment 5 contains a list of documents that were assessed during the audit. Attachment 6 contains the revisions to the implementing procedures since Recertification Audit A-12-16. Attachment 7 lists the permit processes and equipment evaluated during the audit.

5.2 General Activities

5.2.1 Results of Previous Audits

There was one permit-related Corrective Action Report (CAR) generated during CBFO Recertification Audit A-12-16. CBFO CAR 12-040 dealt with HSG sampling, which was removed as a required constituent from the HWFP on March 13, 2013. Since the last ANL/CCP HSG sampling activity was performed in May 2012 and was addressed during CBFO Recertification Audit A-12-16, the HSG Sampling component was removed from the scope of this audit. Therefore, verification of sustaining corrective action for CBFO CAR 12-040 was not addressed.

5.2.2 Changes in Programs or Operations

Interviews with the ANL/CCP management team indicated that, other than the removal of HSG Sampling from the HWFP on March 13, 2013, there were no significant changes in programs or operations since CBFO Recertification Audit A-12-16.

5.2.3 New Programs or Activities Being Implemented

Interviews with the ANL/CCP management team indicated that no new programs or activities have been implemented since CBFO Recertification Audit A-12-16.

5.2.4 Changes in Key Personnel

Interviews with the ANL/CCP management team indicated there were no significant changes in key personnel since CBFO Recertification Audit A-12-16.

5.3 WAP-related Quality Assurance Activities

5.3.1 Control of Nonconforming Items

The audit team interviewed the resident QA Engineer and selected all four ANL nonconformance reports (NCRs) generated since the previous recertification audit to confirm that deficiencies are being appropriately documented and tracked through resolution, as required. The NCRs reviewed during the audit were:

NCR-RHANL-0509-13 NCR-RHANL-1521-12 NCR-RHANL-1522-12
NCR-RHANL-1523-12

The audit team confirmed at the time of the audit that there have been no NCRs which require reporting to the Permittee within the 7-day requirement. All NCRs were verified as being managed and tracked in the Integrated Data Center (IDC) and on the 2012-2013 CCP NCR Logs. Further evaluations included reviews of the RH ANL NCR Log Reconciliation Reports for 2012.

One concern was identified regarding an NCR with an incomplete signature block. NCR-RHANL-0509-13, Rev. 1, was submitted to NTPC Records with a missing signature in block 14 (CCP QA Engineer or CCP QA Designee validation). The NCR was corrected during the audit and resubmitted to NTPC Records (see CDA-1, section 6.2).

The procedures reviewed and objective evidence assembled and evaluated during the audit provided evidence that the applicable requirements for control of nonconforming items are adequately established for compliance with upper-tier requirements, satisfactory in the implementation of these requirements, and effective in achieving the desired results.

5.3.2 Personnel Qualification and Training

The audit team conducted interviews with responsible personnel and reviewed implementing procedure CCP-QP-002, Rev. 35, *CCP Training and Qualification Plan*, to determine the degree to which the procedure adequately addresses upper-tier requirements. Personnel training records associated with VE, AK, and Site Project Managers (SPMs) were examined to verify implementation of associated requirements

and to verify that personnel performing characterization activities are appropriately qualified. Record reviews included qualification cards, appointment letters, and other associated qualification documentation, including attendance sheets for required briefings on AK waste stream summary training for VE operators. Personally identifiable information had been redacted from the documentation before being presented to the audit team.

The procedures reviewed and objective evidence assembled and evaluated during the audit provided evidence that the applicable requirements for personnel training and qualification are adequately established for compliance with upper-tier requirements, satisfactory in the implementation of these requirements, and effective in achieving the desired results.

5.3.3 Quality Assurance Records

The audit team conducted interviews and reviewed implementing procedures relative to the control and administration of QA records to determine the degree to which the procedures adequately address upper-tier requirements. The procedure review included CCP-PO-001, Rev. 21, *CCP Transuranic Waste Characterization Quality Assurance Project Plan;* CCP-PO-002, Rev. 27, *CCP Transuranic Waste Certification Plan*; CCP-QP-008, Rev. 21, *CCP Records Management*; and CCP-QP-028, Rev. 15, *Records Filing, Inventorying, Scheduling, and Dispositioning*. Control of QA records was verified through review of the CCP/NTPC RH (All Sites) Records Inventory and Disposition Schedule dated July 23, 2013.

Additional ANL/CCP records retrieved and reviewed during the audit included batch data reports (BDRs) and other documents to support the AK Traceability Exercise. A random selection of AK source documents for CCP-AK-ANLE-500, Rev. 11, *CCP Acceptable Knowledge Summary Report for Argonne Remote-Handled Debris Waste–Waste Stream: AERHDM*, were verified to be physically located in NTPC Records.

One concern was identified regarding completed quality records. The audit team discovered that three completed radiological surveys and three completed RLC loading forms were not available in NTPC Records. Through interviews with CCP personnel, it was determined that the submittal process for records was changed during the time period that these records were completed and, inadvertently, they were not submitted to NTPC Records. However, they were captured through other means and submitted into NTPC Records during the audit (see CDA-2, section 6.2).

The procedures reviewed and objective evidence assembled and evaluated during the audit provided evidence that the applicable requirements for QA records are adequately established for compliance with upper-tier requirements, satisfactory in the implementation of these requirements, and effective in achieving the desired results.

5.4 WAP-related Technical Activities

Each WAP-related technical area audited is discussed in detail in the following sections. The method used to select objective evidence is discussed, the objective evidence used to assess compliance with the HWFP is cited briefly, and the result of the assessment is provided.

5.4.1 Table C6-1 WAP Checklist (March 13, 2013)

The C6-1 WAP checklist addresses general program requirements from an overall management perspective. The general requirements checklist addresses both technical requirements and specific WAP-related QA programmatic requirements that, when collectively implemented, ensure effective overall management of TRU waste characterization and certification activities. Requirements are integrated into controlled documents to ensure the waste characterization strategy, as defined in the WAP, is accomplished and documented in accordance with controlled processes and procedures. The audit team verified procedures and collected objective evidence to assess the PL V&V and data generation-level data review process. The ability of the ANL/CCP to characterize RH SCG S5000 debris waste was evaluated.

The audit team verified a randomly selected set of BDRs for VE of RH SCG S5000 debris waste from containers at the ANL/CCP. The data assembled into the BDRs support one debris waste stream identified as AERHDM. The reports were produced according to CCP-TP-500, Rev. 11, *CCP Remote-Handled Waste Visual Examination*. This procedure has since been revised to reflect the recent management and operating contractor transition from Washington TRU Solutions to NWP. For the purposes of this audit, the reports were also verified against CCP-TP-500, Rev. 12. The team verified the VE data reviewed in the BDRs were evaluated against the WSPF and waste stream description contained in CCP-AK-ANLE-500, Rev. 11, *CCP Acceptable Knowledge Summary Report for Argonne Remote-Handled Debris Waste – Waste Stream: AERHDM*, dated July 2, 2013. The data recorded in the BDRs matched the waste stream description and the data were complete and accurate. The PL V&V process for VE was evaluated by reviewing the following BDRs:

ANLRHVE12019 ANLRHVE13001 ANLRHVE13007

The BDRs evaluated by the audit team did not contain any NCRs and the team did not find any deficiencies in the VE BDRs reviewed through the Project Level.

The audit team verified the quarterly repeat of permit-related data generation-level reports completed since the previous audit (A-12-16). The quarterly reports examined were for the fourth quarter of 2012, and the first two quarters of 2013. The reports were examined and found to have no discrepancies reported through the re-review process. This re-review process was evaluated utilizing procedure CCP-TP-001, Rev. 21, *CCP Project Level Data Validation and Verification*, section 4.3.

No WAP deficiencies related to Table C6-1 were identified during the audit. The procedures reviewed and objective evidence assembled and evaluated during the audit provided evidence that the applicable requirements for data generation-level and Project Level validation and verification are adequately established for compliance with upper-tier requirements, satisfactory in the implementation of these requirements, and effective in achieving the desired results.

5.4.2 Table C6-2, Acceptable Knowledge Checklist (March 13, 2013)

The audit team conducted a recertification audit of characterization activities for the RH SCG S5000 debris waste stream, designated as AERHDM, generated in the Alpha Gamma Hot Cell Facility (AGHCF) and K-Wing Hot Cells at ANL. The audit was carried out in accordance with the latest revision to the HWFP WAP, the WCPIP, and the RH portion of the WAC, along with CCP implementing procedures. Objective evidence was reviewed and compiled to demonstrate compliance with each of the applicable requirements. Waste stream AERHDM originally consisted of forty-four 30-gallon drums of debris waste from the AGHCF for which CCP reviewed the VE videotapes of packaging done by ANL staff. Subsequently, the waste stream was expanded with the packaging of additional debris drums and fuel examination waste (FEW) from the AGHCF and the K-Wing Hot Cells. The audit team also examined the AK record for solidified liquid waste from the K-Wing operations that was consolidated, sampled, solidified, and then included with debris drums from this facility. The AK record for all of this waste has been examined to demonstrate that it is assigned to the delineated waste stream AERHDM.

The audit team reviewed the latest revision of CCP-AK-ANLE-500, *CCP Acceptable Knowledge Summary Report for Argonne Remote-Handled Debris Waste – Waste Stream: AERHDM* (Rev. 11), and a copy of the Waste Stream Profile Form (WSPF) and attachments along with an applicable change notice. Additionally, numerous AK source documents were reviewed to establish support for the conclusions noted in the AK Summary Report. The audit team also examined the AK Documentation Checklist, Attachment 1; the AK Information List, Attachment 4; the AK Hazardous Constituents List, Attachment 5; the AK Waste Form, Waste Material Parameters, Prohibited Items and Packaging, Attachment 6, along with the applicable justification memo for waste material parameter weight estimates; and the AK Container List, Attachment 8, including numerous add-container memoranda. The add-container memoranda document the review made by the CCP AK Expert (AKE) of waste containers received from ANL to assure that they are part of the waste stream. Examples of the resolution of AK discrepancies in the AK record, a WAP-compliant AK Accuracy Report, and the most recent internal surveillance were also collected and examined along with screenshots from the IDC database, a copy of the AK Tracking Spreadsheet, and the ANL WMO (Waste Management Operations)-195 waste container input forms.

Requisite training records were reviewed for AKEs and SPMs based upon names identified in the reviewed documents. The WAP-required Traceability Exercise was performed for six of the drums that have advanced completely through the

characterization and certification process, including a review of relevant VE BDRs specifically for the FEW. The reconciliation of characterization data with the AK record, including a review of the AK Characterization Checklists, was completed.

The audit team also examined the AK record and compiled objective evidence that demonstrates compliance with the requirements of the WCPIP, as noted above. Documents reviewed included the AK Summary Report, Radiological Characterization Technical Report CCP-AK-ANLE-501, Rev. 9, a WCPIP-compliant AK Accuracy Report, and characterization reconciliation reports along with the examination of relevant AK source documents.

The audit team offered one recommendation that dealt with suggested changes to the existing AK Summary Report to provide clarification. The details of the recommendation are described later in this report (see section 6.4).

No WAP deficiencies related to Table C6-2 were identified during the audit. The procedure reviews, field observations, and document reviews provided evidence that the applicable requirements for AK are adequately established for compliance with upper-tier requirements, satisfactory in the implementation of these requirements, and effective in achieving the desired results.

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

The audit team reviewed procedures CCP-TP-500, Rev. 12, *CCP Remote-Handled Waste Visual Examination,* and CCP-QP-002, Rev. 35, *CCP Training and Qualification Plan,* to determine their adequacy in addressing upper-tier requirements. The review determined that the procedures adequately address requirements. Procedures CCP-TP-163, Rev. 4, *CCP Evaluation of Waste Packaging Records for Visual Examination of Records,* and CCP-TP-509, Rev. 4, *CCP Remote-Handled Transuranic Container Tracking,* were also evaluated. The review determined that the procedures adequately address upper-tier documents. ANL/CCP has not performed VE of records since the previous audit (A-12-16).

ANL/CCP uses the two-operator method when performing VE characterization. The audit team interviewed VE operators and VE experts (VEEs). The audit team also examined VE operational logbooks (RH-ANLE-VE-014) and verified logbook entries were logged correctly and reviewed by the Vendor Project Manager (VPM), as required. The audit team toured the Alpha Gamma Hot Cell Facility in Building 212 and observed the VE being performed on container 1160.

The audit team examined the following RH VE BDRs generated from operations performed in the AGHCF in Building 212 to verify implementation and compliance with the requirements for documenting VE activities:

ANLRHVE12011	ANLRHVE12015	ANLRHVE12016
ANLRHVE12017	ANLRHVE12018	ANLRHVE12019

ANLRHVE13001	ANLRHVE13002	ANLRHVE13003
ANLRHVE13004	ANLRHVE13005	ANLRHVE13006
ANLRHVE13007	RHANLVE100015	

The audit team verified that all containers listed in these BDRs were on the Acceptable Knowledge Tracking Spreadsheet (AKTSS). The AKTSS is used for tracking RH TRU waste containers during the overall characterization activities at ANL/CCP.

The audit team examined training records for five VE operators/independent technical reviewers (ITRs) and confirmed the appointment of two ANL/CCP VEEs. The audit team verified that VE operators, ITRs, and VEEs were appropriately qualified.

No WAP deficiencies related to Table C6-4 were identified during the audit. The procedure reviews, field observations, and document reviews provided evidence that the applicable requirements for characterizing RH SCG S5000 debris waste using the VE process is adequately established for compliance with upper-tier requirements, satisfactory in the implementation of these requirements, and effective in achieving the desired results.

5.4.4 WIPP Waste Information System/Waste Data System

The audit team evaluated implementation of CCP-TP-530, Rev. 11, *CCP RH TRU Waste Certification and WWIS/WDS Data Entry*, for data entry using the WWIS/WDS data entry spreadsheet. The evaluation included data population of the spreadsheet, review of data entry by a Waste Certification Assistant, and waste certification by the Waste Certification Official. Record reviews included CCP data spreadsheet reports, container information summaries, pages from BDRs showing analyses values, WWIS/WDS Container Data Reports, and submittals for WWIS review/approval.

The team reviewed three WWIS/WDS waste certification packages for RH waste from waste stream AERHDM. The packages reviewed were for Canister AE0130, which had three internal containers (1121, 1122, and 1123), Canister AE0150, which had three internal containers (1148, 1150, and 1153), and Canister AE0157, which also had three internal containers (1089, 1168, and 1169).

Overall, the audit team determined that the WWIS/WDS activities were adequately established for compliance with upper-tier requirements, satisfactory in the implementation of these requirements, and effective in achieving the desired result.

6.0 CARS, CDAs, OBSERVATIONS, AND RECOMMENDATIONS

6.1 Corrective Action Reports

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

Condition Adverse to Quality (CAQ) – Term used in reference to failures, malfunctions, deficiencies, defective items, and nonconformances.

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

There were no CARs generated during Audit A-13-24.

6.2 Deficiencies Corrected During the Audit

During the audit, the audit team may identify CAQs. The audit team members and the ATL evaluate the CAQs to determine if they are significant. Once a determination is made that the CAQ is not significant, the audit team member, in conjunction with the ATL, determines if the CAQ is an isolated case requiring only remedial action and therefore can be corrected during the audit (CDA).

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

CDAs – Isolated deficiencies that do not require a root cause determination or actions to preclude recurrence. Correction of the deficiency can be verified prior to the end of the audit. Examples include one or two minor changes required to correct a procedure (isolated), one or two forms not signed or not dated (isolated), and one or two individuals that have not completed a reading assignment.

There were two CAQs identified and corrected during the audit. Supporting documentation is provided in Attachment 3.

CDA- 1

Condition:

During the review of NCR-RHANL-0509-13, Rev. 1, it was identified that the CCP QA Engineer did not sign the validation block (14) on the NCR. The CCP QA Engineer's printed name and a date appear on the form, but it is not signed, as required by the form and procedure.

Requirement:

CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control*, Rev. 22, Section 4.2.14 states, "IF the NCR is determined to be valid, THEN validate the NCR by signing concurrence in Block 14."

Upon identification, QA Management personnel corrected the inconsistencies and provided the audit team with a corrected copy of NCR-RHANL-0509-13, which was verified prior to the conclusion of the audit.

CDA-2

Condition:

Three completed radiological surveys and three completed RLC loading forms were not available in NTPC Records at the time of the audit.

Requirement:

CCP-QP-008, *CCP Records Management*, Rev. 21, Section 4.1.10 states, "Send completed QA records (e.g. BDRs) via Attachment 2 to the Records Custodians/Facility Records Custodians."

Investigation of this CAQ identified that ANL/CCP had revised the records submittal process and the cited records packages (generated immediately following the change) had not been submitted as required. Duplicate records were available in related transportation records, which validated that the radiological surveys and the loading forms had been completed as required, but were not submitted. Review of the total population of RLC radiological surveys and loading forms generated since Audit A-12-16 identified that this CAQ was an isolated occurrence. Transmittal of the missing surveys and loading forms to NTPC Records was verified prior to the conclusion of the audit.

6.3 Observations

During the audit, the audit team may identify potential problems that should be communicated to the audited organization. The audit team member, in conjunction with the ATL, evaluates these conditions and classifies them as observations using the following definition:

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

There were no observations generated during Audit A-13-24.

6.4 Recommendations

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

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

The audit team offers the following recommendation to ANL/CCP. These comments identify areas that could be modified or revised to: a) address recent permit modifications, or b) provide clarity.

<u>Recommendation 1</u>

The following changes are for clarification to the current revision of the AK Summary Report:

- P 13, bullet 2-remove "Koroseal," separate "styrene butadiene" with a comma
- P 17, bullet 5-remove parentheses "(Revision 7)"
- P 25, bullet 3-change "liquid water breeder reactor" to "light water breeder reactor"
- P 27, paragraph 1-clarify language and provide a reference that UREX experiments could not generate HLW.
- P 31, Section 4.6.3-clarify the language in this section with regard to the role that the WMO-195 and WMO-195A forms play in the characterization of this waste stream
- P 65, table 6-move "AGHCF, Carbide FEW, 2nd batch, >1/2" Fuel Remnants to Appendix C
- All-address tense issues as feasible, indicating work completed and future activities

7.0 LIST OF ATTACHMENTS

Attachment 1:	Personnel Contacted During Audit A-13-24
Attachment 2:	Personnel Contacted During Audit A-13-24 by Area
Attachment 3:	CDA Supporting Documentation
Attachment 4:	Objective Evidence Reviewed During the Audit
Attachment 5:	Listing of Audited Procedures
Attachment 6:	Implementing Procedure Change Matrix
Attachment 7:	WAP related Processes and Equipment Evaluated During Audit A-13-24

PERSONNEL CONTACTED DURING AUDIT A-13-24

NAME	TITLE/ORG	PRE-AUDIT MEETING	CONTACTED DURING AUDIT	POST-AUDIT MEETING
Armijo, C.	Rec. Analyst/NTPC		X	
Billett, M.	Training Coordinator/NTPC		X	
Bond, E.	VEO/NWM		X	
Cooney, J.	Chief HP/ANL		X	
Dietzel, D.	Fed. Prog. Dir./DOE-ASO	X		
Groberg, C.	Operator MLU/CCP		X	
Heston, S.	Div. Dir./DOE-ASO	X		X
Joo, I.	RH Proj. Manager/CCP	X	X	
Kirkes, C.	WCO/CCP		X	
Ledford, W.	Auditor/NWP	X		X
Mueller, T	QA Specialists/CCP		X	
Pancake, D.	Proj. Manager/ANL	X		X
Pattee, S.	VEE/CCP	X	X	X
Pearcy, S.	Records Manager/NTPC	X	X	
Peters, K.	AKE/CCP	X	X	X
Redman, G.	VEO/NWP		X	
Rock, C.	Prog. Manager/ANL	X		X
Root, W	SPM-VPM/CCP	X	X	X
Sensibaugh, M.	CCP Ops. Dir./NWP	X		
Tyson, M.	Operator MLU/CCP		X	
Weyerman, C.W.	Manager/CCP-MLU	X	X	
York, R.	TCO-MLU/CCP		X	

PERSONNEL CONTACTED DURING AUDIT A-13-24 BY AREA

Nonconformances	Mueller, T.
Training	Armijo, C. Billet, M.
Records	Pearcy, S.
Project Level Validation and Verification	Joo, I.
Acceptable Knowledge	Pancake, D. Peters, K.
Visual Examination	Bond, E. Joo, I. Pattee, S. Redman, G. Root, W.
WIPP Waste Information System (WWIS Data Entry)	Kirkes, C.
Waste Certification/Project Level Validation & Verification	Kirkes, C.

Audit A-13-24
CDA Supporting Documentation

The documentation supporting the CDAs written during Audit A-13-24 is included in the box(es) submitted with this report. Included in the box(es) is a "Content Map" describing the location (using color coding) and identity of all required objective evidence supporting the performance of the audit.

Audit A-13-24
Objective Evidence Reviewed During the Audit

The objective evidence supporting Audit A-13-24 is included in the box(es) submitted with this report. Included in the box(es) is a "Content Map" describing the location (using color coding) and identity of all required objective evidence supporting the performance of the audit.

Audit A-13-24
LISTING OF AUDITED PROCEDURES

	Document No.	Rev.	Document Title
1.	CCP-PO-001	21	CCP TRU Waste Characterization QAPJP
2.	CCP-PO-002	27	CCP Transuranic Waste Certification Plan
3.	CCP-PO-005	23	CCP Conduct of Operations
4.	CCP-PO-006	4	CCP Conduct of Operations Matrix
5.	CCP-PO-500	6	CCP/ANL RH TRU Waste Interface Document
6.	CCP-QP-001	8	CCP Graded Approach
7.	CCP-QP-002	35	CCP Training and Qualification Plan
8.	CCP-QP-005	23	CCP TRU Nonconforming Item Reporting and Control
9.	CCP-QP-008	21	CCP Records Management
10.	CCP-QP-010	24	CCP Document Preparation, Approval, and Control
11.	CCP-QP-014	6	CCP QA Trend Analysis and Reporting
12.	CCP-QP-015	12	CCP Procurement
13.	CCP-QP-016	18	CCP Control of Measuring and Testing Equipment
14.	CCP-QP-017	3	CCP Identification And Control of Items
15.	CCP-QP-018	10	CCP Management Assessment
16.	CCP-QP-019	7	CCP Quality Assurance Reporting to Management
17.	CCP-QP-021	8	CCP Surveillance Program
18.	CCP-QP-022	13	CCP Software Quality Assurance Plan
19.	CCP-QP-023	4	CCP Handling, Storage and Shipping
20.	CCP-QP-026	14	CCP Inspection Control
21.	CCP-QP-027	6	CCP Test Control
22.	CCP-QP-028	15	CCP Records Filing, Inventorying, Scheduling, and Dispositioning
23.	CCP-QP-029	0	CCP Corrective Action Management
24.	CCP-QP-030	8	CCP Written Practice for the Qualification of CCP Helium Leak Detection Personnel
25.	CCP-TP-001	21	CCP Project Level Data Validation and Verification
26.	CCP-TP-002	26	CCP Reconciliation of DQOs and Reporting Characterization Data
27.	CCP-TP-005	25	CCP Acceptable Knowledge Documentation
28.	CCP-TP-082	9	CCP Waste Container Filter Vent Operation
29.	CCP-TP-163	4	CCP Evaluation of Waste Packaging Records for VE of Records
30.	CCP-TP-500	12	CCP RH Waste VE
31.	CCP-TP-505	7	CCP Removable Lid Canister Loading
32.	CCP-TP-506	2	CCP Preparation of the RH TRU Waste AK Characterization Reconciliation Report
33.	CCP-TP-507	8	CCP Shipping of RH TRU Waste
34.	CCP-TP-509	4	CCP RH TRU Container Tracking
35.	CCP-TP-512	6	CCP RH Waste Sampling
36.	CCP-TP-530	11	CCP RH TRU Waste Certification and WWIS/WDS Data Entry
37.	WP 13-QA.03	22	QA Independent Assessment Program

Audit A-13-24
IMPLEMENTING PROCEDURE CHANGE MATRIX

No.	Procedure Number	Procedure Title	Revision During Last Annual Audit	Revision During Current Annual Audit	Revision Summary
1	CCP-PO-001	CCP TRU Waste Characterization QAPJP	20	21	Revised to clarify hierarchy of documents, adding Nuclear Waste Partnership (NWP) LLC, 13-1, QAPD, also revised due to the Class 2 PMR WIPP Permit, and made other administrative changes as needed.
2	CCP-PO-002	CCP Transuranic Waste Certification Plan	26	27	Revised to incorporate Rev 7.3 and Revc7.4 of DOE/WIPP-02-3122, Transuranic WAC for the WIPP, which incorporates the changes resulting for the Class 2 Permit modification entitled "Revised Waste Analysis Plan Waste Characterization Methods" which was approved NMED on March 13, 2013, incorporate organizational changes to reflect the transition to NWP, to clarify the hierarchy of QA program documents, and minor editorial changes.
3	CCP-PO-005	CCP Conduct of Operations	22	23	Updated to reflect DOE Order 422.1 throughout. Added language in Sections 17.2 and 17.5 regarding pagination of printed Standing Orders and revised text regarding incorporating Standing Orders into procedures. Revised Section 17.5, and Attachments 5, 6, and 7 in response to CBFO CAR 13-006.
4	CCP-PO-006	CCP Conduct of Operations Matrix	3	4	Complete revision to reformat the table and incorporate cross referenced implementation to U.S. DOE Order 422.1, Conduct of Operations.
5	CCP-PO-500	CCP/ANL RH TRU Waste Interface Document	2	6	R3-Revised to incorporate NWP transition changes. R4-Revised to address CBFO CAR 12-039.

No.	Procedure Number	Procedure Title	Revision During Last Annual Audit	Revision During Current Annual Audit	Revision Summary
					R5-Revised to clarify roles associated with providing M&TE CoC to CCP. R6-Revised to implement the Permit Modification Request Class 2 approved by NMED dated March 13, and add CH-TRAMPAC for shielded container shipments.
6	CCP-QP-001	CCP Graded Approach	7	8	Revised to incorporate NWP transitions changes; to add a new 4.1.10, a step for entering ID number on the Attachment 1, QLD Checklist; to add a checkbox for "All," delete "HSG," clarify question A.4, and clarify instruction in Section B, of Attachment 1.
7	CCP-QP-002	CCP Training and Qualification Plan	32	35	R33-As a corrective action in response to CBFO CAR 12-033, revised the document to remove references to Lead SPMs and Alternate SPMs, so that any qualified SPM may perform the actions in Section 3.1. R34-Revised to incorporate Standing Order CCP-SO-086, Clarification of the Time Period for Performance of the RTR Semiannual Training Container Required by CCP-QP-002; incorporate changes to DOE/WIPP-02-3214, Remote-Handled TRU Waste Characterization Program Implementation Plan; update the title of the organization, as appropriate; and minor editorial changes. R35-Revised to implement the Permit Modification Request Class 2 approved by NMED dated March 13, 2013 and CAR-CCP-0003-13.
8	CCP-QP-005	CCP TRU Nonconforming Item Reporting and Control	21	23	R22-Revised to add definitions; to move 2.5.1 to 4.2.1 [F]; to clarify 4.4.15 and Attachment 1, 4.2.10, and CBFO notification in 4.3.1; to add new 4.9.3 to address removal

No.	Procedure Number	Procedure Title	Revision During Last Annual Audit	Revision During Current Annual Audit	Revision Summary
					of Hold Tags when voiding an NCR; to incorporate freeze file changes; to modify Attachment 1; to correct some typos and editorial mistakes. R23-Revised to incorporate NWP transition changes; ensure chronological order; to change Notes that include action steps to action steps; to remove contradiction with CCP-PO-024, CCP/INL Interface Document, in 4.5.10 [A.2]; to add Attachment 2, Instructions for Completing Attachment 1, CCP NCR, and Attachment 6, NCR Hold Tag Guidance, incorporating portions of Standing Order CCP-SO-036 and to implement the Permit Modification Request Class 2 approved by NMED dated March 13, 2013.
9	CCP-QP-008	CCP Records Management	20	21	Revised to incorporate NWP transition changes.
10	CCP-QP-010	CCP Document Preparation, Approval, and Control	23	24	Revised to incorporate NWP transition changes.
11	CCP-QP-014	CCP Trend Analysis and Reporting	5	6	Revised to incorporate the NWP transition changes and other QA changes.
12	CCP-QP-015	CCP Procurement	11	12	Revised in response to MA CCP 0003-12, and made other clarifications and editorial changes that were necessary.
13	CCP-QP-016	CCP Control of Measuring and Testing Equipment	16	18	R17-Revised to clearly flow down items from the QAPD as described in MA-CCP-0003-12, to incorporate CAP items from CAR-LANL-0003-12 and to improve clarity. R18-Revised to clarify actions of each entity defined in this procedure. Incorporate CAP items from CAR-CCP-001-13-0. Added Section 4.9 for process of shipping M&TE to calibration lab.

No.	Procedure Number	Procedure Title	Revision During Last Annual Audit	Revision During Current Annual Audit	Revision Summary
14	CCP-QP-017	CCP Identification and Control of Items	3	3	
15	CCP-QP-018	CCP Management Assessment	9	10	Revised to add the new position of CCP Management Assessment Coordinator. This position assumes responsibility for scheduling and tracking CCP management assessments, actions that were performed by QA in previous revisions of the procedure. General requirements in Sections 2.2 through 2.6 were consolidated and transferred to newly-created Attachment 4, Management Assessment Criteria from the CBFO Quality Assurance Program Document and General Requirements.
16	CCP-QP-019	CCP Quality Assurance Reporting to Management	6	7	Revised to incorporate NWP transition changes.
17	CCP-QP-021	CCP Surveillance Program	7	8	Revised to incorporate NWP transition changes.
18	CCP-QP-022	CCP Software Quality Assurance Plan	12	13	Revised to include Safety Software per DOE Order 414.1D, and to remove repetition and streamline procedure.
19	CCP-QP-023	CCP Handling, Storage and Shipping	3	4	Revised to incorporate NWP transition changes.
20	CCP-QP-026	CCP Inspection Control	13	14	Revised to incorporate NWP transition changes.
21	CCP-QP-027	CCP Test Control	5	6	Revised to incorporate NWP transition changes.
22	CCP-QP-028	CCP Records Filing, Inventory, Scheduling, and Dispositioning	14	15	Revised to incorporate NWP transition changes.
23	CCP-QP-029	CCP Corrective Action Management		0	Initial Issue. To combine CCP-QP-004, CCP Corrective Action Management and CCP-QP-006, CCP Corrective Action Reporting and Control, into one procedure for ease of review and use.
24	CCP-QP-030	CCP Written Practice for the Qualification of CCP Helium Leak Detection Personnel	8	8	

No.	Procedure Number	Procedure Title	Revision During Last Annual Audit	Revision During Current Annual Audit	Revision Summary
25	CCP-TP-001	CCP Project Level Data Validation and Verification	19	21	R20-Revised to remove references to P-TS. Also revised due to CAR-LANL-0005-12 and CBFO CAR 12-033. R21-Revised to address Class 2 HWFP Modification, which was approved by NMED on March 13, 2013
26	CCP-TP-002	CCP Reconciliation of DQOs and Reporting Characterization Data	24	26	R25-Revised to include timeframe for transmitting the waste stream profile form package to records. Also revised to make editorial changes needed. R26-Revised to implement the Permit Modification Request Class 2 approved by NMED dated March 13, 2013.
27	CCP-TP-005	CCP Acceptable Knowledge Documentation	24	25	Revised to incorporate NWP transition changes and to implement the Permit Modification Request Class 2 approved by NMED dated March 13, 2013.
28	CCP-TP-082	Waste Container Filter Vent Operation	8	9	Revised to rearrange some steps to improve flow and added a note to allow some steps to be performed in any order and incorporated editorial comments that were needed.
29	CCP-TP-163	CCP Evaluation of Waste Packaging Records for VE of Records	3	4	Revised to incorporate the NWP transition changes.
30	CCP-TP-500	CCP RH Waste VE	11	12	Revised to incorporate the NWP transition changes.
31	CCP-TP-505	CCP Removable Lid Canister Loading	6	7	Revised to incorporate NWP transition changes and to incorporate steps for inspection requirements from RLC-MAN-0001, Removable Lid Canister Handling and Operation Manual.
32	CCP-TP-506	CCP Preparation of the RH TRU Waste AK Characterization Reconciliation Report	2	2	
33	CCP-TP-507	CCP Shipping of RH TRU Waste	7	8	Revised to incorporate the NWP transition changes.
34	CCP-TP-509	CCP RH TRU Container Tracking	3	4	Revised to incorporate NWP transition

No.	Procedure Number	Procedure Title	Revision During Last Annual Audit	Revision During Current Annual Audit	Revision Summary
					changes, eliminate reference to CCP Data Center, and to implement the Permit Modification Request Class 2 approved by NMED dated March 13, 2013.
35	CCP-TP-512	CCP RH Waste Sampling	5	6	Revised to implement the Permit Modification Request Class 2 approved by NMED dated March 13, 2013.
36	CCP-TP-530	CCP RH TRU Waste Certification and WWIS/WDS Data Entry	10	11	Revised to implement the Permit Modification Request Class 2 approved by NMED dated March 13, 2013.
37	WP 13-QA.03	Q A Independent Assessment Program	19	22	R21- • Removed from section 2.0 last bullet of lead assessor responsibilities and last bullet of surveillor responsibilities. • Added to sections 5.0 and 6.0 provisions to • document findings corrected during assessment on the WIPP Form in accordance with WP 04-IM1000 (Corrective action for CBFO CAR 12-020). • Deleted attachment 9, and added reference to WP 09-CN3025 in section 4.3. • Deleted Attachment 10, Concerns Form and its mention from section 5.0. R22- • Added statement to Introduction that commercial grade surveys are performed in accordance with this procedure and WP 09-CN3040, Commercial Grade Item Dedication. • Added bullets in section 2.0 to delegate the responsibility for identifying the need for technical assistance when performing assessments to the lead assessor and surveillor. • Reworded lead auditor/surveillor actions to

No.	Procedure Number	Procedure Title	Revision During Last Annual Audit	Revision During Current Annual Audit	Revision Summary
					be consistent with QAPD language in section 4.3. • Added additional methods for performing effectiveness reviews in section 5.0. • Deleted requirement in section 5.0 to notify CBFO of deficiencies in DOE requirements (Original requirement was deleted in DOE O 226.1B). • Deleted note in section 6.0 about issuing WIPP Forms for assessment findings (this information is discussed elsewhere). • Changed P-A Coordinator to Compliance Coordinator throughout. • Added discussion item "Potential hazards" to attachment 10.

PROCESSES AND EQUIPMENT EVALUATED DURING AUDIT A-13-24

WIPP #	Process/Equipment Description	Applicable to the Following Waste Streams/Groups of Waste Streams	Currently Approved by NMED	Currently Approved by EPA
PREVIOUSLY APPROVED PROCESSES OR EQUIPMENT				
The following were evaluated during Audit A-13-24				
8RHVE1	Visual Examination CCP-TP-500, Remote-Handled Waste Visual Examination CCP-TP-163, CCP Evaluation of Waste Packaging Records for Visual Examination of Records	Debris (S5000)	YES	YES (Records only)
8RHVE2	Visual Examination of Newly Packaged RH Waste Drums CCP-TP-500, Remote-Handled Waste Visual Examination	Debris (S5000)	YES	YES
Not Applicable	Acceptable Knowledge CCP-TP-005, CCP Acceptable Knowledge Documentation	Debris (S5000)	YES	YES
Not Applicable	Data Verification and Validation CCP-TP-001, CCP Project Level Data Validation and Verification CCP-TP-500, Remote-Handled Waste Visual Examination CCP-TP-504, CCP Dose-to-Curie Survey Procedure for RH TRU Waste	Debris (S5000)	YES	YES
Not Applicable	Quality Assurance	N/A	N/A	YES
Not Applicable	WIPP Waste Information System (WWIS)/Waste Data System (WDS)	N/A	YES	YES

Table C6-1 Waste Analysis Plan (WAP) Checklist
ANL-CCP Re-certification Audit A-13-24

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

	WAP Requirement[1] *ANL-CCP Re-certification Audit A-13-24* Table C6-1 Waste Analysis Plan (WAP) Checklist [1]	Procedure Documented		Example of Implementation/Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
	WASTE STREAM IDENTIFICATION					
1	Does the generator/storage site define "waste stream" as waste materials that have common physical form, that contain similar hazardous constituents, and that are generated from a single process or activity? (Attachment C Section C-0a)	CCP-PO-001 S. C-0a CCP-TP-005 S. 4.4.11 NOTE above	Y	CCP AK Summary Report for ANL RH Debris Waste, waste stream AERHDM, CCP-AK-ANLE-500, R11 **(AK-1)**	Y	
2	Are procedures in place to ensure that the generator/storage site assigns one of the Summary Category Groups (S3000-homogeneous solids, S4000-soils/gravel, S5000-debris waste) to each waste stream? (Section C-1b)	CCP-TP-005 S. 4.4.14 S. 4.4.15 CCP-TP-002 S. 4.3 Att. 2	Y	CCP AK Summary Report for ANL RH Debris Waste, waste stream AERHDM, CCP-AK-ANLE-500, R11, S. 2.0 **(AK-1)** Waste Stream Profile Form and attachments for waste stream AERHDM **(AK-2)**	Y	
3	Are procedures in place to ensure that the generator/storage site assigns Waste Matrix Code Groups (e.g., solidified inorganics, solidified organics, salt waste, soils, combustible waste, filters, graphite, heterogeneous debris waste, inorganic nonmetal waste, lead/cadmium metal, uncategorized metal) to each waste stream? (Section C-0a)	CCP-TP-005 S. 4.4.13 NOTE Above CCP-TP-002 S. 4.3 Att. 2	Y	CCP AK Summary Report for ANL RH Debris Waste, waste stream AERHDM, CCP-AK-ANLE-500, R11, S. 2.0 **(AK-1)** Waste Stream Profile Form and attachments for waste stream AERHDM **(AK-2)**	Y	
4	Are procedures in place to ensure that the generator/storage site assigns a Waste Stream WIPP Identifier (ID) to each waste stream? (Section C3-6b(1))	CCP-TP-002 S. 4.3 Att. 2	Y	Waste Stream Profile Form and attachments for waste stream AERHDM **(AK-2)**	Y	

	WAP Requirement[1] *ANL-CCP Re-certification Audit A-13-24* Table C6-1 Waste Analysis Plan (WAP) Checklist [1]	Procedure Documented		Example of Implementation/Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
4a	Are procedures in place for generator/storage sites to submit an AK Sufficiency Determination (Determination Request) to the Permittees to meet all or part of the waste characterization requirements including: • All information specified in Permit Attachment C4, Section C4-3d • Identification of relevant hazardous constituents, and correctly identifies all toxicity characteristic and listed hazardous waste numbers • All hazardous waste number assignments must be substantiated by supporting data and, if not, whether this lack of substantiation compromises the interpretation • Resolution of data discrepancies between different AK sources must be technically correct and documented • The AK Summary includes all the identification of waste material parameter weights by percentage of the material in the waste stream, and determinations are technically correct • All prohibited items specified in the TSDF-WAC should be addressed, and conclusions drawn are technically adequate and substantiated by supporting information • If the AK record includes process control information specified in Permit Attachment C4, Section C4-3b, the information should include procedures, waste manifests, or other documentation demonstrating that the controls were adequate and sufficient. • The site must provide the supporting information necessary to substantiate technical conclusions within the Determination Request, and this information must be correctly interpreted. (Section C-0b, Section C4-3d)	CCP-TP-005 S. 4.7	Y	N/A	N/A	No AK sufficiency determination request has been submitted for ANL/CCP waste.
4b	If a generator/storage site does not submit a Determination Request or if the Determination Request is not approved, are procedures in place for the generator/storage site to perform radiography or VE on 100% of the containers in a waste stream as specified in Permit Attachment C1? (Section C-0b)	CCP-PO-001 S. C-0b S. C-3b S. C3-4b(1) CCP-TP-001 S. 3.1.1 CCP-TP-500 S. 4.4 Att. 3	Y	ANLRHVE12019 ANLRHVE13001 ANLRHVE13007 **(GEN-1)**	Y	No determination request has been submitted for ANL/CCP waste.

	WAP Requirement[1] *ANL-CCP Re-certification Audit A-13-24* Table C6-1 Waste Analysis Plan (WAP) Checklist [1]	Procedure Documented		Example of Implementation/Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
4c	Are procedures in place to ensure that the generator/storage sites complete a Waste Stream Profile Form (WSPF) and Characterization Information Summary (CIS) as specified in Permit Attachment C3, Sections C3-6b(1) and C3-6b(2)? (Section C-0c)	CCP-TP-002 S. 4.3 S. 4.4	Y	CP:08:00374 – Transmittal of Waste Stream Profile Form, Attachment 2, for Remote Handled Waste Stream AERHDM at the Argonne National Laboratory **(GEN-2)**	Y	
6	Are procedures in place to ensure that the generator/storage site assigns EPA hazardous waste numbers associated with the waste? If so, do these assigned EPA hazardous waste numbers correspond to the permitted EPA hazardous waste numbers in Table C-5? Are there any assigned EPA hazardous waste numbers that are not permitted EPA hazardous waste numbers on the Table C-5? If so, did the generator/storage site reject the waste for shipment to and disposal at WIPP? Did the generator assign a state hazardous waste codes or numbers? If so, is it assigned to waste that is permitted at WIPP? (Section C-1b)	CCP-TP-005 S. 4.4.16- 4.4.21 Att. 5	Y	CCP AK Summary Report for ANL RH Debris Waste, waste stream AERHDM, CCP-AK-ANLE-500, R11, S. 5.4.2, Tables 4, 5 **(AK-1)** AK Attachment 5, Hazardous Constituents, for waste stream AERHDM **(AK-7)**	Y	
7	Are procedures in place to ensure that Summary Category Groups are defined as follows: S3000- Homogeneous solids are solid material, inorganic process residues, inorganic sludges, salt waste, and pyrochemical salt waste excluding soils, that do not meet NMED criteria for classification as debris and are at least 50 percent by volume homogeneous solids or comprise the majority of the waste stream S4000- Waste streams that are at least 50 percent by volume soil/gravel, or comprise the majority of the waste stream S5000- Waste streams that are at least 50 percent volume materials that meet the NMED criteria for debris, or comprise the majority matrix of materials. The criteria for debris are solid materials intended for disposal that exceed 2.36 inch particle size and is a manufactured object, plant or animal matter, or natural geologic material. Particles smaller than 2.36 inches in size may be considered debris if the debris is a manufactured object and if it is not a particle of S3000 or S4000 material. (Section C-0a)	CCP-TP-005 S. 4.4.14	Y	CCP AK Summary Report for ANL RH Debris Waste, waste stream AERHDM, CCP-AK-ANLE-500, R11, S. 2.0 **(AK-1)** Waste Stream Profile Form and attachments for waste stream AERHDM **(AK-2)**	Y	

	WAP Requirement[1] *ANL-CCP Re-certification Audit A-13-24* Table C6-1 Waste Analysis Plan (WAP) Checklist [1]	Procedure Documented		Example of Implementation/Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
8	Does the generator/storage facility have procedures in place to ensure that the following waste characterization parameters will be obtained: • Determination whether TRU mixed waste streams comply with the applicable provisions of the TSDF-WAC • Determination whether TRU mixed wastes exhibit a hazardous characteristic per 20.4.1.200 NMAC (incorporating 40 CFR 261 Subpart C) • Determination whether TRU mixed wastes are listed per 20.4.1.200 NMAC (incorporating 40 CFR 261 Subpart D) • Estimation of waste material parameter weights (Section C-2)	**AK** CCP-TP-005 S. 4.4.16 S. 4.4.17 S. 4.4.26 S. 4.4.30 S. 4.4.33[K], [L] & [M] CCP-TP-500 S. 4.4	Y	B1- CCP AK Summary Report for ANL RH Debris Waste, waste stream AERHDM, CCP-AK-ANLE-500, R11, S. 5.4.2.3, 5.4.4, 5.4.5 **(AK-1)** AK Attachment 6, Waste Form, Waste Material Parameters, Prohibited Items and Packaging for Waste Stream AERHDM **(AK-8)** VE BDRS ANLRHVE12011 (**AK-16)** ANLRHVE13004 **(AK-17)** ANLRHVE13007 **(AK-18)** ANLRHVE13002 **(AK-19)** ANLRHVE11010 **(AK-20)** ANLRHVE11017 **(AK-21)** B2&3- CCP AK Summary Report for ANL RH Debris Waste, Waste Stream AERHDM, CCP-AK-ANLE-500, R11, S. 5.4.2, Tables 4, 5 **(AK-1)** AK Attachment 5, Hazardous Constituents, for Waste Stream AERHDM **(AK-7)** B4- CCP AK Summary Report for ANL RH Debris Waste, waste stream AERHDM, CCP-	Y	

	WAP Requirement[1] *ANL-CCP Re-certification Audit A-13-24* Table C6-1 Waste Analysis Plan (WAP) Checklist [1]	Procedure Documented		Example of Implementation/Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
		PL 4th Bullet: CCP-TP-500 Att. 1 & 2	Y	AK-ANLE-500, R11, S. 5.4.1.2, Table 3 **(AK-1)** Memos attached to AK Attachment 6, Waste Form, Waste Material Parameters, Prohibited Items and Packaging for Waste Stream AERHDM **(AK-8)** ANLRHVE12019 ANLRHVE13001 ANLRHVE13007 **(GEN-1)**	Y	
9	Are procedures in place to ensure that waste streams identified to contain incompatible materials or materials incompatible with waste containers cannot be shipped unless treated to remove the incompatibility? (Section C-1c)	CCP-TP-005 S. 4.4.30 S. 4.4.33[K] CCP-TP-001 S. 2.7 S. 4.0 CCP-TP-500 S. 4.4	Y	CCP AK Summary Report for ANL RH Debris Waste, Waste Stream AERHDM, CCP-AK-ANLE-500, R11, S. 5.4.5 **(AK-1)** AK Attachment 6, Waste Form, Waste Material Parameters, Prohibited Items and Packaging for Waste Stream AERHDM **(AK-8)** VE BDRS ANLRHVE12011 **(AK-16)** ANLRHVE13004 **(AK-17)** ANLRHVE13007 **(AK-18)** ANLRHVE13002 **(AK-19)** ANLRHVE11010 **(AK-20)** ANLRHVE11017 **(AK-21)**		
10 **PL**	Are procedures in place to ensure that the generator/storage site uses acceptable knowledge and, as necessary, radiography and visual examination analysis as specified in Table C-1? (Section C-3)	**AK** CCP-TP-005 S. 4.4 S. 4.5	Y	CCP AK Summary Report for ANL RH Debris Waste, Waste Stream AERHDM, CCP-	Y	

	WAP Requirement[1] *ANL-CCP Re-certification Audit A-13-24* Table C6-1 Waste Analysis Plan (WAP) Checklist [1]	Procedure Documented		Example of Implementation/Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
		PL CCP-TP-500 (All)	Y	AK-ANLE-500, R11 **(AK-1)** VE BDRS ANLRHVE12011 (**AK-16)** ANLRHVE13004 **(AK-17)** ANLRHVE13007 **(AK-18)** ANLRHVE13002 **(AK-19)** ANLRHVE11010 **(AK-20)** ANLRHVE11017 **(AK-21)** ANLRHVE12019 ANLRHVE13001 ANLRHVE13007 **(GEN-1)**	Y	
	UNACCEPTABLE WASTE					

12	Are procedures in place to ensure that the generator/storage site ensures, through administrative and operational procedures and characterization techniques, that waste containers do not include the following unacceptable waste:
	• liquid waste is not acceptable at WIPP. Liquid in the quantities delineated below is acceptable
	  • Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of radiography or visual examination
	  • Internal containers with more than 60 milliliters or 3 percent by volume observable liquid, whichever is greater, are prohibited
	  • Containers with Hazardous Waste number U134 assigned shall have no observable liquid
	  • Overpacking the outermost container that was examined during radiography or visual examination or redistributing untreated liquid within the container shall not be used to meet the liquid volume limits
	• non-radionuclide pyrophoric materials
	• hazardous wastes not occurring as co-contaminants with TRU wastes (non-mixed hazardous wastes)
		CCP-TP-500
		S. 4.4
		Table 1
		Att. 2 & 3
			Y	ANLRHVE12019
				ANLRHVE13001
				ANLRHVE13007
				(GEN-1)
				CP:08:00374 – Transmittal of Waste Stream Profile Form, Attachment 2, for Remote Handled Waste Stream AERHDM at the Argonne National Laboratory
				(GEN-2)
					Y	

	WAP Requirement[1] *ANL-CCP Re-certification Audit A-13-24* Table C6-1 Waste Analysis Plan (WAP) Checklist [1]	Procedure Documented		Example of Implementation/Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
	• wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes • wastes containing explosives or compressed gases (continued below)					
12a	• wastes with polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization • wastes exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003) • waste that has ever been managed as high-level waste and waste from tanks specified in Table C-4, unless specifically approved through a Class 3 permit modification • any waste container from a waste stream (or waste stream lot) which has not undergone either radiographic or visual examination of a statistically representative subpopulation of the wastes stream in each shipment pursuant to Permit Attachment C7 • any waste container from a waste stream which has not been preceded by an appropriate, certified Waste Stream Profile Form (see Section C-1d) (Section C-1c)	CCP-TP-500 S. 4.4 Table 1 Att. 2 & 3	Y	ANLRHVE12019 ANLRHVE13001 ANLRHVE13007 **(GEN-1)** CP:08:00374 – Transmittal of Waste Stream Profile Form, Attachment 2, for Remote Handled Waste Stream AERHDM at the Argonne National Laboratory **(GEN-2)**	Y	
	WASTE ACCEPTANCE CONTROL					
14	Are procedures in place to ensure that the generator/storage site uses a Waste Stream Profile Form (WSPF) which includes, at a minimum, the information indicated on the attached WSPF found in Figure C-1 and a Characterization Information Summary (CIS) prior to waste disposal at the WIPP? (Section C-1d)	CCP-TP-002 S. 4.3 S. 4.4 Att. 2	Y	CP:08:00374 – Transmittal of Waste Stream Profile Form, Attachment 2, for Remote Handled Waste Stream AERHDM at the Argonne National Laboratory **(GEN-2)**	Y	
16	Are procedures in place to ensure that additional WSPFs are provided to WIPP and NMED for waste streams or portions of waste streams that are reclassified based upon waste characterization information? (Section C-1d)	CCP-TP-002 S. 4.7	Y	CP:08:00374 – Transmittal of Waste Stream Profile Form, Attachment 2, for Remote Handled Waste Stream AERHDM at the Argonne National Laboratory **(GEN-2)**	Y	
16a	Are criteria in place to determine the specific circumstances under which a WSPF is revised versus when a new WSPF is required? (Section C-1d)	CCP-TP-002 S. 4.7	Y	N/A	N/A	A revision to the waste stream profile form is in process to add TRUCON codes for the shielded

	WAP Requirement[1] *ANL-CCP Re-certification Audit A-13-24* Table C6-1 Waste Analysis Plan (WAP) Checklist [1]	Procedure Documented		Example of Implementation/Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
						container but is not yet available. The completed WSPF and attachments will be reviewed during Surveillance A-13-24
	GENERAL CHARACTERIZATION REQUIREMENTS					
25 **AK**	Are procedures in place to ensure that Acceptable Knowledge is used in waste characterization activities to delineate TRU mixed waste streams, to assess whether TRU mixed wastes comply with the TSDF-WAC, to assess whether TRU mixed waste exhibits a hazardous characteristic (20.4.1.200 NMAC, incorporating 40 CFR 261 Subpart C), and to assess whether TRU wastes are listed (20.4.1.200 NMAC, incorporating 40 CFR 261 Subpart D), and to estimate waste material parameter weights? (Section C-3a)	CCP-TP-005 S. 4.11 S. 4.4.16 S. 4.4.17 S. 4.4.26 S. 4.4.30 S. 4.4.33[K], [L] & [M] CCP-TP-500 S. 4.4	Y	CCP AK Summary Report for ANL RH Debris Waste, Waste Stream AERHDM, CCP-AK-ANLE-500, R11, S. 2.0 **(AK-1)** CCP AK Summary Report for ANL RH Debris Waste, Waste Stream AERHDM, CCP-AK-ANLE-500, R11, S. 5.4.2.3, 5.4.4, 5.4.5 **(AK-1)** AK Attachment 6, Waste Form, Waste Material Parameters, Prohibited Items and Packaging for Waste Stream AERHDM **(AK-8)** VE BDRS ANLRHVE12011 **(AK-16)** ANLRHVE13004 **(AK-17)** ANLRHVE13007 **(AK-18)** ANLRHVE13002 **(AK-19)** ANLRHVE11010 **(AK-20)** ANLRHVE11017 **(AK-21)** CCP AK Summary Report for ANL RH Debris Waste, Waste Stream AERHDM, CCP-AK-ANLE-500, R11, S. 5.4.2, Tables 4 & 5 **(AK-1)**	Y	

	WAP Requirement[1] *ANL-CCP Re-certification Audit A-13-24* Table C6-1 Waste Analysis Plan (WAP) Checklist [1]	Procedure Documented		Example of Implementation/Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
				AK Attachment 5, Hazardous Constituents, for Waste Stream AERHDM **(AK-7)** CCP AK Summary Report for ANL RH Debris Waste, Waste Stream AERHDM, CCP-AK-ANLE-500, R11, S. 5.4.1.2, Table 3 **(AK-1)** Memos attached to AK Attachment 6, Waste Form, Waste Material Parameters, Prohibited Items and Packaging for waste stream AERHDM **(AK-8)**		
26	Are procedures in place to ensure that radiography and/or visual examination are used as necessary to: • Examine a waste container to determine the physical form • Identify observable liquid in excess of TSDF-WAC limits and containerized gases • Verify the physical form matches the waste stream description (Section C-3b)	CCP-TP-500 Att. 1 & 2	Y	ANLRHVE12011 ANLRHVE12015 ANLRHVE12016 ANLRHVE12017 ANLRHVE12018 ANLRHVE12019 ANLRHVE13001 ANLRHVE13002 ANLRHVE13003 ANLRHVE13004 ANLRHVE13005 ANLRHVE13006 ANLRHVE13007 RHANLVE100015 **(VE-1)**	Y	
28	Are procedures in place to ensure that the following characterization activities shall occur: • Acceptable Knowledge for all wastes, with testing as necessary to augment AK including; - Visual examination or radiography for all waste containers	**AK** CCP-TP-005 S. 4.4 S. 4.5	Y	CCP AK Summary Report for ANL RH Debris Waste, Waste Stream AERHDM, CCP-AK-ANLE-500, R11 **(AK-1)** VE BDRs ANLRHVE12011 **(AK-16)** ANLRHVE13004 **(AK-17)**	Y	

	WAP Requirement[1] *ANL-CCP Re-certification Audit A-13-24* Table C6-1 Waste Analysis Plan (WAP) Checklist [1]	Procedure Documented		Example of Implementation/Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
		PL CCP-TP-002 (All) CCP-TP-500 (All)	Y	ANLRHVE13007 **(AK-18)** ANLRHVE13002 **(AK-19)** ANLRHVE11010 **(AK-20)** ANLRHVE11017 **(AK-21)** Waste Stream Characterization Checklists **(AK-22)** ANLRHVE12019 ANLRHVE13001 ANLRHVE13007 **(GEN-1)** CP:08:00374 – Transmittal of Waste Stream Profile Form, Attachment 2, for Remote Handled Waste Stream AERHDM at the Argonne National Laboratory **(GEN-2)**	Y	

	WAP Requirement[1] *ANL-CCP Re-certification Audit A-13-24* Table C6-1 Waste Analysis Plan (WAP) Checklist [1]	Procedure Documented		Example of Implementation/Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
	DATA GENERATION, VERIFICATION, VALIDATION, DOCUMENTATION, AND QUALITY ASSURANCE					
30	Are procedures in place to ensure that the following Data Quality Objectives are met: • Use Acceptable Knowledge to delineate TRU mixed waste streams, assess whether TRU mixed wastes comply with the applicable requirements of the TSDF-WAC, assess whether TRU mixed wastes exhibit a hazardous characteristic, assess whether TRU mixed wastes are listed and to estimate waste material parameter weights • Use radiography or visual examination to verify the physical form of the waste matches its waste stream description as determined by AK and to verify the absence of prohibited items (Section C-4a(1))	**AK** CCP-TP-005 S. 4.11 S. 4.4.16 S. 4.4.17 S. 4.4.26 S. 4.4.30 S. 4.4.33[K], [L] & [M] CCP-TP-500 S. 4.4	Y	CCP AK Summary Report for ANL RH Debris Waste, Waste Stream AERHDM, CCP-AK-ANLE-500, R11, S. 2.0 **(AK-1)** CCP AK Summary Report for ANL RH Debris Waste, Waste Stream AERHDM, CCP-AK-ANLE-500, R11, S. 5.4.2.3, 5.4.4, 5.4.5 **(AK-1)** AK Attachment 6, Waste Form, Waste Material Parameters, Prohibited Items and Packaging for Waste Stream AERHDM **(AK-8)** VE BDRS ANLRHVE12011 **(AK-16)** ANLRHVE13004 **(AK-17)** ANLRHVE13007 **(AK-18)** ANLRHVE13002 **(AK-19)** ANLRHVE11010 **(AK-20)** ANLRHVE11017 **(AK-21)** CCP AK Summary Report for ANL RH Debris Waste, Waste Stream AERHDM, CCP-AK-ANLE-500, R11, S. 5.4.2, Tables 4, 5 **(AK-1)** AK Attachment 5, Hazardous Constituents, for Waste Stream	Y	

	WAP Requirement[1] *ANL-CCP Re-certification Audit A-13-24* Table C6-1 Waste Analysis Plan (WAP) Checklist [1]	Procedure Documented		Example of Implementation/Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
		PL CCP-TP-500 S. 4.4 Table 1 Att. 2 & 3	Y	AERHDM **(AK-7)** CCP AK Summary Report for ANL RH Debris Waste, Waste Stream AERHDM, CCP-AK-ANLE-500, R11, S. 5.4.1.2, Table 3 **(AK-1)** Memos attached to AK Attachment 6, Waste Form, Waste Material Parameters, Prohibited Items and Packaging for Waste Stream AERHDM **(AK-8)** ANLRHVE12019 ANLRHVE13001 ANLRHVE13007 **(GEN-1)** CP:08:00374 – Transmittal of Waste Stream Profile Form, Attachment 2, for Remote Handled Waste Stream AERHDM at the Argonne National Laboratory **(GEN-2)**	Y	
31	Are procedures in place to ensure that the following Quality Assurance Objectives are adequately defined and assessed for each characterization method: • Precision as a measure of the mutual agreement among multiple measurements. • Accuracy as the degree of agreement between a measurement result and a true or known value. • Completeness is a measure of the amount of valid data obtained from a method compared to the total amount of data obtained that is expressed as a percentage. • Comparability is the degree to which one data set can be compared to another data set. • Representativeness as an expression of the degree to which data represent characteristics of a population.	CCP-TP-500 Att. 2 & 3	Y	ANLRHVE12011 ANLRHVE12015 ANLRHVE12016 ANLRHVE12017 ANLRHVE12018 ANLRHVE12019 ANLRHVE13001 ANLRHVE13002 ANLRHVE13003 ANLRHVE13004 ANLRHVE13005 ANLRHVE13006 ANLRHVE13007 RHANLVE100015 **(VE-1)**	Y	

	WAP Requirement[1] *ANL-CCP Re-certification Audit A-13-24* Table C6-1 Waste Analysis Plan (WAP) Checklist [1]	Procedure Documented		Example of Implementation/Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
	(Section C-4a(2))					
32	With respect to data generation, are procedures in place to ensure that the generator/storage site's waste characterization program meets the following general requirements: • Testing data packages and batch data reports must be reported accurately in a pre-approved format, must be maintained in permanent files, and must be traceable? • All data must receive a technical review by another qualified operator? (Section C3-4a)	CCP-TP-500 S. 5.0 Att. 2	Y	ANLRHVE12011 ANLRHVE12015 ANLRHVE12016 ANLRHVE12017 ANLRHVE12018 ANLRHVE12019 ANLRHVE13001 ANLRHVE13002 ANLRHVE13003 ANLRHVE13004 ANLRHVE13005 ANLRHVE13006 ANLRHVE13007 RHANLVE100015 **(VE-1)**		
33	Are procedures in place to ensure that the generator/storage site performs validation of waste characterization data for each waste container? (Section C-4)	**VE** CCP-TP-500 Att. 1 & 2	Y	ANLRHVE12011 ANLRHVE12015 ANLRHVE12016 ANLRHVE12017 ANLRHVE12018 ANLRHVE12019 ANLRHVE13001 ANLRHVE13002 ANLRHVE13003 ANLRHVE13004 ANLRHVE13005 ANLRHVE13006 ANLRHVE13007 RHANLVE100015 **(VE-1)**	Y	
		PL CCP-TP-500 S. 4.4 Att. 3	Y	ANLRHVE12019 ANLRHVE13001 ANLRHVE13007 **(GEN-1)**	Y	
34	Are procedures in place to ensure that the generator/storage site has a pre-approved format for reporting waste characterization data? (Section C-4a(3))	**VE** CCP-TP-500 Att. 1 & 2	Y	ANLRHVE12011 ANLRHVE12015 ANLRHVE12016 ANLRHVE12017 ANLRHVE12018 ANLRHVE12019 ANLRHVE13001 ANLRHVE13002	Y	

	WAP Requirement[1] *ANL-CCP Re-certification Audit A-13-24* Table C6-1 Waste Analysis Plan (WAP) Checklist [1]	Procedure Documented		Example of Implementation/Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
		PL CCP-TP-500 S. 4.4 Att. 2 & 3	Y	ANLRHVE13003 ANLRHVE13004 ANLRHVE13005 ANLRHVE13006 ANLRHVE13007 RHANLVE100015 **(VE-1)** ANLRHVE12019 ANLRHVE13001 ANLRHVE13007 **(GEN-1)** CP:08:00374 – Transmittal of Waste Stream Profile Form, Attachment 2, for Remote Handled Waste Stream AERHDM at the Argonne National Laboratory **(GEN-2)**	Y	
35	Are procedures in place to ensure that the generator/storage site prepares testing batch data reports to meet the requirements of their own site-specific QAPjP and/or SOPs? (Section C-4a(3))	**VE** CCP-TP-500 S. 5.0 Att. 1 & 2	Y	ANLRHVE12011 ANLRHVE12015 ANLRHVE12016 ANLRHVE12017 ANLRHVE12018 ANLRHVE12019 ANLRHVE13001 ANLRHVE13002 ANLRHVE13003 ANLRHVE13004 ANLRHVE13005 ANLRHVE13006 ANLRHVE13007 RHANLVE100015 **(VE-1)**	Y	
		PL CCP-TP-500 S. 4.4 Att. 2 & 3	Y	ANLRHVE12019 ANLRHVE13001 ANLRHVE13007 **(GEN-1)**	Y	

	WAP Requirement[1] *ANL-CCP Re-certification Audit A-13-24* Table C6-1 Waste Analysis Plan (WAP) Checklist [1]	Procedure Documented		Example of Implementation/Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
36	Are procedures in place to ensure that all raw data is collected and managed at the data generation level in accordance with the following criteria: • All raw data shall be signed and dated in reproducible ink by the individual collecting the data, or signed and dated using electronic signatures • All data shall be recorded clearly, legibly, and accurately in field records • All changes to original data shall be lined out, initialed, and dated by the individual making the change. Original data may not be obliterated or otherwise be made unreadable • All data shall be transferred and reduced from field records completely and accurately • All field records shall be maintained as specified in Table C-2 of Attachment C • Data shall be organized into standard reporting formats for reporting purposes • All electronic and video data must be stored to ensure that waste container and QC data are readily retrievable (Section C3-4a)	CCP-TP-500 S. 5.0 Att. 1 & 2	Y	ANLRHVE12011 ANLRHVE12015 ANLRHVE12016 ANLRHVE12017 ANLRHVE12018 ANLRHVE12019 ANLRHVE13001 ANLRHVE13002 ANLRHVE13003 ANLRHVE13004 ANLRHVE13005 ANLRHVE13006 ANLRHVE13007 RHANLVE100015 **(VE-1)**	Y	
37	Are procedures in place to ensure that 100 % of batch data reports are subject to independent technical review by an individual qualified to review the data who was not involved in the generation or recording of the data under review. The reviewer shall release the data through signature with an associated review checklist prior to characterization of the associated waste and shipment to the WIPP. The review shall ensure the following, as applicable: • Data generation and reduction were conducted according to the methods used and reported in the proper units and significant figures • Calculations have been verified by a valid calculation program, a spot check of verified calculation programs, and/or a 100 percent check of all hand calculations • The data have been reviewed for transcription errors • The testing QA documentation for BDRs is complete and includes, as applicable, raw data, calculation records, calibration records • Radiography tapes are reviewed on a waste container basis at a minimum of once per testing batch or once per day of operation, whichever is less frequent. The radiography tape will be reviewed against the data on the radiography form to ensure that data are complete and correct • QAOs have been met (Section C3-4a(1))	CCP-TP-500 Att. 2	Y	ANLRHVE12011 ANLRHVE12015 ANLRHVE12016 ANLRHVE12017 ANLRHVE12018 ANLRHVE12019 ANLRHVE13001 ANLRHVE13002 ANLRHVE13003 ANLRHVE13004 ANLRHVE13005 ANLRHVE13006 ANLRHVE13007 RHANLVE100015 **(VE-1)**	Y	

	WAP Requirement[1] *ANL-CCP Re-certification Audit A-13-24* Table C6-1 Waste Analysis Plan (WAP) Checklist [1]	Procedure Documented		Example of Implementation/Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
40	Are procedures in place to ensure that 100 percent of all batch data reports receive a Site Project Manager signature release with an associated review checklist prior to characterization of the associated waste and shipment to the WIPP. This release shall ensure the following: • Testing batch QC checks were properly performed. Radiography data are complete and acceptable based on evidence of videotape review of one waste container per day or once per testing batch, whichever is less frequent • Data generation level independent technical review, validation, and verification have been performed as evidenced by the completed review checklists and appropriate signature releases. • Independent technical reviewers were not involved in the generation or recording of the data under review. • Batch Data review checklists are complete • Batch Data Reports are complete and data properly reported • Verify that data are within established data assessment criteria and meet all applicable QAOs (Section C3-4b(1))	CCP-PO-001 S. C-0b S. C-3b S. C3-4b(1) CCP-TP-001 S. 3.1.1 CCP-TP-500 S. 4.4 Att. 3	Y	ANLRHVE12019 ANLRHVE13001 ANLRHVE13007 **(GEN-1)**	Y	
42	Are procedures in place to ensure that a repeat of the data review process at the data generation level will be performed on a minimum of one randomly chosen waste container every quarter to determine if the verification and validation is performed according to documented procedures? (Section C3-4b)	CCP-TP-001 S. 4.3	Y	CP:13:01016 – Fourth Quarter 2012 Visual Examination Quarterly Repeat of Data Generation Level Review at the Argonne National Laboratory – Remote Handled – January 10, 2013 CP:13:01087 – Results of Visual Examination Quarterly Repeat of Data Generation Level Review: Argonne National Laboratory – Remote Handled Fourth Calendar Quarter 2012 – February 19, 2013 CP:13:01128 – First Quarter 2013 Visual Examination Quarterly Repeat of Data Generation Level Review	Y	

	WAP Requirement[1] *ANL-CCP Re-certification Audit A-13-24* Table C6-1 Waste Analysis Plan (WAP) Checklist [1]	Procedure Documented		Example of Implementation/Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
				at the Argonne National Laboratory – Remote Handled – April 9, 2013 CP:13:01373 – Results of Visual Examination Quarterly Repeat Data Generation Level Data Review: Argonne National Laboratory Remote Handled First Calendar Quarter 2013 – August 13, 2013 CP:13:01287 – Second Quarter 2013 Visual Examination Quarterly Repeat of Data Generation Level Review at the Argonne National Laboratory – Remote Handled – July 9, 2013 CP:13:01374 – Results of Visual Examination Quarterly Repeat Data Generation Level Data Review: Argonne National Laboratory – Remote Handled Second Calendar Quarter 2013 – August 13, 2013 **(GEN-3)**		
43	Are procedures in place and checklists are available to prepare a Site Project Manager (SPM) Summary and a Data Validation Summary (the summaries may be in the same document)? The SPM Summary includes a validation checklist for each batch that is of sufficient detail to document all aspects of a batch data report that could affect data quality. The Data Validation Summary must identify each Batch Data Report reviewed, describe how the validation was performed, identify all problems, and identify all acceptable and unacceptable data. Summaries must include release signatures. (Section C3-4b(2))	CCP-PO-001 S. C-0b S. C-3b S. C3-4b(1) CCP-TP-001 S. 3.1.6 S. 3.1.7 CCP-TP-500 S. 4.4 Att. 3	Y	ANLRHVE12019 ANLRHVE13001 ANLRHVE13007 **(GEN-1)**	Y	
44	Are procedures in place to ensure that non-administrative, WAP-related nonconformances first identified at the site project manager level are reported to the Permittees within seven calendar days of identification, that nonconformance reports are prepared within 30 calendar days, and that corrective action is implemented	CCP-QP-005 S. 4.4.1[D.3]	Y	N/A	N/A	There were no reportable RH NCRs since the previous recertification audit.

	WAP Requirement[1] *ANL-CCP Re-certification Audit A-13-24* Table C6-1 Waste Analysis Plan (WAP) Checklist [1]	Procedure Documented		Example of Implementation/Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
	prior to waste shipment? (Section C3-7)					
45	Are procedures in place to ensure that any waste container for which a nonconformance report (**NCR**) has been written will not be shipped to the WIPP facility unless the condition that led to the NCR for that container is appropriately identified, reconciled, corrected, and documented? Are nonconformance reports prepared for nonconformances identified? Are nonconformances identified and tracked, and does the Site Project Manager oversee the nonconformance report process? (Section C3-7)	CCP-QP-005 (All)	Y	NCRs: NCR-RHANL-0509-13-R1 NCR-RHANL-1521-12-R0 NCR-RHANL-1522-12-R0 NCR-RHANL-1523-12-R0 **(GEN-4)** RH Nonconformance Report Log for Project Level and Data Generation Level since last recertification audit **(GEN-5)**	Y	
	DATA TRANSMITTAL					
48	Are procedures in place to ensure that the generator/storage site transmits data by hard copy or electronic copy from the data generation level to the site project level? If electronic, does the generator/site have a hard copy available on demand? (Section C-4a(5))	CCP-TP-500 S. 4.4 Att. 3	Y	ANLRHVE12019 ANLRHVE13001 ANLRHVE13007 **(GEN-1)**	Y	
50	Are procedures in place to ensure that the generator/storage site inputs the data into the WWIS manually or electronically? (Section C-4a(5))	CCP-TP-530 (All)	Y	RH Package for Container AE0130 including three canisters: 1121, 1122, and 1123; Container AE0150 including three canisters: 1148, 1150, and 1153; and Container AE0157 including three canisters: 1089, 1168, and 1169 **(GEN-6)**	Y	Characterization data packages for the referenced containers were reviewed including: CCP data spreadsheet reports, pages from batch data reports showing analyses values, and WWIS/WDS Container Data Reports.
51	Are procedures in place to ensure that the generator/storage site enters the data into the WWIS in the exact format required by the database? (Section C-4a(5))	CCP-TP-530 (All)	Y	RH Package for Container AE0130 including three canisters: 1121, 1122, and 1123; Container AE0150 including three canisters: 1148, 1150, and 1153; and Container AE0157 including three canisters: 1089, 1168, and 1169 **(GEN-6)**	Y	Characterization data packages for the referenced containers were reviewed including: CCP data spreadsheet reports, pages from batch data reports showing analyses values, and WWIS/WDS Container Data Reports.
52	Are procedures in place to ensure all of the data presented on Table C-3 of the	CCP-TP-530	Y	RH Package for	Y	Characterization data packages

	WAP Requirement[1] *ANL-CCP Re-certification Audit A-13-24* Table C6-1 Waste Analysis Plan (WAP) Checklist [1]	Procedure Documented		Example of Implementation/Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
	Permit is transmitted to the WWIS? (Table C-3)	(All)		Container AE0130 including three canisters: 1121, 1122, and 1123; Container AE0150 including three canisters: 1148, 1150, and 1153; and Container AE0157 including three canisters: 1089, 1168, and 1169 **(GEN-6)**		for the referenced containers were reviewed including: CCP data spreadsheet reports, pages from batch data reports showing analyses values, and WWIS/WDS Container Data Reports.
	RECORDS AND RECORD MANAGEMENT					
55	Are procedures in place to ensure that the generator/storage site's hard copy and/or electronic data reports follow the Permittees' format requirements? (Section C-4a(3))	CCP-TP-001 (All) CCP-TP-500 (All)	Y	ANLRHVE12019 ANLRHVE13001 ANLRHVE13007 **(GEN-1)** CP:08:00374 – Transmittal of Waste Stream Profile Form, Attachment 2, for Remote Handled Waste Stream AERHDM at the Argonne National Laboratory **(GEN-2)**	Y	
56	Are procedures in place to ensure that hard copy or electronic Waste Stream Profile Form will include the following: • Generator/storage site name • Generator/storage site EPA ID • Date of audit report approval by NMED (if obtained) • Original generator of waste stream • Whether waste is Contact-Handled or Remote-Handled • Waste Stream WIPP Identification Number • Summary Category Group • Waste Matrix Code Group • Waste Material Parameter Weight Estimates per unit of waste • Waste stream name • A description of the waste stream • Applicable EPA hazardous waste codes numbers	CCP-TP-002 S. 4.3 Att. 2	Y	CP:08:00374 – Transmittal of Waste Stream Profile Form, Attachment 2, for Remote Handled Waste Stream AERHDM at the Argonne National Laboratory **(GEN-2)**	Y	

	WAP Requirement[1] *ANL-CCP Re-certification Audit A-13-24* Table C6-1 Waste Analysis Plan (WAP) Checklist [1]	Procedure Documented		Example of Implementation/Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
	• Applicable TRUCON codes • A listing of acceptable knowledge documentation used to identify the waste stream • The waste characterization procedures used and the reference and date of the procedure • Certification signature of Site Project Manager, name, title, and date signed (Section C3-6b(1))					
56a	Are procedures in place to ensure that hard copy or electronic Characterization Information Summary will include the following: • Data reconciliation with DQOs • Radiography and visual examination summary to document that all prohibited items are absent in the waste and to verify that the physical form of the waste matches its waste stream description as determined by AK (if applicable) • A complete listing of all container identification numbers used to generate the Waste Stream Profile Form, cross-referenced to each Batch Data Report • Complete AK summary, including stream name and number, point of generation, waste stream volume (current and projected), generation dates, TRUCON codes, Summary Category Group, Waste Matrix Code(s) and Waste Matrix Code Group, other TWBIR information, waste stream description, areas of operation, generating processes, RCRA determinations, radionuclide information, all references used to generate the AK summary, and any other information required by Permit Attachment C4, Section C4-2b. • Method for determining Waste Material Parameter Weights per unit of waste. • List of any AK Sufficiency Determinations requested for the waste stream • Certification through acceptable knowledge or testing that any waste assigned the hazardous waste number of U134 (hydrofluoric acid) no longer exhibits the characteristic of corrosivity. This is verified by ensuring that no liquid is present in U134 waste. • A justification for the selection of radiography and/or VE as an appropriate method of characterizing the waste. (Section C3-6b(2))	CCP-TP-002 S. 4.4 Att. 3	Y	CP:08:00374 – Transmittal of Waste Stream Profile Form, Attachment 2, for Remote Handled Waste Stream AERHDM at the Argonne National Laboratory **(GEN-2)**	Y	
56b	Are procedures in place to assure that ongoing container characterization results	CCP-TP-001 S. 4.2	Y	ANLRHVE12019 ANLRHVE13001	Y	

	WAP Requirement[1] *ANL-CCP Re-certification Audit A-13-24* Table C6-1 Waste Analysis Plan (WAP) Checklist [1]	Procedure Documented		Example of Implementation/Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
	are cross referenced to Batch Data Reports? (Section C3-6b)	CCP-TP-002 S. 4.4.2 Att. 4		ANLRHVE13007 **(GEN-1)** CP:08:00374 – Transmittal of Waste Stream Profile Form, Attachment 2, for Remote Handled Waste Stream AERHDM at the Argonne National Laboratory **(GEN-2)**		
58	Are procedures in place to ensure that project level reports are compiled into Characterization Information Summaries? (Section C3-6b)	CCP-TP-002 S. 4.4	Y	CP:08:00374 – Transmittal of Waste Stream Profile Form, Attachment 2, for Remote Handled Waste Stream AERHDM at the Argonne National Laboratory **(GEN-2)**	Y	
59	Are procedures in place to ensure that the generator/storage site uses forms for data reporting that are pre-approved forms in site-specific documentation? (Section C3-6)	CCP-TP-500 Att. 1 & 2 -	Y	ANLRHVE12011 ANLRHVE12015 ANLRHVE12016 ANLRHVE12017 ANLRHVE12018 ANLRHVE12019 ANLRHVE13001 ANLRHVE13002 ANLRHVE13003 ANLRHVE13004 ANLRHVE13005 ANLRHVE13006 ANLRHVE13007 RHANLVE100015 **(VE-1)**	Y	
60	Are procedures in place to ensure that the generator/storage site's site project manager submits to the WIPP facility a summary of the waste stream information and reconciliation with data quality objectives (DQOs) once a waste stream is characterized? (Section C-4a(5))	CCP-TP-002 (All)	Y	ANLRHVE12019 ANLRHVE13001 ANLRHVE13007 **(GEN-1)** CP:08:00374 – Transmittal of Waste Stream Profile Form, Attachment 2, for Remote Handled Waste Stream AERHDM at the Argonne National Laboratory **(GEN-2)**	Y	
61	Are procedures in place to ensure that the generator/storage site project office	CCP-TP-002	Y	ANLRHVE12019	Y	

	WAP Requirement[1] *ANL-CCP Re-certification Audit A-13-24* Table C6-1 Waste Analysis Plan (WAP) Checklist [1]	Procedure Documented		Example of Implementation/Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
	completes a WSPF based on the Batch Data Reports? (C3-6b)	S. 4.3		ANLRHVE13001 ANLRHVE13007 **(GEN-1)** CP:08:00374 – Transmittal of Waste Stream Profile Form, Attachment 2, for Remote Handled Waste Stream AERHDM at the Argonne National Laboratory **(GEN-2)**		
62	Are procedures in place to ensure that the generator/storage Site Project Manager submits the WSPF to the Permittees for DOE's approval along with the accompanying Characterization Information Summary for that waste stream? (Section C-4a(5))	CCP-TP-002 S. 4.3 S. 4.4	Y	CP:08:00374 – Transmittal of Waste Stream Profile Form, Attachment 2, for Remote Handled Waste Stream AERHDM at the Argonne National Laboratory **(GEN-2)**	Y	
63	Are procedures in place to ensure that the generator/storage site maintains records related to waste characterization testing activities in the testing facility files, or site project files for those facilities located on-site? (Section C-4a(6))	CCP-QP-008, (All) CCP-QP-028, (All)	Y	RH Records Inventory and Distribution Schedule (RIDS) dated 7/23/2013 **(GEN-7)**	Y	
64	Are procedures in place to ensure that the appropriate documented training and indoctrination is performed for all individuals and that procedures are documented in site specific QAPjPs and procedures? (Section C3-8)	CCP-PO-001 (All) CCP-QP-002 S. 4.0	Y	RH Program – ANLE List of Qualified Individuals dated 07/25/2013 **(GEN-8)** Qualification records for selected CCP personnel **(GEN-9)**	Y	
66	Are procedures in place to ensure that the generator/storage site has an appropriate records inventory and disposition schedule (RIDS) or equivalent that was prepared and approved by appropriate site personnel? (Section C-4a(6))	CCP-QP-008 S. 3.1.2 CCP-QP-028 S. 3.1.1	Y	RH Records Inventory and Distribution Schedule (RIDS) dated 7/23/2013 **(GEN-7)**	Y	
67	Are procedures in place to ensure that the generator/storage site maintains all records relevant to an enforcement action, regardless of disposition, until they are no longer needed for enforcement action, and then dispositioned per the approved RIDS? (Section C-4a(6))	CCP-QP-008 S. 4.15.1 (NOTE) CCP-QP-028 (All)	Y	RH Records Inventory and Distribution Schedule (RIDS) dated 7/23/2013 **(GEN-7)**	Y	
68	Are procedures in place to ensure that the generator/storage site maintains records that are designated as Lifetime Records for the life of the waste characterization program plus six years or that the records have been transferred to the WIPP	CCP-PO-001 S. C-4a(6) Table C-2	Y	RH Records Inventory and Distribution Schedule (RIDS) dated 7/23/2013 **(GEN-7)**	Y	

	WAP Requirement[1] *ANL-CCP Re-certification Audit A-13-24* Table C6-1 Waste Analysis Plan (WAP) Checklist [1]	Procedure Documented		Example of Implementation/Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
	Records Archive facility? Lifetime Records include: • Test facility Batch Data Reports, • Waste Stream Characterization Package, • Data reduction, validation, and reporting documentation, • Acceptable knowledge documentation, • WSPF and Characterization Information Summary (Section C-4a(6), Table C-2)	CCP-PO-002 S. 5.5 CCP-QP-008 (All) CCP-QP-028 (All)				
69	Are procedures in place to ensure that the generator/storage site maintains records that are designated as Non-Permanent Records for ten years from the date of record generation, and then dispositioned according per the approved RIDS or transferred to the WIPP Records Archive facility? Non-Permanent Records include: • Nonconformance documentation, • Variance documentation, • Assessment documentation, • Calculations and related software documentation, • Training/qualification documentation, • QAPjP documentation (all revisions), • Calibration documentation, • Procurement documentation, • QA procedures (all revisions), • Technical implementing procedures (all revisions), and • Audio/video recording (radiography, visual, etc.). (Section C-4a(6), Table C-2)	CCP-PO-001 S. C-4a(6) Table C-2 CCP-PO-002 S. 5.5 CCP-QP-008 (All) CCP-QP-028 (All)	Y	RH Records Inventory and Distribution Schedule (RIDS) dated 7/23/2013 **(GEN-7)**	Y	
70	Are procedures in place to ensure that the generator/storage site has raw data that is identifiable and legible, and provides documentary evidence of quality? (Section C-4a(6))	CCP-TP-500 Att. 1 & 2	Y	ANLRHVE12011 ANLRHVE12015 ANLRHVE12016 ANLRHVE12017 ANLRHVE12018 ANLRHVE12019 ANLRHVE13001 ANLRHVE13002 ANLRHVE13003 ANLRHVE13004 ANLRHVE13005	Y	

	WAP Requirement[1] *ANL-CCP Re-certification Audit A-13-24* Table C6-1 Waste Analysis Plan (WAP) Checklist [1]	Procedure Documented		Example of Implementation/Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
				ANLRHVE13006 ANLRHVE13007 RHANLVE100015 **(VE-1)**		
71	Are procedures in place to ensure that if the generator/storage site ceases to operate, that all records be transferred before closeout? (Section C-4a(6))	CCP-QP-008 S. 4.10.2	Y	N/A	N/A	This site has not ceased operations.
	SHIPMENT					
72	Are procedures in place to ensure that the generator/storage site accurately completes an EPA Hazardous Waste Manifest prior to shipping the waste to WIPP that contains the following information: • Generator/storage site name and EPA ID • Generator/storage site contact name and phone number • Quantity of waste • List of up to six state and/or federal hazardous waste numbers in each line item • Listing of all container IDS • Signature of authorized generator representative (Section C-5b)	CCP-TP-507 S. 2.6.6 S. 4.2 S. 4.4 Att. 1	Y	Examined HWM 010995097 (**GEN-11**)	Y	
73	Are procedures in place to ensure that the generator/storage site accurately completes the following container specific information: • Waste stream identification number • List of hazardous waste numbers per container • Certification data • Shipping data (Section C-5b)	CCP-TP-507 S. 2.6.6 S. 4.2 S. 4.4 Att. 1	Y	Examined HWM 010995097 (**GEN-11**)	Y	

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

Table C6-2 Acceptable Knowledge (AK) Checklist
ANLE CCP Audit A-13-24
August 27-29, 2013

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Acceptable Knowledge (AK) Checklist[1]

	WAP Requirement[2] *ANLE CCP RH Recertification Audit A-13-24* Table C6-2 Acceptable Knowledge (AK) Checklist[1]	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why)	Item Reviewed	Adequate? Y/N	
	GENERAL REQUIREMENTS					
134	Are the primary document(s) required in Permit Attachment C4 containing acceptable knowledge information available? (Section C4-2)	CCP-TP-002 S. 4.3-4.5 CCP-TP-005 S. 4.4	Y	CCP AK Summary Report for ANL RH Debris Waste, Waste Stream AERHDM, CCP-AK-ANLE-500, R11 **(AK-1)** Waste Stream Profile Form and attachments for Waste Stream AERHDM **(AK-2)** QMIS Approval for AK Summary for Waste Stream AERHDM R11 **(AK-3)**	Y	During the week of August 26, 2013, CTAC conducted a recertification audit of ANLE for the RH S5000 debris stream AERHDM. The AK audit team examined the AK record and process for this waste stream generated in the AGHCF and the K Wing at ANLE. Since there were no HSG sampling activities since the previous audit, the AK review was performed using the new C6 checklists that reflected the removal of chemical sampling requirements from the permit
135	Has the generator developed a methodology whereby a logical sequence of acceptable knowledge information that progresses from general facility to more detailed waste-specific information can be acquired? (Section C4-2)	CCP-TP-005 S. 4.0	Y	CCP AK Summary Report for ANL RH Debris Waste, Waste Stream AERHDM, CCP-AK-ANLE-500, R11 **(AK-1)** AK Source Document Summaries for Waste Stream AERHDM **(AK-4)**	Y	
136	Does the site have adequate procedures in place to ensure that the Acceptable Knowledge process is adequately implemented? Do these procedures facilitate the mandatory traceability analysis performed for each Summary Waste Category Group examined during the audit? (Section C4-2)	CCP-TP-005 S. 4.0	Y	CCP AK Summary Report for ANL RH Debris Waste, Waste Stream AERHDM, CCP-AK-ANLE-500, R11 **(AK-1)** Waste Stream Profile Form and attachments for Waste Stream AERHDM **(AK-2)** AK Source Document Summaries for Waste Stream AERHDM **(AK-4)**	Y	A total of 6 drums were included in the required traceability exercise, consisting of waste containers representative of the AGHCF and K Wing operations The drum numbers are: 1099 1197 1242 1182 RW18904 RW48268

	WAP Requirement[2] *ANLE CCP RH Recertification Audit A-13-24* Table C6-2 Acceptable Knowledge (AK) Checklist[1]	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why)	Item Reviewed	Adequate? Y/N	
				Traceability BDRs VE BDRs ANLRHVE12011 (**AK-16)** ANLRHVE13004 **(AK-17)** ANLRHVE13007 **(AK-18)** ANLRHVE13002 **(AK-19)** ANLRHVE11010 **(AK-20)** ANLRHVE11017 **(AK-21)** Waste Stream Characterization Checklists **(AK-22)** IDC Database screenshots **(AK-11)** AK Tracking Spreadsheet **(AK-12)** AK Attachment 8, Waste Container List **(AK-9)** Container Input Forms **(AK-13)**		
137	Does the generator site's TRU mixed waste management program information clearly define (or provide a methodology for defining) waste categorization schemes and terminology, provide a breakdown of the types and quantities of TRU mixed waste generated/stored at the site, and describe how waste is tracked and managed at the generator site (including historical and current operations? Do procedures ensure that waste streams are adequately identified? (Section C4-2a)	CCP-TP-005 S. 4.2.2 S. 4.2.4 S. 4.2.5 S. 4.2.6 S. 4.4 Att. 8 CCP-TP-001 S. 2.7 S. 4.1 S. 4.2	Y	CCP AK Summary Report for ANL RH Debris Waste, Waste Stream AERHDM, CCP-AK-ANLE-500, R11 **(AK-1)** IDC Database screenshots **(AK-11)** AK Tracking Spreadsheet **(AK-12)** AK Attachment 8, Waste Container List **(AK-9)**	Y	
138	Does site documentation procedures indicate that the site will document, justify, and consistently define waste streams and assign EPA hazardous waste numbers?	CCP-TP-005 S. 4.4.16-	Y	CCP AK Summary Report for ANL RH Debris	Y	

	WAP Requirement[2] *ANLE CCP RH Recertification Audit A-13-24* Table C6-2 Acceptable Knowledge (AK) Checklist[1]	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why)	Item Reviewed	Adequate? Y/N	
	(Section C4-2b)	4.4.21 Att. 5		Waste, Waste Stream AERHDM, CCP-AK-ANLE-500, R11, S. 5.4.2, Tables 4 & 5 **(AK-1)** AK Attachment 5, Hazardous Constituents, for Waste Stream AERHDM **(AK-7)**		
	REQUIRED AND ADDITIONAL INFORMATION					
140	Does the generator site document that the following must be included in the acceptable knowledge record: • Map of the site with the areas and facilities involved in TRU waste generation, treatment, and storage identified • Facility mission description as related to TRU waste generation and management (e.g., nuclear weapons research may involve metallurgy, radiochemistry, and nuclear physics operations that result in specific waste streams) • Description of the operations that generate TRU waste at the site (e.g., plutonium recovery, weapons design, or weapons fabrication) • Waste identification or categorization schemes used at the facility (e.g., item description codes, content codes) • Types and quantities of TRU mixed waste generated, including historical generation through future projections • Correlation of waste streams generated from the same building and process, as appropriate (e.g., sludge, combustibles, metals, and glass) • Waste certification procedures for retrievably stored and newly generated wastes to be sent to the WIPP facility (Section C4-2a)	CCP-TP-005 S. 4.2.2 S. 4.4.5 Att. 1	Y	CCP-AK-ANLE-500, R11 **(AK-1)** Bullet 1 S. 4.1 Figures 1, 2 **(AK-1)** Bullet 2 S. 4.3 **(AK-1)** Bullet 3 S. 4.2 S. 4.7 **(AK-1)** Bullet 4 S. 4.6.3 **(AK-1)** Bullet 5 S. 4.6.1 **(AK-1)** Bullet 6 S. 4.6.2 **(AK-1)** Bullet 7 S. 4.8 **(AK-1)**	Y	
141	Does the generator site document that the following shall be collected for each waste stream:	CCP-TP-005 S. 4.2.4 S. 4.4.5 Att. 1	Y	CCP-AK-ANLE-500, R11 **(AK-1)**	Y	

	WAP Requirement[2] *ANLE CCP RH Recertification Audit A-13-24* Table C6-2 Acceptable Knowledge (AK) Checklist[1]	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why)	Item Reviewed	Adequate? Y/N	
	A. Area(s) and/or building(s) from which the waste stream was or is generated B. Waste stream volume and time period of generation (e.g., 100 standard waste boxes of retrievable stored waste generated from June 1977 through December 1977) C. Waste generating process described for each building (e.g., batch waste stream generated during decommissioning operations of glove boxes), including processes associated with U134 waste generation, if applicable. D. Documentation demonstrating how the site has historically managed the waste, including the historical regulatory status of the waste (i.e., TRU mixed versus TRU non-mined waste) E. Process flow diagrams (e.g., a diagram illustrating glove boxes from a specific building to a size reduction facility to a container storage area). In the case of research/development, analytical laboratory waste, or the similar processes where process flow diagrams cannot be created, a description of the waste generating processes, rather than a formal process flow diagram, may be included if this modification is justified and the justification is placed in the auditable record F. Material inputs or other information that identifies the chemical content of the waste stream and the physical waste form (e.g., glove box materials and chemical handled during glove box operations, events or processes that may have modified the chemical or physical properties of the waste stream after generation, data obtained through visual examination of newly generated waste that later undergoes radiography; information demonstrating neutralization of U134 [hydrofluoric acid] and waste compatibility. (Section C4-2b)			A. S. 5.1 **(AK-1)** B. S. 5.2 **(AK-1)** AK Source Document Summaries, C2025 **(AK-4)** C. S. 5.3 Figures 3 & 4 **(AK-1)** D. S. 5.4.2 **(AK-1)** AK Source Document Summaries, C351 **(AK-4)** E. S. 4.7 Figures 3 & 4 **(AK-1)** F. S. 5.4.1 S. 5.4.2 Tables 3, 4, 5 **(AK-1)**		
142	Do site documents/procedures require that the facility will provide a summary to the Permittees that summarizes all information collected, including basis and rationale	CCP-TP-005 S. 4.4 S. 4.9	Y	CCP AK Summary Report for ANL RH Debris	Y	

	WAP Requirement[2] *ANLE CCP RH Recertification Audit A-13-24* Table C6-2 Acceptable Knowledge (AK) Checklist[1]	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why)	Item Reviewed	Adequate? Y/N	
	for all waste stream designations? Is an example of this summary available for audit review? If discrepant hazardous waste data exist in required information, do sites consider applying all hazardous waste numbers, but assess and evaluate the information to determine the appropriate hazardous waste number consistent with RCRA requirements? (Section C4-2b)			Waste, Waste Stream AERHDM, CCP-AK-ANLE-500, R11 **(AK-1)** AK Discrepancy Resolutions **(AK-10)**		
143	Do site procedures indicate that if the required AK information is not available for a particular waste stream, that the waste stream will not be eligible for an AK Sufficiency Determination? (Section C4-2)	CCP-TP-005 S. 4.2 S. 4.4 S. 4.7	Y	AK Documentation Checklist, Attachment 1, for Waste Stream AERHDM **(AK-5)**	Y	

	WAP Requirement[2] *ANLE CCP RH Recertification Audit A-13-24* Table C6-2 Acceptable Knowledge (AK) Checklist[1]	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why)	Item Reviewed	Adequate? Y/N	
144	Have the following procedures been prepared?: A. Procedures for identifying and assigning the physical waste form of the waste B. Procedures for delineating waste streams and assigning Waste Matrix Codes C. Procedures for resolving inconsistencies in acceptable knowledge documentation D. Procedures for visual examination and/or radiography, if applicable E. For newly generated waste, procedures describing process controls used to ensure prohibited items (specified in the WAP, Permit Attachment C) are documented and managed F. Procedures to ensure radiography and visual examination include a list of prohibited items that the operator shall verify are not present in each container (e.g. liquid exceeding TSDF-WAC limits, corrosives, ignitables, reactives, and incompatible wastes) G. Procedures to document how changes to Waste Matrix Codes, waste stream assignment, and associated Environmental Protection Agency hazardous waste numbers based on material composition are documented for any waste H. Procedures that ensure the assignment of EPA hazardous waste numbers is appropriate, consistent with RCRA requirements, and adequately considers site historical waste management	**AK** A. CCP-TP-005 S. 4.4.13 S. 4.4.14 B. CCP-TP-005 S. 4.4.11 NOTE above S. 4.4.12 C & G. CCP-TP-005 S. 4.9 E. CCP-TP-500 (All) H. CCP-TP-005, S. 4.4.16 -4.4.21 I. CCP-TP-005 S. 4.4.26	Y	CCP-AK-ANLE-500, R11 **(AK-1)** A. S. 5.4.1 **(AK-1)** B. S. 5.4.1.1 **(AK-1)** C. AK Discrepancy Resolutions **(AK-10)** E. <u>VE BDRs</u> ANLRHVE12011 (**AK-16)** ANLRHVE13004 **(AK-17)** ANLRHVE13007 **(AK-18)** ANLRHVE13002 **(AK-19)** ANLRHVE11010 **(AK-20)** ANLRHVE11017 **(AK-21)** G. AK Discrepancy Resolutions **(AK-10)** H. CCP AK Summary Report for ANL RH Debris Waste, Waste Stream AERHDM, CCP-AK-ANLE-500, R11, S. 5.4.2, Tables 4, 5 **(AK-1)** AK Attachment 5, Hazardous Constituents, for Waste Stream AERHDM **(AK-7)**	Y Y Y Y Y Y Y	

	WAP Requirement[2] *ANLE CCP RH Recertification Audit A-13-24* Table C6-2 Acceptable Knowledge (AK) Checklist[1]	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why)	Item Reviewed	Adequate? Y/N	
	I. Procedures for estimating waste material parameter weights (Section C4-2b)	**VE** D, E & F: CCP-TP-500 (All)	Y	I. CCP AK Summary Report for ANL RH Debris Waste, Waste Stream AERHDM, CCP-AK-ANLE-500, R11, S. 5.4.1.2, Table 3 **(AK-1)** Memo attached to AK Attachment 6, Waste Form, Waste Material Parameters, Prohibited Items and Packaging for Waste Stream AERHDM **(AK-8)** ANLRHVE12011 ANLRHVE12015 ANLRHVE12016 ANLRHVE12017 ANLRHVE12018 ANLRHVE12019 ANLRHVE13001 ANLRHVE13002 ANLRHVE13003 ANLRHVE13004 ANLRHVE13005 ANLRHVE13006 ANLRHVE13007 RHANLVE100015 **(VE-1)**	Y	
145	Does the generator provide procedures or written commitment to collect additional acceptable knowledge information, as available and as necessary to augment mandatory information? (Section C4-2c)	CCP-TP-005 S. 4.2.5 Att.1	Y	AK Documentation Checklist, Attachment 1, for Waste Stream AERHDM **(AK-5)**	Y	
146	Does the generator site document that all additional specific, relevant information used in the acceptable knowledge process will be identified and its use explained? Is all necessary information assembled and has it been appropriately used? (Section C4-2c)	CCP-TP-005 S. 4.2.5 Att.1	Y	AK Documentation Checklist, Attachment 1, for Waste Stream AERHDM **(AK-5)**	Y	

	WAP Requirement[2] *ANLE CCP RH Recertification Audit A-13-24* Table C6-2 Acceptable Knowledge (AK) Checklist[1]	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why)	Item Reviewed	Adequate? Y/N	
147	Does the generator site discrepancy analysis documentation (for acceptable knowledge additional and required documentation) indicate that if discrepancies are detected, the site may consider applying all hazardous waste numbers indicated in the required and additional information, but must assess and evaluate the information to determine the appropriate hazardous waste numbers consistent with RCRA requirements? (Section C4-2c)	CCP-TP-005 S. 4.9	Y	AK Discrepancy Resolutions **(AK-10)**	Y	
	TRAINING					
148	Does the generator site have procedures to ensure that all personnel involved with acceptable knowledge waste characterization have the following training, and is this training documented? A. WIPP WAP in Permit Attachment C and the TSDF-WAC specified in this permit B. State and Federal RCRA regulations associated with solid and hazardous waste characterization C. Discrepancy resolution and reporting D. Site-specific procedures associated with waste characterization using acceptable knowledge (Section C4-3a)	CCP-QP-002 S. 4.2.1	Y	Acceptable Knowledge Expert (AKE) and Site Project Manager (SPM) Training files **(GEN-10)**	Y	
	PROCEDURES					
149	Has the generator site developed the following procedures, and are these procedures technically sufficient? A. Sites must prepare and implement a written procedure outlining the specific methodology used to assemble acceptable knowledge records, including the origin of the documentation, how it will be used, and any limitations associated with the information (e.g., identify the purpose and scope of a study that included limited sampling and analysis data). B. Sites must develop and implement a written procedure to compile the required acceptable knowledge record.	CCP-TP-005 S. 4.2 S. 4.3 S. 4.4 S. 4.9 CCP-TP-001 S. 2.7 S. 4.1 S. 4.2 CCP-TP-500 (All)	Y	A. CCP AK Summary Report for ANL RH Debris Waste, Waste Stream AERHDM, CCP-AK-ANLE-500, R11 **(AK-1)** AK Source Document Summaries for Waste Stream AERHDM **(AK-4)** B. CCP AK Summary Report for ANL RH Debris Waste, Waste Stream AERHDM, CCP-AK-	Y	

	WAP Requirement[2] *ANLE CCP RH Recertification Audit A-13-24* Table C6-2 Acceptable Knowledge (AK) Checklist[1]	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why)	Item Reviewed	Adequate? Y/N	
	C. Sites must develop and implement a written procedure that ensures unacceptable wastes (e.g., reactive, ignitable, corrosive) are identified and segregated from TRU mixed waste populations sent to WIPP. D. Sites must prepare and implement a written procedure to evaluate acceptable knowledge and resolve discrepancies. For example, if different sources of information indicate different hazardous wastes are present, then sites must include all sources of information in its records and may choose to either conservatively assign hazardous waste numbers, or assign only those numbers deemed appropriate and consistent with RCRA requirements. All information used to justify assignment of hazardous waste numbers must be placed in the auditable record. Further, the assignment of hazardous waste numbers shall be tracked in the auditable record to all required documentation.			ANLE-500, R11 **(AK-1)** C. CCP AK Summary Report for ANL RH Debris Waste, Waste Stream AERHDM, CCP-AK-ANLE-500, R11, S. 5.4.5 **(AK-1)** AK Attachment 6, Waste Form, Waste Material Parameters, Prohibited Items and Packaging for Waste Stream AERHDM **(AK-8)** VE BDRS ANLRHVE12011 (**AK-16)** ANLRHVE13004 **(AK-17)** ANLRHVE13007 **(AK-18)** ANLRHVE13002 **(AK-19)** ANLRHVE11010 **(AK-20)** ANLRHVE11017 **(AK-21)** D. AK Discrepancy Resolutions **(AK-10)**		C: All container management and movement done by ANL personnel.
149a	E. Sites must prepare and implement a written procedure to identify hazardous wastes and assign the appropriate hazardous waste numbers to each waste stream. The following are minimum baseline requirements/standards that site-specific procedures must include to ensure comparable and consistent	CCP-TP-005 S. 1.1 S. 4.2 S. 4.3 S. 4.4	Y	E1. CCP AK Summary Report for ANL RH Debris Waste, Waste Stream AERHDM, CCP-AK-	Y	

	WAP Requirement[2] *ANLE CCP RH Recertification Audit A-13-24* Table C6-2 Acceptable Knowledge (AK) Checklist[1]	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why)	Item Reviewed	Adequate? Y/N	
	characterization of hazardous waste: 1. Compile all of the required information in an auditable record. 2. Review the compiled information and delineate waste streams. Delineation of waste streams must comply with the WAP definition in Permit Attachment C, Section C-0a, and justify combining waste historically managed separately as TRU mixed and TRU non-mixed waste streams into a single waste stream. 3. Review the compiled information to determine if the waste stream is compliant with the TSDF-WAC 4. Review the required information to determine if the waste is listed under 20.4.1.200 NMAC (incorporating 40 CFR 261), Subpart D. Assign all listed hazardous waste numbers, unless the site chooses to justify an alternative assignment and document the justification in the auditable record. 5. Review the required information to determine if the waste exhibits a hazardous characteristic or may contain hazardous constituents	CCP-TP-500 S. 4.4		ANLE-500, R11 **(AK-1)** E2. CCP AK Summary Report for ANL RH Debris Waste, Waste Stream AERHDM, CCP-AK-ANLE-500, R11, S. 2.0, 5.4 **(AK-1)** E3. CCP AK Summary Report for ANL RH Debris Waste, Waste Stream AERHDM, CCP-AK-ANLE-500, R11, S. 5.4.2.3, 5.4.4, 5.4.5 **(AK-1)** AK Attachment 6, Waste Form, Waste Material Parameters, Prohibited Items and Packaging for Waste Stream AERHDM **(AK-8)** VE BDRS ANLRHVE12011 (**AK-16)** ANLRHVE13004 **(AK-17)** ANLRHVE13007 **(AK-18)** ANLRHVE13002 **(AK-19)** ANLRHVE11010 **(AK-20)** ANLRHVE11017 **(AK-21)** E4&E5 CCP AK Summary Report for ANL RH Debris Waste, Waste Stream AERHDM, CCP-AK-ANLE-500, R11, S. 5.4.2, Tables 4 & 5		

	WAP Requirement[2] *ANLE CCP RH Recertification Audit A-13-24* Table C6-2 Acceptable Knowledge (AK) Checklist[1]	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why)	Item Reviewed	Adequate? Y/N	
	included in the toxicity characteristics specified in 20.4.1.200 NMAC (incorporating 40 CFR 261, Subpart C. If a toxicity characteristic contaminant is identified and is not included as a listed waste, sites may evaluate available data and assign the toxicity characteristic hazardous waste number consistent with RCRA requirements. All data examined to reach the hazardous waste number determination must be placed in the auditable record and must present a clear justification for the hazardous waste number analyses. 6. Review the compiled information to provide an estimate of the material parameter weights for each container to be stored or disposed of at WIPP. For newly generated waste, procedures shall be developed and implemented to characterize hazardous waste using acceptable knowledge prior to packaging.			**(AK-1)** AK Attachment 5, Hazardous Constituents, for Waste Stream AERHDM **(AK-7)** E6. CCP AK Summary Report for ANL RH Debris Waste, Waste Stream AERHDM, CCP-AK-ANLE-500, R11, S. 5.4.1.2, Table 3 **(AK-1)** Memo attached to AK Attachment 6, Waste Form, Waste Material Parameters, Prohibited Items and Packaging for Waste Stream AERHDM **(AK-8)**		
149b	F. Sites shall ensure that results of audits of the TRU mixed waste characterization programs at the site are available in the records. G. Sites shall identify all process controls (implemented to ensure that the waste contains no prohibited items and to control hazardous waste content and/or physical form) that have been applied to retrievably stored waste and/or may presently be applied to newly generated waste. Process controls are applied <u>at the time</u> of waste generation/packaging to control waste content, whereas any activities performed <u>after</u> waste generation/packaging to identify prohibited items, hazardous waste content, or physical form are waste characterization activities, not process controls. The AK record must contain specific process control and supporting documentation identifying when these process controls are used to control waste content. See Permit Attachment C, Section C-2 for programmatic requirements related to process controls. (Section C4-3b)	F. CCP-PO-001, S. C4-3f S. C4-3b CCP-QP-021, (All) WP 13-QA.03 (All) G. CCP-TP-005, S. 4.2 - 4.4 Att. 1	Y	F. Internal Audit **(AK-14)** G. AK Source Document Summaries for AERHDM, P009, P055, P626 **(AK-4)** <u>VE BDRS</u> ANLRHVE12011 (**AK-16)** ANLRHVE13004 **(AK-17)** ANLRHVE13007 **(AK-18)** ANLRHVE13002 **(AK-19)** ANLRHVE11010 **(AK-20)** ANLRHVE11017 **(AK-21)**	Y	

	WAP Requirement[2] *ANLE CCP RH Recertification Audit A-13-24* Table C6-2 Acceptable Knowledge (AK) Checklist[1]	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why)	Item Reviewed	Adequate? Y/N	
150	Does the site have implemented procedures which comply with the following criteria to establish acceptable knowledge records: A. Acceptable knowledge information shall be compiled in an auditable record including a road map for all applicable information. B. The overview of the facility and TRU mixed waste management operations in the context of the facility's mission shall be correlated to specific waste stream information. C. Correlations between waste streams, with regard to time of generation, waste generating processes, and site-specific facilities shall be clearly described. For newly generated wastes, the rate and quantity of waste to be generated shall be defined. D. A reference list shall be provided that identifies documents, databases, Quality Assurance protocols, and other sources of information that support the acceptable knowledge information. E. Container inventories for TRU mixed waste in retrievable storage shall be delineated into waste streams by correlating the container identification to all of the required and additional AK information. (Section C4-3c)	CCP-TP-005, S. 1.1 S. 4.2 S. 4.3 S. 4.4 S. 4.10 S. 4.11 Att. 1, 4 & 8 CCP-TP-001, S. 2.7	Y	A. CCP AK Summary Report for ANL RH Debris Waste, Waste Stream AERHDM, CCP-AK-ANLE-500, R11 **(AK-1)** AK Documentation Checklist, Attachment 1, for Waste Stream AERHDM **(AK-5)** B. CCP AK Summary Report for ANL RH Debris Waste, Waste Stream AERHDM, CCP-AK-ANLE-500, R11, S. 4.2, 4.3, 4.6, 5.4 **(AK-1)** C. CCP AK Summary Report for ANL RH Debris Waste, Waste Stream AERHDM, CCP-AK-ANLE-500, R11, S. 4.6.2, 4.7, 5.1, 5.2, 5.4 **(AK-1)** D. Acceptable Knowledge Information List for Waste Stream AERHDM **(AK-6)** E. IDC Database screenshots **(AK-11)** AK Tracking Spreadsheet **(AK-12)** AK Attachment 8, Waste Container List **(AK-9)**	Y	
151	If the generator site submitted an AK Sufficiency Determination Request for a specific waste stream, did the site provide all of the requisite information for which	CCP-TP-005 S. 4.7	Y	N/A	N/A	An AK Sufficiency Determination is not being sought for any ANL

	WAP Requirement[2] *ANLE CCP RH Recertification Audit A-13-24* Table C6-2 Acceptable Knowledge (AK) Checklist[1]	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why)	Item Reviewed	Adequate? Y/N	
	approval is sought? (Section C-0b)					waste streams at this time.
	RE-EVALUATING ACCEPTABLE KNOWLEDGE					
152	Does the generator site have written procedures for the augmentation of all acceptable knowledge information using testing. Testing consists of radiography and visual examination. Do site procedures indicate that the following testing will be conducted based upon the results of the Determination Request AKSD denied - 100% RTR or VE (Section C4-1, C-0b)	CCP-TP-005 S. 4.4 S. 4.5 S. 4.7	Y	CCP AK Summary Report for ANL RH Debris Waste, Waste Stream AERHDM, CCP-AK-ANLE-500, R11 **(AK-1)** VE BDRs ANLRHVE12011 **(AK-16)** ANLRHVE13004 **(AK-17)** ANLRHVE13007 **(AK-18)** ANLRHVE13002 **(AK-19)** ANLRHVE11010 **(AK-20)** ANLRHVE11017 **(AK-21)** Waste Stream Characterization Checklists **(AK-22)**	Y	
155	Does the generator site have procedures for reevaluating acceptable knowledge if the results of the waste characterization indicate that the waste to be shipped does not match the approved waste stream or if the data from radiography or visual examination for waste streams without an AK Sufficiency Determination exhibit this discrepancy? Does this procedure describe how the waste is reassigned, acceptable knowledge reevaluation, and appropriate hazardous waste numbers are assigned? (Section C4-3e)	CCP-TP-005 S. 4.8 S. 4.9 Att. 10	Y	N/A	N/A	There were no examples of discrepancy resolution during characterization and resultant AK reevaluations for this waste stream
156	Do site procedures indicate that debris wastes are assigned toxicity characteristic EPA numbers based on AK regardless of the quantity or concentration? (C4-3e)	CCP-TP-005 S. 4.4.17 Att. 5	Y	CCP AK Summary CCP-AK-ANLE-500, R11 S. 5.4.2.2, Tables 4 & 5 **(AK-1)** AK Attachment 5, Hazardous Constituents for Waste Stream AERHDM	Y	

	WAP Requirement[2] *ANLE CCP RH Recertification Audit A-13-24* Table C6-2 Acceptable Knowledge (AK) Checklist[1]	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why)	Item Reviewed	Adequate? Y/N	
				(AK-7)		
	CRITERIA FOR ASSEMBLING AN ACCEPTABLE KNOWLEDGE RECORD DELINEATING THE WASTE STREAM					
158	If wastes are reassigned to a different waste matrix code based on site visual examination or radiography or Permittee confirmation activities, does the generator site have written documentation to ensure that the following steps are followed: A. Review existing information based on the container identification number and document all differences in hazardous waste number assignments B. If differences exist in the hazardous waste numbers that were assigned, reassess and document all required acceptable knowledge information (Section C4-3b) associated with the new designation C. Reassess and document all testing data associated with the waste D. Verify and document that the reassigned waste matrix code was generated within the specified time period, area and buildings, waste generating process, and that the process material inputs are consistent with the waste material parameters identified during radiography or visual examination E. Record all changes to acceptable knowledge records F. If discrepancies exist in the acceptable knowledge information for the revised waste matrix code, document the segregation of the affected portion of the waste stream, and define the actions necessary to fully characterize the waste (Section C4-3e)	CCP-TP-005 S. 4.8 S. 4.9 Att. 10	Y	N/A	N/A	There were no examples of discrepancy resolution during characterization and resultant AK reevaluations for this waste stream
	DATA QUALITY REQUIREMENTS					
168	Are acceptable knowledge processes consistently applied among all generator sites, and does each generator site comply with the following data quality requirements for acceptable knowledge documentation: A. Precision - The qualitative determinations, such as compiling and assessing acceptable knowledge documentation, do not lend themselves to statistical evaluations of precision. However, the acceptable knowledge information will be addressed by the independent review of acceptable knowledge information during internal and external audits. B. Accuracy - The percentage of waste containers which require reassignment to a new waste matrix code and/or designation of different hazardous waste numbers based on testing data and discrepancies identified by the Permittees during waste confirmation will be reported as a measure of	A. CCP-PO-001 S. C4-3f CCP-QP-021 (All) WP 13-QA.03 (All) B. CCP-TP-005 S. 4.6	Y	A. Internal Audit **(AK-14)** B. AK Accuracy Report **(AK-15)**	Y	

	WAP Requirement[2] *ANLE CCP RH Recertification Audit A-13-24* Table C6-2 Acceptable Knowledge (AK) Checklist[1]	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why)	Item Reviewed	Adequate? Y/N	
	acceptable knowledge accuracy. C. Completeness - The acceptable knowledge record must contain 100 percent of the information (Permit Attachment C4-3). The usability of the acceptable knowledge information will be assessed for completeness during audits	C. CCP-TP-005 S. 4.0		C. AK Documentation Checklist, Attachment 1, for Waste Stream AERHDM **(AK-5)**		
168a	D. Comparability - Comparability is ensured through sites meeting the training requirements and complying with the minimum standards outlined for procedures that are used to implement the acceptable knowledge process. All sites must assign hazardous waste numbers in accordance with Permit Attachment C4-4 and provide this information regarding its waste to other sites who store or generate a similar waste stream. E. Representativeness - Representativeness is a qualitative parameter that will be satisfied by ensuring that the process of obtaining, evaluating, and documenting acceptable knowledge information is performed in accordance with the minimum standards established in Permit Attachment C4. Sites also must assess and document the limitations of the acceptable knowledge information used to assign hazardous waste numbers (e.g., purpose and scope of information, date of publication, type and extent to which waste parameters are addressed). (Section C3-3)	D. CCP-TP-005 S. 2.2 S. 4.4 CCP-QP-002 S. 4.2.1 E. CCP-TP-005 S. 2.2 S. 4.0 CCP-QP-002 S. 4.2.1	Y	D. Acceptable Knowledge Expert (AKE) and Site Project Manager (SPM) Training files **(GEN-10)** E. Acceptable Knowledge Expert (AKE) and Site Project Manager (SPM) Training files **(GEN-10)** AK Source Document Summaries for Waste Stream AERHDM **(AK-4)**	Y	
169	Does the generator site address quality control by tracking its performance with regard to the use of acceptable knowledge by: 1) assessing the frequency of inconsistencies among information, and 2) documenting the results of waste discrepancies identified by the generator/storage site during waste characterization or the Permittees during waste confirmation using radiography, review of radiography audio/video recordings, or visual examination, or review of visual examination records. In addition, the acceptable knowledge process and waste stream documentation must be evaluated through internal assessments by generator/storage site quality assurance organizations. (Section C4-3e)	CCP-TP-005 S. 4.6 S. 4.9 CCP-QP-021 (All) WP 13-QA.03 (All) CCP-PO-001 S. C4-3f	Y	Internal Audit **(AK-14)** AK Accuracy Report **(AK-15)** AK Discrepancy Resolutions **(AK-10)**	Y	

1. NMED expects a traceability analysis to be performed, the results of which should be presented on this checklist under the "Examples of Implementation" column. Further, the

traceability analysis process and results should be discussed in the Final Audit Report.

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

Table C6-4 Visual Examination (VE) Checklist
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Visual Examination (VE) Checklist

	WAP Requirement[1] *ANL-CCP Re-certification Audit A-13-24* Table C6-4 Visual Examination (VE) Checklist	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why)	Item Reviewed	Adequate? Y/N	
	TRAINING					
296 VE	Is there documentation which shows that a standardized training program for visual examination operators has been developed? Is it specific to the site and include the various waste configurations generated/stored at the site? (Section C1-2)	CCP-QP-002 S. 4.1.2 S. 4.3.6 CCP-TP-500 S. 1.1	Y	Training Records for 5 VE operators **(VE-2)**	Y	
297 VE	Is there documentation which shows that the visual examination operators receive training on the specific waste generating processes, typical packaging configurations, and waste material parameters expected to be found in each Waste Matrix Code at the site? (Section C1-2)	CCP-QP-002 S. 4.1.1 S. 4.3.6 S. 4.2	Y	Training Records for 5 VE operators **(VE-2)**	Y	
298 VE	Are the visual examination personnel requalified once every two years? (Section C1-2)	CCP-QP-002 S. 4.1.2 [H] CCP-TP-500 S. 2.2 CCP-TP-163 S. 2.2	Y	Training Records for 5 VE operators **(VE-2)**	Y	
298a VE	Does the training include the following regardless of Summary Category Group? • Identifying and describing the contents of a waste container by examining all items in waste containers of previously packaged waste. • Identifying when VE cannot be used to meet the DQOs. (Section C1-2)	CCP-QP-002 S. 4.1.2 S. 4.3.6 CCP-TP-500 S. 1.1	Y	Training Records for 5 VE operators **(VE-2)**	Y	
	VISUAL EXAMINATION EXPERT REQUIREMENTS					
300 VE	Does documentation ensure that the site has designated a visual examination expert? Is the visual examination expert familiar with the waste generating processes that have taken place at the site? Is the visual examination expert familiar with all of the types of waste being characterized at that site? (Section C1-2)	CCP-QP-002 S. 3.1.6 S. 4.4.1 S. 4.2 CCP-TP-500 S. 3.3	Y	Training Records & VEE appointment letters for 2 VEE operators **(VE-3)**	Y	
301 VE	Does documentation ensure that the visual examination expert shall be responsible for the overall direction and implementation of the visual examination aspects of the program? Does the site's QAPjP specify the selection, qualification, and training	CCP-TP-500 S. 3.3	Y	Training Records & VEE appointment letters for 2 VEE operators	Y	

	WAP Requirement[1] *ANL-CCP Re-certification Audit A-13-24* Table C6-4 Visual Examination (VE) Checklist	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why)	Item Reviewed	Adequate? Y/N	
	requirements of the visual examination expert? (Section C1-2)	CCP-PO-001 S. C1-2		**(VE-3)**		
	VISUAL EXAMINATION PROCEDURES					
304 **VE**	Do procedures indicate that all visual examination activities are documented on video/audio media or VE performed by using a second operator to provide additional verification by reviewing the contents of the waste container to ensure correct reporting? (Section C1-2)	CCP-TP-500 S. 1.1 S. 4.0 NOTE S. 4.1.2[J] Att.1	Y	ANLRHVE12011 ANLRHVE12015 ANLRHVE12016 ANLRHVE12017 ANLRHVE12018 ANLRHVE12019 ANLRHVE13001 ANLRHVE13002 ANLRHVE13003 ANLRHVE13004 ANLRHVE13005 ANLRHVE13006 ANLRHVE13007 RHANLVE100015 **(VE-1)**	Y	
304a **VE**	Are procedures in place to ensure that when VE is performed using a second operator, each operator performing VE shall observe for themselves the waste being placed in the container or the contents within the examined waste container when waste is not removed? (Section C1-2)	CCP-TP-500 S. 1.1 S. 4.0 NOTE S. 4.1.2[J] Att. 1	Y	ANLRHVE12011 ANLRHVE12015 ANLRHVE12016 ANLRHVE12017 ANLRHVE12018 ANLRHVE12019 ANLRHVE13001 ANLRHVE13002 ANLRHVE13003 ANLRHVE13004 ANLRHVE13005 ANLRHVE13006 ANLRHVE13007 RHANLVE100015 **(VE-1)**	Y	
313 **VE**	Do site procedures ensure that when liquid is found, the non-transparent internal container holding the liquid will be assumed to be filled with liquid and this volume will be added to the total liquid in the container being characterized using VE? The container being characterized using VE would then be rejected and/or repackaged to exclude the internal container if it is over the TSDF-WAC limits. (Section C-3b)	CCP-TP-500 Att. 1 Table 1	Y	ANLRHVE12011 ANLRHVE12015 ANLRHVE12016 ANLRHVE12017 ANLRHVE12018 ANLRHVE12019 ANLRHVE13001 ANLRHVE13002 ANLRHVE13003 ANLRHVE13004	Y	

	WAP Requirement[1] *ANL-CCP Re-certification Audit A-13-24* Table C6-4 Visual Examination (VE) Checklist	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why)	Item Reviewed	Adequate? Y/N	
				ANLRHVE13005 ANLRHVE13006 ANLRHVE13007 RHANLVE100015 **(VE-1)**		
	QUALITY ASSURANCE OBJECTIVES					
314	Are process procedures in place to meet the following Quality Assurance Objectives? Precision • Precision is maintained by reconciling any discrepancies between the operator and the independent technical reviewer with regard to identification of waste matrix code, liquids in excess of TSDF-WAC limits, and compressed gases. Accuracy • Accuracy is maintained by requiring operators to pass a comprehensive examination and demonstrate satisfactory performance in the presence of the VE expert during their initial qualification and subsequent requalification. Completeness • A validated VE data form will be obtained for 100 percent of the waste containers subject to VE. Comparability • The comparability of VE data from different operators shall be enhanced by using standardized VE procedures and operator qualifications. (Section C3-2b)	Bullet 1 CCP-TP-500 Att. 1 & 2 Bullet 2 CCP-QP-002 S. 4.3.6 Bullet 3 CCP-TP-500 Att. 1 & 2 Bullet 4 CCP-QP-002 (All) CCP-TP-500 (All)	Y	ANLRHVE12011 ANLRHVE12015 ANLRHVE12016 ANLRHVE12017 ANLRHVE12018 ANLRHVE12019 ANLRHVE13001 ANLRHVE13002 ANLRHVE13003 ANLRHVE13004 ANLRHVE13005 ANLRHVE13006 ANLRHVE13007 RHANLVE100015 **(VE-1)** Training Records for 5 VE operators **(VE-2)** Training Records & VEE Appointment Letters for 2 VEE operators **(VE-3)**	Y	

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

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Effective Date: MAY 3 1 2013

CCP-PO-001
Revision 21

CCP Transuranic Waste Characterization Quality Assurance Project Plan

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Carlsbad, NM

RECORD OF REVISION

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

RECORD OF REVISION (Continued)

Revision Number	Date Approved	Description of Revision
13	11/16/2006	Revised to implement changes to the Waste Isolation Pilot Plant Hazardous Waste Facility Permit requirements resulting from the Section 311/RH PMR.
14	03/28/2007	Revised procedure tables to add references to sections implemented by the procedure, and to align the wording of Section B7-2 with the wording in the permit.
15	08/10/2007	Revised to remove Visual Examination (VE) Expert decisions and signature and date from Table B3-11, Testing Batch Data Report Contents. Added the Idaho National Laboratory (INL) procedures to Attachment 1, Implementing Procedures.
16	10/31/2007	Revised to incorporate statistical terminology and text changes included in September 2007 Class 1 Permit Notifications and update Attachment 1, Implementing Procedures.
17	06/23/2009	Updated to agree with the Waste Isolation Pilot Plant (WIPP) Hazardous Waste Facility Permit Class 1 Modification dated July 2008.
18	06/30/2010	Revised to incorporate modifications to the Hazardous Waste Facility Permit. To make editorial changes that are needed and to change the Waste Isolation Pilot Plant (WIPP), Waste Information System (WWIS) to WWIS/Waste Data System (WDS).
19	12/29/2010	Revised to include changes from Permit Renewal.
20	06/16/2011	Revised to incorporate Class 2 Permit Modification (Transuranic Package Transporter Model III and Standard Large Box 2).
21	05/31/2013	Revised to clarify hierarchy of documents, adding Nuclear Waste Partnership (NWP) LLC, 13-1, *Quality Assurance Program Description*, also revised due to the Class 2 permit modification request (PMR) to the Waste Isolation Pilot Plant (WIPP) Permit, and made other administrative changes as needed.

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A INTRODUCTION

The Central Characterization Program (CCP) is tasked with characterizing and certifying transuranic (TRU) waste for disposal at the Waste Isolation Pilot Plant (WIPP). Characterization consists of acceptable knowledge (AK), radiography and visual examination (VE). This work is conducted in accordance with the Nuclear Waste Partnership, LLC (NWP), *Quality Assurance Program Description* (QAPD) and this Quality Assurance Project Plan (QAPjP).

This QAPjP describes how waste characterization and certification by the CCP comply with NM 4890139088-TSDF, *Waste Isolation Pilot Plant Hazardous Waste Facility Permit* (HWFP), Attachment C - C6, *Waste Analysis Plan* (WAP) (New Mexico Environment Department [NMED]) and WP 13-1, the NWP QAPD. The format of this QAPjP parallels that of the WAP.

NOTE

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

A-1 Background

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

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

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

A-2 Scope

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

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

B PROJECT DESCRIPTION

Consistent with requirements in the WAP, CCP uses AK to initially characterize TRU waste. Section C4 of this QAPjP outlines the process used to characterize TRU waste using AK. AK documentation provides the basis for identifying the TRU waste eligible for WIPP disposal. The characterization process is based on the following:

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

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

The CCP evaluates the characterization necessary to certify a particular waste stream. If additional characterization is needed to supplement site capabilities, the CCP uses mobile characterization facilities to perform characterization activities. Mobile characterization support is provided in accordance with this QAPjP. The CCP has the option to use data or transportation services from established TRU waste characterization activities at a U.S. Department of Energy (DOE)-Carlsbad Field Office (CBFO)-certified site.

B-1 Central Characterization Program Organization and Responsibilities

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

B-2 Central Characterization Program (CCP) Manager

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

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

B-3 Site Project Manager

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

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

- Ensuring CCP personnel receive appropriate training and orientation and maintain proficiency in work assignments
- Evaluating AK reports
- Reconciling AK information with characterization data
- Reconciling verified data with DQOs
- Ensuring that conditions adverse to quality are resolved and that corrective actions are implemented in a timely manner
- Preparing and submitting SPM Data Validation Summaries, Waste Stream Profile Forms (WSPFs), Characterization Information Summaries, and Waste Stream Characterization Packages (if requested by DOE-CBFO)
- Reviewing semi-annual QA/Quality Control (QC) summary reports and forwarding them and comments to the DOE-CBFO

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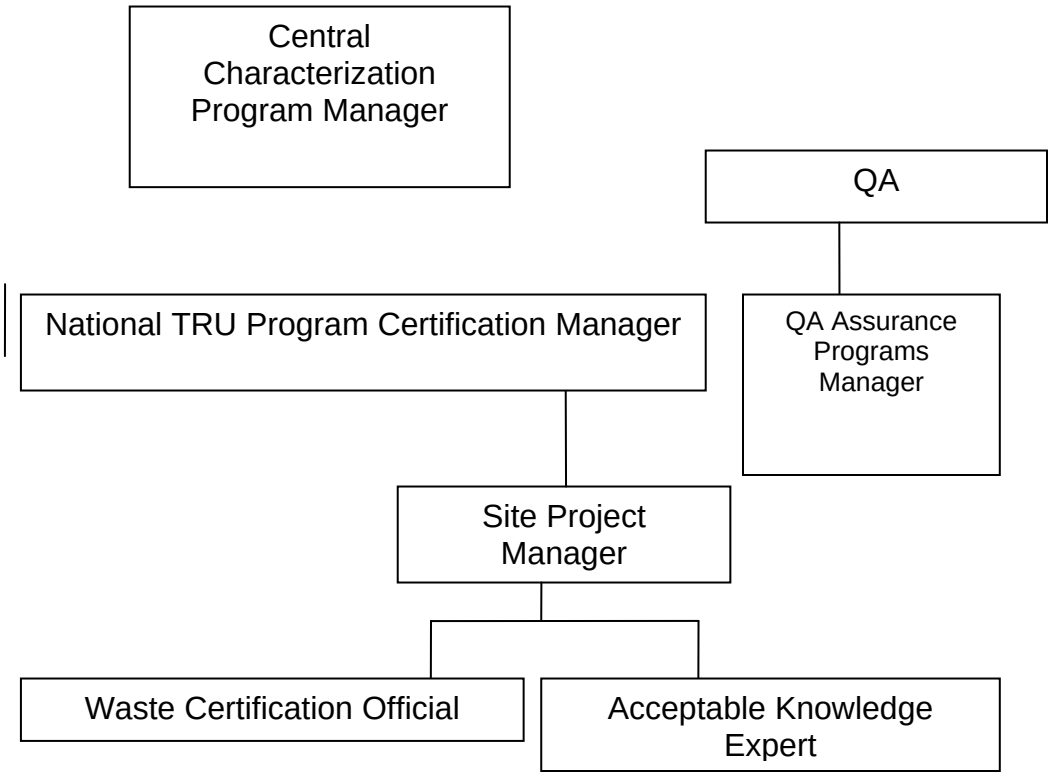
Figure B-1. CCP Organization



C WASTE ANALYSIS PLAN

C-0 Introduction and Attachment Highlights

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

TRU waste contains TRU radioactive components and may contain hazardous components, as defined in the New Mexico Hazardous Waste Act (HWA) and 20.4.1.200 NMAC (incorporating 40 CFR, §268.35. TRU waste is designated and separately packaged as either CH or RH, based on the radiological dose rate at the surface of the waste container.

The hazardous components of the TRU waste to be managed at the WIPP facility are designated in Table C-5, Listing of Permitted Hazardous Waste Numbers. Some of the waste is also identified by unique state hazardous waste numbers and is certified by the CCP if it meets the conditions of the WIPP Hazardous Waste Permit, Part 2, Table 2.3.4. This document describes the measures that will be taken to ensure that the TRU mixed wastes received at the WIPP facility are within the scope of Table C-5 as established by 20.4.1.500 NMAC (incorporating 40 CFR §264), and that they comply with unit-specific requirements of 20.4.1.500 NMAC (incorporating 40 CFR §264.600), Miscellaneous Units.

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

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

Some TRU waste is retrievably stored at the DOE sites. Additional TRU waste is generated and packaged into containers at these sites. Retrievably stored waste is defined as TRU waste generated after 1970 and before NMED notifies the Permittees, by approval of the final audit report, that the characterization requirements of the WAP

at a site have been implemented. Newly-generated waste is defined as TRU waste generated after NMED approves the final audit report for a site. Waste characterization of retrievably stored TRU waste is performed on an ongoing basis, as the waste is retrieved. AK information is assembled for both the retrievably stored and newly generated waste. Waste characterization of newly generated TRU waste is performed as it is generated, although some characterization occurs post-generation.

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

C-0a Waste Characterization

Characterization requirements for individual containers of TRU waste are specified on a waste stream basis. The WAP defines a waste stream as waste materials that have common physical form, that contain similar hazardous constituents, and that are generated from a single process or activity. Waste streams are grouped by waste matrix code groups related to the physical and chemical properties of the waste (DOE 1995b). The CCP uses the characterization techniques described in this QAPjP to assign the appropriate waste matrix code groups to waste streams for WIPP disposal. The waste matrix code groups are solidified inorganics, solidified organics, salt waste, soils, lead/cadmium metal, inorganic nonmetal waste, combustible waste, graphite, filters, heterogeneous debris waste, and uncategorized metal. Waste matrix code groups are grouped into three Summary Category Groups: Homogeneous Solids (Summary Category Group S3000), Soil/Gravel (Summary Category Group S4000), and Debris Waste (Summary Category Group S5000).

TRU wastes are initially categorized into the three broad Summary Category Groups that are related to the final physical form of the wastes. This categorization is based on the Summary Category Group constituting the greatest volume of waste for a waste stream. Waste characterization requirements for these groups are specified in Section C-2. Each of the three groups is described below.

S3000 - Homogeneous Solids

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

S4000 - Soils/Gravel

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

S5000 - Debris Wastes

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

1. a manufactured object, or

2. plant or animal matter, or

3. natural geologic material.

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

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

Metals

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

Halogenated Volatile Organic Compounds

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

Nonhalogenated Volatile Organic Compounds

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

The CCP will characterize waste in accordance with this QAPjP, and ensure that waste proposed for storage and disposal at WIPP meets the applicable requirements of the

TSDF-WAC in Part 2. The CCP will assemble the AK information in an auditable record[1] for the waste stream as described in Section C4. For those waste streams with an approved AK Sufficiency Determination (see below), radiography or VE per the methods described in Section C1 are not required.

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

- Radiography, an x-ray technique used to determine the physical contents of containers.
- VE of the contents of opened containers as an alternative way to determine their physical contents.
- Compilation of AK documentation into an auditable record.

C-0b AK Sufficiency Determination

CCP may submit a request to the Permittees for an AK Sufficiency Determination (Determination Request) to be exempt from the requirement to perform radiography or VE based on AK(T5). The contents of the Determination Request are specified in Section C4-3d.

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

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

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

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

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

1. Written notice to all individuals on the facility mailing list;
2. Public notice in area newspapers, including the Carlsbad Current-Argus, Albuquerque Journal, and Santa Fe New Mexican;

3. Notice on the WIPP Home Page;

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

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

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

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

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

If the CCP does not submit a Determination Request, or if the DOE does not approve a Determination Request, or if NMED finds that the DOE's provisional approval of a Determination Request is inadequate, the CCP shall perform radiography or VE on 100 percent of the containers in a waste stream.

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

C-0c Waste Stream Profile Form Completion

After a complete AK record has been compiled and either a Determination Request has been approved by the DOE or the CCP has completed the applicable representative testing requirements specified in Section C1, the CCP will complete a WSPF and Characterization Information Summary (CIS) (T2). The requirements for the completion of a WSPF and a CIS are specified in Sections C3-6b(1) and C3-6b(2) respectively.

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

In the event that the Permittees request detailed information on a waste stream, the CCP provides a Waste Stream Characterization Package, as described in Section C3-6b(3). For each waste stream, this package will include the WSPF, the CIS, and the AK summary. The Waste Stream Characterization Package will also include specific Batch Data Reports (BDRs), and raw data associated with waste container characterization as requested by the Permittees.

C-0d Waste Confirmation

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

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

C-1a Waste Stream Identification

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

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

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

The CCP considers only those TRU waste streams that are assigned EPA hazardous waste numbers listed in Table C-5. Waste identified by unique state hazardous waste numbers is acceptable at WIPP provided they meet the requirements of the TSDF-WAC. The CCP performs characterization of all waste streams as required by the WAP. If during the characterization process, new hazardous waste numbers are identified, those wastes are prohibited for disposal at the WIPP facility until a permit modification has been submitted and approved by NMED.

C-1c Waste Prohibited at the WIPP Facility

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

- Liquid waste is not acceptable at WIPP. Liquid in the quantities delineated below is acceptable.
  - Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of radiography or visual examination
  - Internal containers with more than 60 milliliters or 3 percent by volume observable liquid, whichever is greater, are prohibited
  - Containers with hazardous waste number U134 assigned shall have no observable liquid
  - Overpacking the outermost container that was examined during radiography or VE or redistributing untreated liquid within the container shall not be used to meet the volume limits

- Non-radionuclide pyrophoric materials, such as elemental potassium.
- Hazardous wastes not occurring as co-contaminants with TRU waste (non-mixed hazardous waste).
- Wastes incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials, or other wastes.
- Wastes containing explosives or compressed gases.
- Wastes with polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization.
- Wastes exhibiting the characteristic of ignitability, corrosivity, or reactivity (Hazardous Waste Numbers D001, D002, or D003).
- Any waste container from a waste stream (or waste stream lot) that has not undergone either radiographic or VE of a statistically representative subpopulation of the waste stream in each shipment, pursuant to Section C7.
- Any waste container from a waste stream which has not been preceded by an appropriate, certified WSPF (see Section C-1d).
- Waste that has ever been managed as high-level waste and waste from tanks specified in Table C-4, Waste Tanks Subject to Exclusion, unless specifically approved through a Class 3 permit modification.

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

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

identified to contain incompatible materials or materials incompatible with waste containers or backfill.

C-1d Control of Waste Acceptance

The CCP will provide a WSPF and CIS to the Permittee for each waste stream prior to shipment of the waste (T2). The WSPF and CIS elements are found in Section C3-6b(1) and Section C3-6b(2). The CCP will provide the WSPF to the Permittees for each waste stream prior to its acceptance for disposal at WIPP. The WSPF and the CIS will be transmitted to the Permittees for each waste stream. After WSPF submittal, if continued waste characterization activities reveal discrepancies that identify different hazardous waste numbers or indicate that the waste belongs to a different waste stream, the waste is redefined to a separate waste stream and a new WSPF is submitted.

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

The CCP provides a Waste Stream Characterization Package (as described in Section C3-6b(3)) to the Permittees upon request. The option for the Permittees to request additional information ensures that the waste being offered for disposal is adequately characterized and accurately described on the WSPF.

C-1e Waste Generating Processes at the WIPP Facility

Not applicable. This section applies to the Permittee.

C-2 Waste Characterization Program Requirements and Waste Characterization Parameters

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

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

- Waste characterization and certification procedures for retrievably stored and newly generated wastes to be sent to the WIPP facility.

- Methods used to ensure prohibited items are documented and managed. These will include procedures for performing radiography, VE, or treatment, if these methods are used to ensure prohibited items are not present in the waste prior to shipment of the waste to WIPP.

- Identify the organization(s) responsible for compliance with waste characterization and certification procedures.

- Identify the oversight procedures and frequency of actions to verify compliance with waste characterization and certification procedures.

- Develop training specific to waste characterization and certification procedures.

- Ensure that personnel may stop work if noncompliance with waste characterization or certification procedures is identified.

- Develop a nonconformance process that complies with the requirements in Section C3 to document and establish corrective actions.

- As part of the corrective action process, assess the potential time frame of the noncompliance, the potentially affected waste population(s), and the reassessment and recertification of those wastes.

- A listing of all approved hazardous waste numbers which are acceptable at WIPP are included in Table C-5.

For those waste streams or containers that are not amenable to radiography (e.g., RH TRU waste, direct loaded ten-drum overpacks [TDOPs]) for waste confirmation by the Permittees pursuant to Section C7, CCP VE data may be used for waste acceptance. In those cases, the Permittees will review the CCP VE procedures to ensure that data sufficient for the Permittees' waste acceptance activities pursuant to Section C7 will be obtained and the procedures meet the minimum requirements for VE specified in Section C1-1.

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

- Determination whether TRU waste streams comply with the applicable provisions of the TSDF-WAC.

- Determination whether TRU mixed wastes exhibit a hazardous characteristic (20.4.1.200 NMAC, incorporating 40 CFR §261 Subpart C).

- Determination whether TRU mixed wastes are listed (20.4.1.200 NMAC, incorporating 40 CFR §261 Subpart D).

- Estimation of waste material parameter weights.

Table C-1, Summary of Parameters, Characteristic Methods, and Rationale for Transuranic Mixed Waste, provides the parameters of interest for the constituent groupings and testing methodologies.

C-3 Generator Waste Characterization Methods

The characterization techniques used by the CCP include AK and may also include, as necessary, VE, and radiography. Characterization activities are performed in accordance with this QAPjP. Table C-1, Summary of Parameters, Characterization Methods, and Rationale for Transuranic Mixed Waste, provides a summary of the characterization requirements for TRU waste.

C-3a Acceptable Knowledge

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

- To delineate TRU waste streams

- To assess whether TRU mixed wastes comply with the TSDF-WAC

- To assess whether TRU wastes exhibit a hazardous characteristic (New Mexico Hazardous Waste Management Regulations in 20.4.1.200 NMAC incorporating 40 CFR §261 Subpart C)

- To assess whether TRU wastes are listed (20.4.1.200 NMAC, incorporating 40 CFR §261 Subpart D)

- To estimate waste material parameter weights

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

C-3b Radiography and Visual Examination

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

documentation of radiography or VE of 100 percent of the containers as specified in Section C1. VE consists of either observing the filling of waste containers or opening full containers and physically examining their contents. Radiography and/or VE are used, when necessary, to examine a waste container to verify the physical form of the waste matches its waste stream description as determined by AK. These techniques detect observable liquid in excess of TSDF-WAC limits and containerized gases which are prohibited for WIPP disposal. The prohibition of liquid in excess of TSDF-WAC limits and containerized gases prevents the shipment of corrosive, ignitable, or reactive wastes. Radiography and/or VE are also able to verify the physical form of the waste matches its waste stream description (i.e., Homogeneous Solids, Soil/Gravel, or Debris Waste [including uncategorized metals]).

If the physical form does not match the waste stream description, the waste is designated as another waste stream and assigned the preliminary hazardous waste numbers associated with that new waste stream assignment. That is, if radiography and/or VE indicate that the waste does not match the waste stream description produced by AK characterization, a nonconformance report (NCR) is completed and the inconsistency resolved as specified in Section C4 (Q5), and the NCR will be dispositioned as specified in Section C3-7. The proper waste stream assignment is determined (including preparation of a new WSPF), the correct hazardous waste numbers are assigned, and the resolution is documented. The AK verification process is discussed in Section C4.

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

C-4 Data Verification and Quality Assurance

The CCP ensures that its applicable waste characterization process performance for generator/storage sites sending TRU waste to the WIPP for disposal meets WAP requirements through data validation, verification, usability and reporting controls. Verification occurs at three levels: 1) the CCP data generation level, 2) the CCP project

level, which consists of verification and validation by the CCP to ensure that applicable WAP requirements are met and; 3) the Permittee level. The validation and verification process and requirements at each level are described in Section C3-4. The validation verification process at the Permittee Level is also described in C-5.

C-4a Data Generation and Project Level Verification Requirements

C-4a(1) Data Quality Objectives

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

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

Acceptable Knowledge

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

Radiography and VE

- Verify the TRU mixed waste streams contain no prohibited items and to verify the physical form of the waste matches the waste stream description as to be determined by AK.

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

C-4a(2) Quality Assurance Objectives

The CCP shall demonstrate compliance with each Quality Assurance Objective (QAO) associated with the characterization methods in Section C3. The SPM performs reconciliation of the data with the DQOs established in this QAPjP. The SPM concludes that all of the DQOs have been met for the characterization of the waste stream prior to submitting a WSPF to the DOE for approval (T2).

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

- Precision - a measure of the mutual agreement among multiple measurements
- Accuracy - the degree of agreement between a measurement result and the true or known value
- Completeness - a measure of the amount of valid data obtained from a method compared to the total amount of data obtained (expressed as a percentage)
- Comparability - the degree to which one data set can be compared to another
- Representativeness - the degree to which sample data represent characteristics of a population

A more detailed discussion of the QAOs can be found in Section C3, which describes the QAOs associated with each test method.

C-4a(3) Data Generation

BDRs, in a format approved by the DOE, are used by CCP for reporting waste characterization data. The CCP formats for reporting waste characterization data in BDRs are specified in several procedures. These procedures comply with the waste characterization data reporting requirements described in Section C3.

C-4a(4) Data Verification

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

C-4a(5) Data Transmittal

As part of the waste characterization data submittal, the CCP transmits the data electronically to the Permittees via the WIPP Waste Information System (WWIS)/Waste Data System (WDS) (T30, T530). Data will be entered into the WWIS/WDS in the exact format required by the data base as specified in Section C-5a(1) for WWIS/WDS reporting requirements and the *Waste Data System User's Manual* (DOE 2009) for the WWIS/WDS data fields and format requirements. BDRs include the information required by Section C3-4 and are transmitted by hard copy or electronically (provided a hard copy is available on demand) from the data generation level to the CCP project level.

Once a waste stream is fully characterized the SPM submits a WSPF, accompanied by a CIS for that waste stream to the Permittees, which includes a record of reconciliation with DQOs as described in Sections C3-6b(1) and C3-6b(2).

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

C-4a(6) Records Management

Records related to waste characterization activities performed by the generator/storage sites will be maintained in the testing facility files or generator/storage site project files or at the WIPP Records Archive facility. Raw data obtained by testing TRU mixed waste in support of the WAP will be identifiable, legible, and provide documentary evidence of quality. TRU mixed waste characterization records submitted to the Permittees shall be maintained in the WIPP facility operating record and be available for inspection by NMED. A detailed description of CCP site-specific records management activities is provided in Section C7.

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

Waste characterization records include characterization records (i.e., headspace gas sampling and homogeneous solids and soil/gravel sampling/analysis) generated through implementation of previous requirements in this WAP. Those waste characterization records designated as Non-Permanent Records shall be maintained for 10 years from the date of (record) generation by CCP Records or at the participating generator/storage site or at the WIPP Records Archive facility and then dispositioned according to their approved RIDS. If a generator/storage site ceases to operate, all records shall be transferred before closeout to the Permittees for management at the WIPP Records Archive facility. Table C-2, Required Program Records, is a listing of records designated as Lifetime Records and Non-Permanent Records.

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

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

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

C-5a Phase I Waste Stream Screening and Verification

The first phase of the waste screening and verification process occurs before TRU waste is shipped to the WIPP facility. Before the Permittees begin the process of accepting TRU waste from the CCP, an initial audit is conducted as part of the Audit and Surveillance Program. The audit of CCP provides verification of characterization procedures; BDR preparation; and recordkeeping that ensures that all applicable provisions of the WAP requirements are met. Another portion of the Phase I verification is the WSPF approval process. At the WIPP facility, this process includes verification that all of the required elements of a WSPF and CIS are present and that the summarized waste characterization information meets acceptance criteria required for compliance with the WAP (Section C3-6b(1)).

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

When the required waste stream characterization data have been collected by the CCP and the initial audit is successfully completed, the SPM will verify that the waste stream characterization meets the applicable WAP requirements as part of the project level verification (T2). If the waste characterization does not meet the applicable requirements of the WAP, the waste stream cannot be managed, stored, or disposed of at the WIPP until those requirements are met. The SPM will then complete the WSPF and submit it to the Permittees, along with the accompanying CIS for that waste stream. All data necessary to check the accuracy of the WSPF is transmitted to the Permittees. This provides notification that the CCP considers that the waste stream (identified by the waste stream identification number) has been adequately characterized for disposal prior to shipment to WIPP. The Permittees then compare radiography and VE data obtained subsequent to submittal and approval of the WSPF (and prior to submittal) with characterization information presented on this form. If the Permittees determine (through the data comparison) that the characterization information is adequate, DOE will approve the WSPF. Prior to the first shipment of containers from the approved waste stream, the approved WSPF and accompanying CIS is provided to NMED. If the data comparison indicates that analyzed containers have hazardous wastes not present on the WSPF, or a different waste matrix code applies, the WSPF is in error and is resubmitted. Ongoing WSPF examination is discussed in detail in Section C-5a(2).

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

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

C-5a(1) WWIS/WDS Description

The CCP supplies the required data to the Permittees via the WWIS/WDS (T30, T530). The WWIS/WDS Data Dictionary includes all of the data fields, the field format and the limits associated with the data as established by the WIPP WAP. These data will be subjected to edit and limit checks that are performed automatically by the database, as defined in the *Waste Data System User's Manual* DOE/WIPP-09-3427(DOE, 2009). The Permittees will coordinate the data transmission with CCP. Actual data transmission will use appropriate technology to ensure the integrity of the data transmissions. The Permittees will require sites with large waste inventories and large databases to populate a data structure provided by the Permittees that contains the required data dictionary fields that are appropriate for the waste stream (or waste streams) at the site. The Permittees will access these data via the Internet to ensure an efficient transfer of this data. Small quantity sites will be given a similar data structure by the Permittees that is tailored to their types of waste. Sites with very small quantities of waste will be provided with the ability to assemble the data interactively to this data structure on the WWIS/WDS.

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

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

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

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

The Permittees verify the completeness and accuracy of the WSPF (Section C3-6b(1)). The assignment of the waste stream description, waste matrix code group, and Summary Category Groups; the AK summary documentation; the methods used for characterization; the DOE certification, and appropriate designation of hazardous waste number(s) are examined by the Permittees. If the WSPF is inaccurate, efforts are made to resolve discrepancies by contacting the CCP in order for the waste stream to be eligible for shipment to the WIPP facility. If discrepancies in the

waste stream are detected, the CCP implements a non-conformance action to identify, document, and report discrepancies.

The WSPF shall pass all verification checks by the Permittees in order for the waste stream to be approved by DOE for shipment to the WIPP facility. The WSPF check against waste container data will occur during the initial WSPF process (Section C-5a). Waste data transferred via the WWIS/WDS after WSPF approval is compared with the approved WSPF. Any container from an approved hazardous waste stream with a description different from its WSPF is not shipped to the WIPP for disposal.
The CCP verifies that the three different types of data specified below are available for every container holding TRU waste before that waste is managed, stored, or disposed at WIPP: 1) an assignment of the waste stream's waste description (by waste matrix codes) and waste matrix code group; 2) a determination of ignitability, reactivity, and corrosivity; and 3) a determination of compatibility. The CIS indicates if the waste was checked for the characteristics of ignitability, corrosivity, and reactivity.

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

C-5a(3) Audit and Surveillance Program

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

C-5b Phase II Waste Shipment Screening and Verification

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

Hazardous Waste Manifest Information:

- Generator/storage site name and EPA Identification Number
- CCP contact name and phone number
- Quantity of waste
- List of up to six state and/or federal hazardous waste numbers in each line item

- Listing of all shipping container identification numbers (IDs) (Shipping Package serial number)

- Signature of authorized generator representative

Specific Waste Container information:

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

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

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

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

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

TRU waste designated by the Secretary of Energy for disposal at WIPP is exempt from the Land Disposal Restrictions (LDRs) by the WIPP Land Withdrawal Act Amendment (Public Law 104-201). This amendment states that WIPP “Waste is exempted from treatment standards promulgated pursuant to section 3004(m) of the Solid Waste Disposal Act (42 U.S.C. 6924[m]) and shall not be subjected to the Land Disposal prohibitions in section 3004(d), (e), (f), and (g) of the Solid Waste Disposal Act.”

Therefore, with the initial shipment of a TRU waste stream, the CCP provides the Permittees with a onetime written notice. The notice includes the information listed below:

Land Disposal Restriction Notice Information:

- EPA hazardous waste numbers and Manifest Numbers of first shipment of a mixed waste stream
- Statement: this waste is not prohibited from land disposal
- Date the waste is subject to prohibition

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

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

C-5b(3) Verification

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

C-6 Permittees' Waste Shipment Screening QA/QC

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

C-7 Records Management and Reporting

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

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

C-7a General Requirements

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

C-7b Records Storage

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

C-8 Reporting

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

Table C-1. Summary of Parameters, Characterization Methods, and Rationale for Transuranic Mixed Waste

Waste Matrix Code Summary Categories	Waste Matrix Code Groups	Characterization Parameter	Method	Rationale
S3000-Homogeneous Solids	• Solidified inorganics • Salt waste • Solidified organics	Physical waste form	Acceptable knowledge, radiography and/or visual examination	• Determine waste matrix • Demonstrate compliance with waste acceptance criteria (e.g., no liquid in excess of TSDF-WAC limits, no incompatible wastes, no compressed gases)
S4000-Soil/Gravel	• Contaminated soil/debris			
S5000-Debris Waste	• Uncategorized metal (metal waste other than lead/cadmium) • Lead/cadmium waste • Inorganic nonmetal waste • Combustible waste • Graphite waste • Heterogeneous debris waste • Composite filter waste	Hazardous constituents • Listed • Characteristic	Acceptable knowledge	• Determine assignment of EPA hazardous waste numbers

Table C-2. Required Program Records Maintained in Generator/Storage Site Project Files

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

Table C-3. WIPP Waste Information System Data Fields[a]

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

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

Table C-4. Waste Tanks Subject to Exclusion

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

Table C-5. Listing of Permitted Hazardous Waste Numbers

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

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

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

(1) Waste Stream Profile Number:					
(2) Generator site name:			(3) Generator site EPA ID:		
(4) Technical contact:			(5) Technical contact phone number:		
(6) Date of audit report approval by New Mexico Environment Department (NMED):					
(7) Title, version number, and date of documents used for WIPP-WAP Certification:					
(8) Did your facility generate this waste?	YES		NO		
(9) If no, provide the name and EPA ID of the original generator:					
Waste Stream Information[1]					
(10) WIPP ID:			(11) Summary Category Group:		
(12) Waste Matrix Code Group:			(13) Waste Stream Name:		
(14) Description from the ATWIR:					
(15) Defense TRU Waste:	YES		NO		
(16) Check One:	CH		RH		
(17) Number of SWBs (17a) Number of SLB2	(18) Number of Drums		(19) Number of Canisters		
(20) Batch Data Report numbers supporting this waste stream characterization:					
(21) List applicable EPA Hazardous Waste Numbers:[2]					
(22) Applicable TRUCON Content Numbers:					
(23)**Acceptable Knowledge Information[1]**					
(For the following, enter the supporting documentation used [i.e., references and dates])					
Required Program Information					
(23A) Map of site:					
(23B) Facility mission description:					
(23C) Description of operations that generate waste:					
(23D) Waste identification/categorization schemes:					
(23E) Types and quantities of waste generated:					
(23F) Correlation of waste streams generated from the same building and process, as applicable:					
(24) Waste certification procedures:					
(25)Required Waste Stream Information					
(25A) Area(s) and building(s) from which the waste stream was generated:					
(25B) Waste stream volume and time period of generation:					
(25C) Waste generating process description for each building:					
(25D) Waste Process flow diagrams:					
(25E) Material inputs or other information identifying chemical/radionuclide content and physical waste form:					
(25F) Waste Material Parameter Weight Estimates per unit of waste					
(26) Which Defense Activity generated the waste:					
	Weapons activities including defense inertial confinement fusion				Naval Reactors development
	Verification and control technology				Defense research and development
	Defense nuclear waste and material by products management				Defense nuclear material production
	Defense nuclear waste and materials security and safeguards and security investigations				

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

(27)Supplemental Documentation:	
(27A) Process design documents:	
(27B) Standard operating procedures:	
(27C) Safety Analysis Reports:	
(27D) Waste packaging logs:	
(27E) Test plans/research project reports:	
(27F) Site databases:	
(27G) Information from site personnel:	
(27H) Standard industry documents:	
(27I) Previous analytical data:	
(27J) Material safety data sheets:	
(27K) Sampling and analysis data from comparable/surrogate Waste:	
(27L) Laboratory notebooks:	
Confirmation Information2	
For the following, when applicable, enter procedure title(s), number(s) and date(s)	
(28)	Radiography:
	Visual Examination:
(29) Comments: For a list of the waste characterization procedures used and date of respective procedures see the list of procedures on the attached CIS.	

Reviewed by AK Expert: **YES** ☐ **Date:**_____

Reviewed by STR (if necessary): **YES** ☐ **N/A** ☐ **Date:**_____

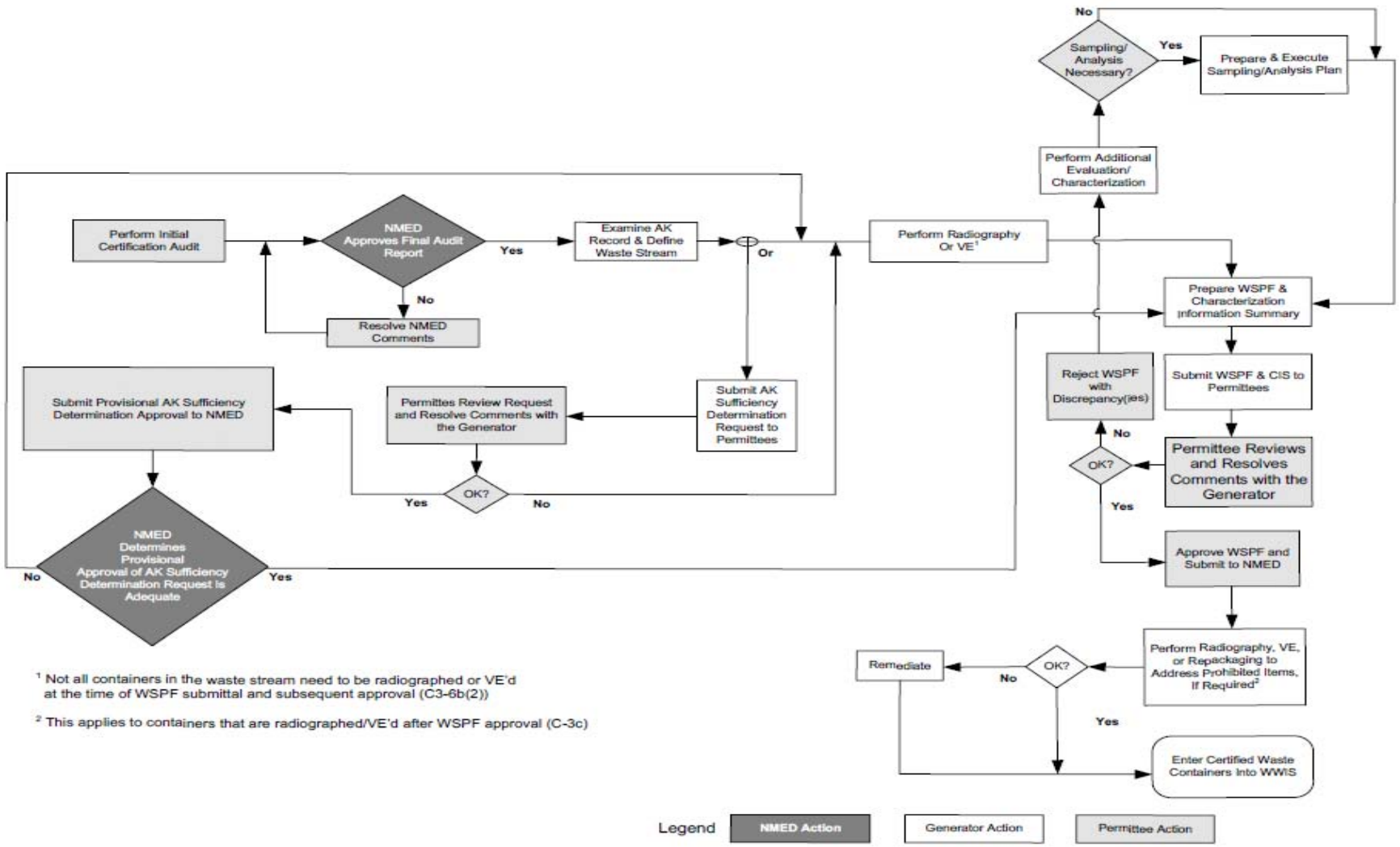
Waste Stream Profile Form Certification:

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

Signature of Site Project Manager	Printed Name	Date

Controlled
Copy

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



[1] Not all containers in the waste stream need to be radiographed or VE'd at the time of WSPF submittal and subsequent approval (C3-6b(2))

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

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

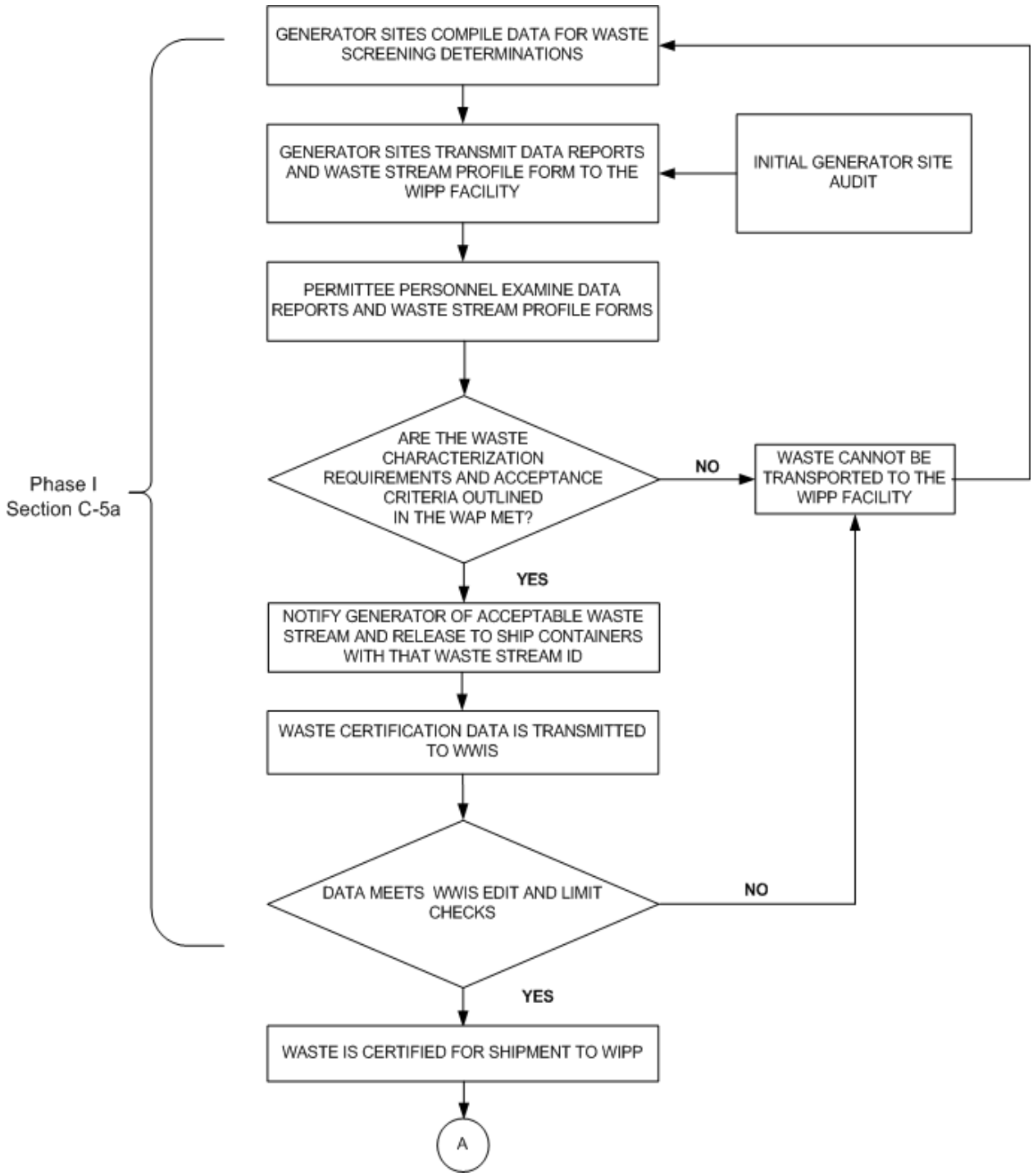
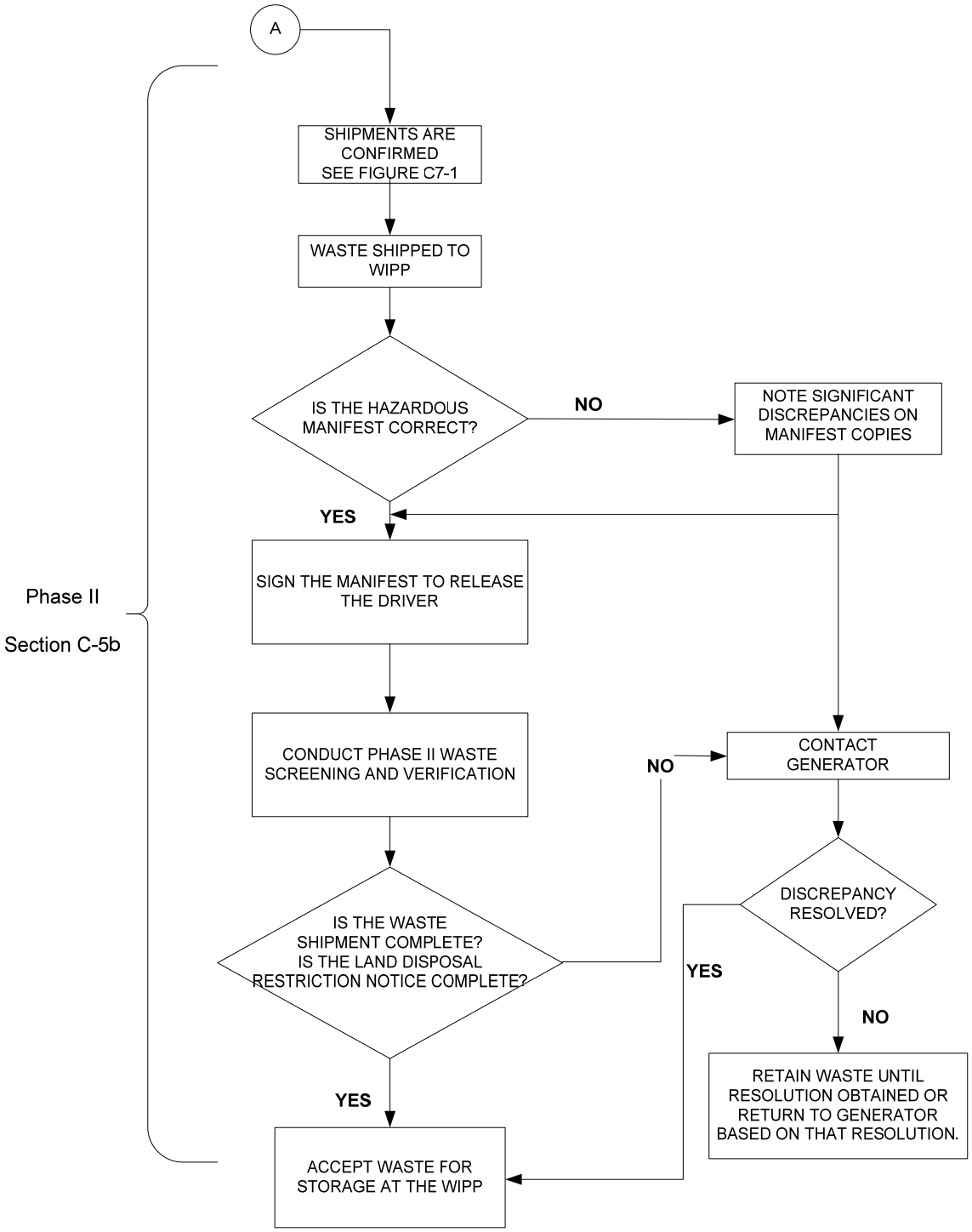


Figure C-3. TRU Mixed Waste Screening and Verification Flow Diagram (continued)



C1 WASTE CHARACTERIZATION TESTING METHODS

CCP characterizes TRU waste for shipment to WIPP by using the following methods, if applicable, for characterization of TRU waste. These methods include requirements for radiography or VE. This section describes these methods, QC requirements.

C1-1 Radiography

Radiography aids in the examination and identification of containerized waste. There is no equivalent EPA method. Personnel perform radiography in accordance with the procedures to meet the WAP requirements described in the following sections (T53, T508). Additionally, these procedures include instructions specific to the radiography method used. For example, details about moving the drum in a specific way in order to detect liquids are included in the radiography procedures. QAOs for radiography are contained in Section C3-2a.

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

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

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

The radiography system involves qualitative and semi-quantitative evaluations of visual displays. Operator training and experience are the most important considerations for ensuring QC in regard to the operation of the radiography system and for interpretation and disposition of radiography results. Only trained personnel are allowed to operate radiography equipment.

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

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

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

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

Independent replicate scans and replicate observations of the video output of the radiography process are performed under uniform conditions and procedures. Independent replicate scans are performed on one waste container per day or once per testing batch, whichever is less frequent by a qualified radiography operator that was not involved in the original scan of the waste container. Independent observations of one scan (not the replicate scan) are made once per day or once per testing batch, whichever is less frequent, by a qualified radiography operator that was not involved in the original scan of the waste container. A testing batch is a suite of waste containers

undergoing radiography using the same testing equipment. A testing batch can be up to 20 waste containers without regard to waste matrix.

Oversight functions include periodic audio/video media reviews of accepted waste containers and are performed by qualified radiography operators that were not involved in the original scans of the waste containers. The results of this independent verification are available to the radiography operators who performed the original scans. The SPM is responsible for monitoring the quality of the radiography data and calling for corrective action, when necessary.

C1-2 Visual Examination

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

- Identifying when VE cannot be used to meet the DQOs

VE personnel are requalified once every two years.

The SPM designates VE experts. Designated VE experts are familiar with the waste-generating processes that have taken place at the site and waste types for wastes being characterized at a particular site. VE experts are responsible for the overall direction and implementation of VE activities for the CCP at that site. VE experts meet the qualification and training requirements specified in CCP-QP-002 and make decisions based on training, previous experience, and knowledge of the waste stream.

C2 RESERVED

C3 QUALITY ASSURANCE OBJECTIVES AND DATA VALIDATION TECHNIQUES FOR WASTE CHARACTERIZATION METHODS

C3-1 Validation Methods

The CCP performs validation of qualitative and quantitative data so that characterization data are of known and acceptable quality.

The qualitative data or descriptive information generated by radiography and VE are not amenable to statistical data quality analysis. However, radiography and VE are complementary techniques yielding similar data for determining the waste matrix code. The waste matrix code is determined to ensure that the container is properly included in the appropriate waste stream.

Data validation is used to assess the quality of waste characterization data collected based on project precision, accuracy, completeness, comparability, and representativeness objectives. These objectives are described below:

Precision

Precision is a measure of the mutual agreement among multiple measurements.

Accuracy

Accuracy is the degree of agreement between a measured result and the true or known value.

Completeness

Completeness is a measure of the amount of valid data obtained from a method compared to the total amount of data collected.

Comparability

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

Representativeness

Representativeness is the degree to which sample data represent a characteristic of a population.

C3-2 Nondestructive Examination Methods

Quality Assurance Objectives

The QAOs for nondestructive examination (NDE) are detailed in this section. NDE can be either radiography or VE. If the QAOs in this section are not met, then corrective actions are taken. NDE is a primary qualitative determination. The objective of NDE for the program is to verify that the physical form of waste matches the waste stream description as determined by AK and the absence of prohibited items. CCP describes all of the activities required to achieve these objectives in this QAPjP and the operating procedures listed in Section C1.

C3-2a Radiography (T53, T508)

Data to meet the QAOs for radiography are obtained from a video and audio recorded scan provided by trained radiography operators at the Host site. Results are also recorded on a radiography data form. The precision, accuracy, completeness, and comparability objectives for radiography data follow.

Precision

Precision is maintained by reconciling any discrepancies between two radiography operators with regard to identification of the waste matrix code, liquids in excess of TSDF-WAC limits, and compressed gases through independent replicate scans and independent observations. The precision of radiography is also verified prior to use by tuning precisely enough to demonstrate compliance with QAOs listed in Section C-4a through viewing an image test pattern.

Accuracy

Accuracy is obtained by using a target to tune the image for maximum sharpness and by requiring operators to successfully identify 100 percent of the items required to meet the DQOs for radiography specified in Section C. Section C-4a(1) in a training container during their initial qualification and subsequent requalification.

Completeness

To ensure completeness, video and audio media recording of the radiography of the radiography examination and a validated radiography data form are obtained for 100 percent of retrievably stored waste containers that are examined by radiography. All video and audio media recordings and radiography data forms are subject to validation as indicated in Section C3-7.

Comparability

The comparability of radiography data from different operators is enhanced by using standardized radiography procedures and operator qualifications.

C3-2b Visual Examination (T6, T113, T163, T500)

Results must be recorded on a VE data form. The precision, accuracy, completeness, and comparability objectives for VE data are presented below.

Precision

Precision is maintained by reconciling any discrepancies between the operator and the independent technical reviewer with regard to identification of waste matrix code, liquids in excess of TSDF-WAC limits, and compressed gases.

Accuracy

Accuracy is maintained by requiring operators to pass a comprehensive examination and demonstrate satisfactory performance in the presence of the VE expert during their initial qualification. VE operators shall be requalified every two years.

Completeness

A validated VE data form will be obtained for 100 percent of the waste containers subject to VE.

Comparability

The comparability of VE data from different operators shall be enhanced by using standardized VE procedures and operator qualifications.

C3-3 Acceptable Knowledge (T5)

AK documentation provides qualitative information that cannot be assessed according to specific data quality goals that may be used for quantitative techniques. To ensure that the AK process is consistently applied, the CCP complies with the following data quality requirements for AK documentation.

- Precision - The qualitative determinations, such as compiling and assessing AK documentation, do not lend themselves to statistical evaluations of precision. However, the AK information is assessed by independent review during internal and external audits.

- Accuracy - The percentage of waste containers which require reassignment to a new waste matrix code and/or designation of a different hazardous waste number, based on testing data and discrepancies identified during waste confirmation is reported as a measure of AK accuracy. The CCP calculates the AK accuracy in accordance with CCP-TP-005, *CCP Acceptable Knowledge Documentation*.

- Completeness - The AK record contains 100 percent of the required information (Section C4-3). The usability of the AK information is assessed for completeness during audits.

- Comparability - The CCP ensures comparability by meeting the training requirements and complying with the minimum standards outlined for procedures that are used to implement the AK process. The CCP assign hazardous waste numbers in accordance with Section C4-3b and will provide the information regarding the waste being characterized to other sites that store or generate a similar waste stream.

- Representativeness - Representativeness is a qualitative parameter that is satisfied by ensuring that the process of obtaining, evaluating, and documenting AK information is performed in accordance with the minimum standards established in Section C4. The CCP assesses and documents the limitations of the AK information used to assign hazardous waste numbers (e.g., purpose and scope of information, date of publication, type and extent to which waste parameters are addressed).

The CCP complies with the nonconformance notification and reporting requirements of Section C3-7of this QAPjP if the results of testing specified in this QAPjP are inconsistent with AK documentation.

In addition, performance with regard to the use of AK information is tracked by assessing the frequency of inconsistencies among information, and documenting AK inconsistencies identified through radiography and VE. The AK process and waste stream documentation are evaluated through internal assessments by QA and assessments by auditors external to the organization (i.e. the Permittees).

C3-4 Data Review, Validation, and Verification Requirements

Data review, validation, and verification are performed at the CCP data generation level in accordance with CCP data generation level characterization procedures. Data validation and verification are performed at the project level by the CCP project staff.

Data review determines whether raw data was properly collected and ensures that it was properly reduced. Data validation verifies that the reported data satisfy the

WAP requirements and are accompanied by signature release. Data verification authenticates that the data are presented accurately, represent the testing activities performed, and have been subject to the appropriate level of review. By meeting the requirements in this section, the CCP ensures that records furnish documentary evidence of quality.

The following types of BDRs (as applicable to the characterization process in use) are required for data validation and verification, and quality assurance activities:

- The Testing BDR or equivalent includes all data pertaining to radiography or VE for up to 20 waste containers without regard to waste matrix. Table C3-3, Testing Batch Data Report Contents lists the information required in Testing BDRs (identified with an "X") and other information necessary for data validation but optional for inclusion in the Testing BDR (identified with an "O")

C3-4a Data Generation Level (T6, T32, T53, T106, T113, T143, T188, T500, T508)

The minimum requirements for raw data collection and management include the following:

- All data are signed and dated in reproducible ink by the individual generating the data, or by use of unalterable electronic signature.
- All data are recorded clearly, legibly, and accurately in field records.
- All changes to original data are lined out, initialed, and dated by the individual making the change. A justification for changing the original data may also be included. Original data are not obliterated or otherwise disfigured so as to be unreadable. Data changes are made only by the individual who originally collected the data, or by an individual authorized to change the data.
- All data are transferred and reduced from field records completely and accurately.
- All field records are maintained as specified in Table C-2.
- All data are organized in standard formats (i.e., BDRs) specified in procedures.

- All electronic and video data are stored appropriately to ensure that waste containerand associated QC data are readily retrievable. In the case of classified information, additional security provisions may apply that could restrict retrievability. The additional security provisions will be documented in CCP procedures when required.

Data review, validation, and verification at this level involves scrutiny and signature release from qualified independent technical reviewers not involved in the generation or recording of the data under review as specified below. Individuals conducting the data review, validation, and verification use checklists that address the items in this section. Checklists are forwarded with BDRs to the CCP Project Office.

C3-4a(1) Independent Technical Review (T6, T32, T53, T106, T113, T143, T188, T500, T508)

The independent technical reviewer ensures by review of raw data that data generation and reduction are technically correct, calculations are verified correct, deviations are documented, and QA/QC results are complete, documented correctly, and compared against the criteria specified in this QAPjP. This review is to validate and verify all of the work done by the originator.

One hundred percent of the BDRs must receive an independent technical review. This review is performed by an individual by a trained and qualified individual who was not involved in the generation or recording of the data under review. The independent technical review is performed as soon as practicably possible in order to determine and correct negative quality trends in the testing, process. However at a minimum, the independent technical review must be performed before any waste associated with the data reviewed is managed, stored, or disposed at WIPP. The reviewer(s) must release the data as evidenced by signature, and as a consequence ensure the following:

- Data generation and reduction were conducted in a technically correct manner in accordance with the methods used (procedure revision) and data were reported in the proper units and correct number of significant figures.

- Calculations were verified by a valid calculation program, a spot check of verified calculation programs, and/or 100 percent check of all hand calculations. Values that are not verifiable to within rounding or significant difference discrepancies are rectified prior to completion of independent technical review.

- The data were reviewed for transcription errors.

- The testing, data QA documentation for BDRs is complete and includes, as applicable, raw data, calculation records, calibration records, (or reference to an available calibration package), and Corrective action is taken to ensure that all BDRs are complete and include all necessary raw data prior to completion of the independent technical review.

- Radiography tapes were reviewed (independent observation) on a waste container basis at a minimum of once per testing batch or once per day of operation, whichever is less frequent (Section C1-3). The radiography tape was reviewed against the data reported on the radiography form to ensure that the data are correct and complete.

- QAOs have been met according to the methods outlined in Sections C3-2 and C3-3.

C3-4b Project Level

Data validation and verification at this level involves scrutiny and signature release from the SPM (T1, T500, T508). Any nonconformance identified during this process is documented on an NCR (Section C3-7).

The SPM ensures that a repeat of the data generation level review, verification and validation is performed on the data for a minimum of one randomly chosen waste container quarterly (every three months). This exercise documents that the data generation level review, verification, and validation are being performed in accordance with implementing procedures.

C3-4b(1) Site Project Manager Review

The SPM review is the final validation that all of the data contained in BDRs from the data generation level are complete and are properly reviewed, as evidenced by signature release and completed checklists.

One hundred percent of the BDRs have SPM signature release. At a minimum, the SPM signature release is performed before any waste associated with data reviewed is shipped to the WIPP. This signature release ensures the following (T1, T500, T508):

- Data generation level independent technical review, validation, and verification are performed as evidenced by completed review checklists and by the appropriate signature releases.

- Independent technical reviewers were not involved in the generation or recording of the data under review.

- Batch data review checklists are complete.
- BDRs are complete and data are properly reported (i.e., data are reported in the correct units, with the correct significant figures.
- Data are within established data assessment criteria and meet all applicable QAOs as described in Sections C3-2 through C3-3.
- Testing batch QC checks (e.g., replicate scans, measurement system checks) were properly performed. Radiography data are complete and acceptable based on evidence of videotape review of one waste container per day or once per testing batch, whichever is less frequent, as specified in C1-1.

C3-4b(2) Preparing SPM Summary and Data Validation Summary

To document the project level validation and verification described above, the SPM (or designee) prepares an SPM Summary, and Data Validation Summary (T1). These reports may be combined to eliminate redundancy. The SPM Summary includes a validation checklist for each BDR. Checklists for the SPM Summary are of sufficient detail to validate all aspects of a BDR that affect data quality.

The SPM Data Validation Summary provides verification that, on a per waste container as evidenced by BDR reviews, all data have been validated in accordance with this QAPjP. The SPM Data Validation Summary identifies each BDR data report reviewed (including all waste container numbers), describes how the validation was performed and whether or not problems were detected (e.g., nonconformance reports), and includes a statement indicating that data are acceptable. Summaries must include release signatures.

C3-4b(3) Preparing Waste Stream Characterization Packages

If requested by the Permittee, the SPM provides a Waste Stream Characterization Package. The SPM must ensure that the Waste Stream Characterization Package (described in Section C3-6b(3)) supports the waste characterization determinations.

C3-4c Permittee Level

Not applicable to CCP. This is a Permittee function.

C3-5 Reconciliation with Data Quality Objectives

Reconciling the results of waste testing with DQOs ensures that data are of adequate quality to support regulatory compliance programs. When waste is characterized by

CCP, reconciliation with the DQOs is the responsibility of the SPM and occurs prior to waste shipment (T2).

C3-5a Reconciliation at the Project Level

The SPM ensures that all data generated and used in decision making meet the DQOs providing in Section C-4a(1). DQO reconciliation is the responsibility of the SPM, who assesses whether data of sufficient type, quality, and quantity to meet the DQOs (Section C-4a(1)) have been collected and determines whether the variability of the data set is small enough to provide the required confidence in the results.

The SPM determines for each waste stream characterized, whether sufficient data have been collected to determine the following required waste parameters (T2):

- Waste matrix code.
- Waste material parameter weights.
- That each container of waste is transuranic radioactive waste.
- Whether the waste stream exhibits a toxic characteristic or is listed under 40 CFR §261, Subpart C.
- Whether the waste stream contains listed waste found in 20.1.4.200 NMAC incorporating 40 CFR §261, Subpart D.
- Whether the waste stream can be classified as hazardous or nonhazardous
- Whether the overall completeness, comparability, and representativeness QAOs were met for the testing procedures specified in Sections C3-2 and C3-3 prior to submittal of a WSPF for a waste stream or waste stream lot.

If the SPM determines that insufficient data have been collected to make the determinations listed above, additional data collection efforts are undertaken.
The reconciliation of a waste stream is performed, as described in Section C4, prior to submittal of the WSPF and CIS to the Permittees for that waste stream. The CCP does not ship TRU waste stream to the WIPP unless the SPM determines that the WAP-required waste parameters listed above are met for that waste stream.

C3-5b Reconciliation at the Permittee Level

Not applicable to the CCP. This is a Permittee function.

C3-6 Data Reporting Requirements

Data reporting requirements define the type of information and the method of transmittal for data transfer from the data generation level to the CCP Project Office and from the CCP Project Office to the Permittee.

C3-6a Data Generation Level

Data are transmitted by hard copy or electronically (with hard copies available on demand) from the data generation level to the CCP Project Office. Transmitted data include all BDRs, and data review checklists. The BDR forms and checklists must contain all the information required by the testing techniques described in Sections C1 through C6, as well as the signature releases to document the review, validation, and verification as described in Section C3-4. BDRs and checklists are on approved forms as provided in procedures.

BDRs are forwarded to the SPM. All BDRs are assigned serial numbers, and each page is numbered. The serial number is the same as the batch number. QA documentation, including raw data, is maintained in either testing facility files, or the CCP files in accordance with CCP-QP-008.

C3-6b Project Level

The CCP Project Office prepares a WSPF for each waste stream certified for shipment to the WIPP based on information obtained from AK and BDRs, if applicable (T2). The CCP Project Office ensures that the CIS and Waste Stream Characterization Package (when requested by the Permittee) are prepared as appropriate. The SPM verifies these reports are consistent with information found in BDRs. Summarized testing are included in the CIS. The contents of the WSPF, the CIS, and the Waste Stream Characterization Package are discussed in the following sections.

A Waste Stream Characterization Package is submitted only when requested by the Permittee. These reports are reviewed, validated, and verified by the SPM (T2).

After approval of a WSPF and the associated CIS by the DOE, CCP will maintain a cross reference of container identification number to each BDR.

A Waste Stream Characterization Package will be transmitted by hard copy or electronically from the SPM to the Permittees when requested.

Controlled
Copy

C3-6b(1) Waste Stream Profile Form (T2)

The WSPF shall include the following information:

- Site name
- Site EPA ID
- Date of audit report approval by NMED (if obtained)
- Original generator of waste stream
- Whether waste is CH or RH
- The Waste Stream WIPP Identification Number
- Summary category group
- Waste matrix code group
- Waste Material Parameter Weight Estimates per unit of waste
- Waste stream name
- A description of the waste stream
- Applicable U.S. EPA Hazardous Waste Numbers
- Applicable TRUPACT Content (TRUCON) codes
- A listing of AK documentation used to identify the waste stream
- The waste characterization procedures used and the reference and date of the procedure
- Certification signature of SPM, name, title, and date signed

C3-6b(2) Characterization Information Summary (T2)

The CIS shall include the following elements, if applicable:

- Data reconciliation with DQOs.

- Radiography and VE summary to document that prohibited items are not present, and to verify that the physical form of the waste matches the waste stream description as determined by AK.

- A justification for the selection of radiography and/or VE as an appropriate method for characterization of the waste.

- A complete listing of all container identification numbers used to generate the WSPF, cross-referenced to each BDR.

- Complete AK summary, including waste stream name and number, the point of generation, waste stream volume (current or projected), generation dates, TRUCON codes, Summary Category Group, Waste Matrix Code(s) and Waste Matrix Code Group, other TRU Waste Baseline Inventory Report (TWBIR) information, waste stream description, areas of operation, generation processes, RCRA determinations, radionuclide information, all references used to generate the AK summary, and any other information required by Section C4-2b.

- Method for determining Waste Material Parameter Weights per unit of waste.

- List of any AK Sufficiency Determinations requested for the waste stream.

- Certification through acceptable knowledge or testing that any waste assigned the Hazardous Waste Number of U134 (hydrofluoric acid) no longer exhibits the characteristic of corrosivity. This is verified by ensuring that no liquid is present in U134 waste.

C3-6b(3) Waste Stream Characterization Package (T2)

The waste stream characterization package is submitted when requested by the Permittee and includes the following information:

- WSPF (Section C3-6b(1))

- Applicable CIS (Section C3-6b(2))

- Complete AK summary (Section C3-6b(2))

- BDRs supporting the characterization of the waste stream and any others requested by the Permittee

- Raw testing data requested by the Permittee

C3-6b(4) WIPP Waste Information System Data Reporting (T30)

The WWIS/WDS data dictionary includes the data, field formats, and limits associated with waste characterization data established by the WAP. These data are subject to edit and limit checks that are performed automatically by the database, as defined in the "Waste Data System User's Manual" (DOE 2009).

C3-7 Nonconformances (Q5)

The status of CCP activities are monitored and controlled by the SPM in accordance with the nonconformance and procurement procedures identified below. This includes nonconformance identification, documentation, and reporting.

Nonconformances

Nonconformances are uncontrolled and unapproved deviations from an approved plan or procedure (e.g., this QAPjP). In the context of this QAPjP, deficiencies and nonconformances are synonymous. Nonconforming items and activities are those that do not meet the CCP requirements, procurement document criteria, or approved work procedures. The CCP personnel are responsible for promptly reporting any nonconformance to management. The CCP reconciles and corrects nonconformance items, as appropriate, in accordance with the DOE-CBFO QAPD. The disposition of nonconforming items is identified and documented and nonconforming items are identified by marking, tagging, or segregating and appropriate notifications are made to the site. When a nonconformance related to the CCP is observed or detected, the QA is notified, and affected management reviews the content of the NCRs and assists the QA in processing the NCR. For each container selected for confirmation pursuant to Section C7, the Permittees will examine the respective NCR documentation to verify NCRs have been dispositioned for the selected container.

The CCP identifies and documents nonconformances as follows:

- The NCR procedure establishes the method for CCP personnel to identify, document, control, and disposition nonconforming activities, processes, items, and materials. NCRs are initiated by any individual identifying a nonconformance during performance of work tasks, random observations, inspections, or any other review of CCP procedures, operations, and activities. The CCP personnel identify deficient items by marking, tagging, or segregating them. This procedure implements the requirements of Section 1.3.2 (Nonconformances) of the DOE-CBFO QAPD.

- Corrective Action Reporting and Control procedures establishes the method for personnel to identify and correct potential problems and conditions adverse to quality, in addition to precluding their recurrence, and if necessary,

stopping associated work activities (Q8). Any person may temporarily stop work prior to evaluation of the condition by the responsible CCP supervisor. The CCP supervisor then evaluates and reports the condition, as necessary, in accordance with CCP-QP-029, *CCP Corrective Action Management.* This procedure implements the requirements of Section 1.3.3 (Corrective Action) of the DOE-CBFO QAPD.

Management at all levels fosters a "no-fault" attitude to encourage the identification of nonconforming items and processes within the CCP. Nonconformances may be detected and identified by anyone performing activities in support of this QAPjP, including:

- The CCP project staff - during field operations, supervision of subcontractors, data validation and verification, and self-assessment
- Testing Facility staff - during the preparation for and performance of testing; calibration of equipment; QC activities; data review, validation, and verification; and self-assessment.
- QA personnel - during oversight activities or audits

An NCR is prepared for each nonconformance identified. Each NCR is initiated by the individual(s) identifying the nonconformance. The NCR is then processed by knowledgeable and appropriate personnel. The NCR includes or references results of, QC tests, audit reports, internal memoranda, or letters, as appropriate. The NCR provides the following information:

- Identification of the individual(s) identifying or originating the nonconformance
- Description of the nonconformance
- Method(s) or suggestions for correcting the nonconformance (corrective action)
- Schedule for completing the corrective action
- An indication of the potential ramifications and overall usability of the data, if applicable
- Any approval signatures specified in the nonconformance procedures.

The SPM oversees the NCR process for the CCP, identifies and tracks the status of deficiencies, reports this information to the Permittees, and is responsible for verifying the close-out of the NCRs.

Nonconformances are tracked and trended in accordance with procedures (Q5, Q14) that establish the method for evaluating trends in nonconformances and identifying appropriate corrective actions.

The SPM ensures that relevant project personnel are notified of nonconformances and verifying completion of corrective action for nonconformances.

Nonconformance to DQOs

For any non-administrative nonconformance related to applicable requirements specified in this QAPjP which are first identified at the SPM signature release level (i.e., a failure to meet a DQO), the SPM will provide a written notification to the Permittees within seven (7) calendar days of identification and shall also provide a nonconformance report within 30 calendar days of identification of the incident. The CCP implements a corrective action process and resolves identified nonconformances prior to shipment of any affected waste to the WIPP.

DOE Corrective Action Process

This section is not applicable to the CCP.

C3-8 Special Training Requirements and Certifications (Q2)

The SPM is responsible for ensuring that all personnel maintain proficiency in the work performed and identifies additional training if required. The training and qualification process for CCP personnel and subcontracted personnel who perform work to support the CCP is documented and controlled. In accordance with these plans, only personnel trained to applicable CCP-related plans and procedures perform CCP activities. Before performing CCP-related activities, assigned staff receive indoctrination into the scope, purpose, and objectives of the WAP and the specific QAOs of assigned tasks. Personnel assigned to perform activities under this QAPjP have the education, experience, and training applicable to the functions associated with the work.

Evidence of personnel proficiency and demonstration of competence in the task(s) assigned are demonstrated and documented. All personnel designated to work on specific aspects of the WAP maintain qualification (i.e., training and certification) throughout the duration of the work as specified in this QAPjP and applicable procedures. Job performance is evaluated and documented at periodic intervals, as specified in the appropriate implementing procedures.

CCP personnel involved in WAP activities (as flowed down in this QAPjP) receive continuing training to ensure that job proficiency is maintained and documented. The due date for required continuing training courses and requalification shall be the end of the month of the anniversary date when the training was previously completed. Training

includes both education in principles and enhancement of skills. Job performance is evaluated and documented at periodic intervals, as specified in the implementing procedures or in CCP-QP-002. Documentation of training, consisting of training records that specify the scope of training, dates of completion, and job proficiency are maintained by the CCP Project Office and/or the site records system as QA records.

The minimum qualifications for certain specified positions for the WAP are summarized in Table C3-2. This QAPjP specify the titles and minimum training and qualification requirements for personnel performing QAPjP activities.

Evaluation of CCP personnel qualifications includes a comparison of the job description to the skills, training, and experience included in the individual's resume, training records, and other documented bases for job assignment. This evaluation is also performed for personnel who change positions because of a transfer or promotion as well as personnel assigned to short-term or temporary work assignments that may affect the quality of CCP activities. Procedures identify the responsible persons for ensuring all personnel maintain proficiency in the work performed and identify any additional training that may be required.

C3-9 Changes to WAP Related Plans or Procedures

Controlled changes to WAP-related CCP plans or procedures are managed through the document control process (Q10). The SPM reviews all nonadministrative changes and evaluates whether those changes could impact DQOs specified in the WAP. Any changes to the WAP-related plans or procedures that could impact DQOs (i.e., those changes that require prior approval of the DOE as defined in Section C5-2) are reported to the DOE within five days of identification by the project level review.

Table C3-1. Waste Material Parameters and Descriptions

Waste Material Parameter	Description
Iron-Based Metals/Alloys	Iron and steel alloys in the waste excluding the waste container materials.
Aluminum-Based Metals/Alloys	Aluminum or aluminum-based alloys in the waste materials.
Other Metals	All other metals found in the waste materials (e.g., copper, lead, zirconium, tantalum, etc.).
Other Inorganic Materials	Non-metallic inorganic waste, including concrete, glass, firebrick, ceramics, sand, and inorganic sorbents.
Cellulosics	Materials generally derived from high polymer plant carbohydrates (e.g., paper, cardboard, wood, cloth).
Rubber	Natural or man-made elastic latex materials (e.g., surgeon's gloves, leaded rubber gloves).
Plastics (Waste Materials)	Generally man-made materials, often derived from petroleum feedstock (e.g., polyethylene and polyvinylchloride).
Organic Matrix	Cemented organic resins, solidified organic liquids and sludges.
Inorganic Matrix	Any homogeneous materials consisting of sludge or aqueous-based liquids that are solidified with cement, calcium silicate, or other solidification agents; (e.g., waste water treatment sludge, cemented aqueous liquids, and inorganic particulates).
Soils/Gravel	Generally consists of naturally-occurring soils that have been contaminated with inorganic waste materials.
Steel (Packaging Materials)	208-liter (55-gallon) drums.
Plastics (Packaging Materials)	90-mil polyethylene drum liner and plastic bags.

Table C3-2. Minimum Training and Qualification Requirements

Personnel	Requirements
Radiography Operators[a]	Site-specific training based on waste matrix codes and waste material parameters as described in Section C3-4; requalification every 2 years

[a] Operators are responsible for the actual operation of testing equipment.

Table C3-3. Testing Batch Data Report Contents

Required Information	Radiography	VE	Comment
Batch Data Report Date	X	X	
Batch number	X	X	
Waste container number	X	X	
Waste stream name and/or number	O	O	
Waste matrix code	X	X	Summary Category Group included in waste matrix code.
Implementing procedure (specific version used)	X	X	If procedure cited contains more than one method, the method used must also be cited. Can use revision number, date, or other means to track specific version used.
Container type	O	O	Drums, Pipe Overpack, SWB, TDOP, etc.
Video media reference	X	X	Reference to video media applicable to each container. For VE for newly generated waste, video media is not required if two trained operators review the contents of the waste container to ensure correct reporting.
Imaging check	O	N/A	
Camera check	N/A	O	
Audio check	O	O	
QC documentation	X	X	

Table C3-3. Testing Batch Data Report Contents (continued)

Required Information	Radiography	VE	Comment
Verification that the physical form matches the waste stream description and waste matrix code	X	X	Summary Category Group included in waste matrix code.
Comments	X	X	
Reference to or copy of associated NCRs, if any	X	X	Copies of associated NCRs must be available.
Verify absence of prohibited items	X	X	
Operator signature and date of test	X	X	Signatures of both operators required for visual verification of AK.
Data review checklists	X	X	All data review checklists will be identified.

LEGEND:
X = Required in Batch Data Report
O = Information must be documented and traceable; inclusion in Batch Data Report is optional.

C4 ACCEPTABLE KNOWLEDGE

C4-1 Introduction

The RCRA regulations codified in 40 CFR and the New Mexico Hazardous Waste Management Regulations in 20.4.1 NMAC, Subparts 100 through 600, Subpart 800, and Subpart 900, authorize the use of AK in appropriate circumstances by waste generators or treatment, storage, or disposal facilities to characterize hazardous waste. AK is described in *Waste Analysis at Facilities that Generate, Treat, Store and Dispose of Hazardous Waste: A Guidance Manual* (EPA 1994a). AK, as an alternative to waste sampling and analysis, is used to meet all or part of RCRA waste characterization requirements (EPA 1994a).

EPA's 1994 Waste Analysis Guidance Manual broadly defines the term "acceptable knowledge" to include process knowledge, whereby detailed information on the wastes is obtained from existing published or documented waste analysis data or studies conducted on hazardous waste generated by processes similar to that which generated the waste; facility records of analysis performed before the effective date of RCRA; and sampling and waste analysis data obtained from generators of similar wastes that send their wastes off-site for treatment, storage, or disposal (EPA 1994a). If it is determined that AK alone is insufficient to accurately characterize a waste, radiography and/or VE, may be used to complete the waste characterization process and satisfy the requirements of the WAP. AK is used in TRU waste characterization activities in five ways:

- To delineate TRU waste streams
- To assess whether TRU mixed wastes comply with the applicable requirements of the Treatment, Storage, and Disposal Facility Waste Acceptance Criteria (TSDF-WAC)
- To assess whether TRU mixed wastes exhibit hazardous characteristic (20 NMAC 4.1.200, incorporating 40 CFR § 261 Subpart C)
- To assess whether TRU mixed wastes are listed wastes (20 NMAC 4.1.200, incorporating 40 CFR § 261 Subpart D)
- To estimate waste material parameter weights

Radiography and/or VE may be performed to augment the characterization of wastes based on AK when an AK Sufficiency Determination has not been requested by the generator/storage site or, if requested, has not been granted by the DOE (see Section C4-3d). TRU waste streams undergo applicable provisions of the AK process prior to shipment of the waste to WIPP.

C4-2 Acceptable Knowledge Documentation

The CCP collects and compiles, in a logical sequence, AK information that progresses from general facility information (TRU waste management program information) to more detailed waste-specific information (TRU waste stream information).

The CCP implements the AK process as specified in the WAP to characterize TRU waste (T5). The AK information is then compiled into the AK report (and supporting documentation), as shown in Figure C4-1, Compilation of Acceptable Knowledge Documentation, in Attachment C-4 of the WAP.

The following sections include the information the Permittee will require for the CCP to characterize TRU waste using AK. Because waste generating processes are site-specific, CCP will, as necessary, augment the required AK records with additional supporting information as discussed in Section C4-2c. If the required information is not available for a particular waste stream, the waste stream is not eligible for an AK Sufficiency Determination as specified in Section C4-3d.

C4-2a Required TRU Waste Management Program Information

TRU waste management program information clearly defines waste categorization schemes and terminology, provides a breakdown of the types and quantities of TRU waste that are generated and stored by the site (and processed by the CCP), and describes how waste is tracked and managed, including historical and current operations. Information related to TRU waste certification procedures and the types of documentation (e.g., WSPFs) used to summarize AK are also provided.

The following information is included as part of the AK written record:

- A map of the site with the areas and facilities involved in TRU waste generation, treatment, and storage identified
- Facility mission description as related to TRU waste generation and management
- Description of the operations that generate TRU waste at the site
- Description of waste identification and characterization schemes used at the site or facility (e.g., content codes, item description codes)
- Types and quantities of TRU waste generated, including historical generation through future projections. Includes time and facility/site of generation
- Description of correlation of waste streams generated from the same building and process (e.g., sludge, combustibles, metals, and glass)

- Waste certification procedures for TRU wastes to be shipped to the WIPP

C4-2b Required TRU Waste Stream Information

The CCP uses AK to delineate site-specific waste streams for shipment to the WIPP. The available process information and data that supports the AK used to characterize waste streams are compiled in AK summary reports and supporting documentation in accordance with CCP-TP-005. The type and quantity of supporting documentation may vary by waste stream, depending on the waste generating process and site specific requirements imposed by the Permittee. At a minimum, the waste process information on each waste stream includes the following written information:

- Areas and buildings from which the waste stream was or is generated
- The waste stream volume and time period of waste generation
- Waste generating process described for each building (e.g., batch waste stream generated during decommissioning operations of glove boxes), including processes associated with U134 waste generation, if applicable
- Documentation regarding how the site has historically managed the waste, including the historical regulatory status of the waste (i.e., TRU mixed versus TRU non-mixed waste)
- Process flow diagrams. In the event that a process flow diagram cannot be created, a description of the waste generating process, rather than a formal process flow diagram, is used to satisfy this requirement. The use of the waste generating process description is justified, and the justification is placed in the AK record
- Material inputs or other information that identify the chemical content of the waste stream and physical waste form (e.g., glove box materials and chemicals handled during glove box operations; events or processes that may have modified the chemical or physical properties of the waste stream after generation; data obtained through VE of newly generated waste that later undergoes radiography; information demonstrating neutralization of U134 [hydrofluoric acid] and waste compatibility)

The AK written record includes a summary that identifies all sources of waste characterization information used to delineate the waste stream. The basis and rationale for delineating each waste stream, based on the parameters of interest, is clearly summarized and traceable to referenced documents. Assumptions made in delineating each waste stream also are identified and justified. If discrepancies exist between required information, then the CCP may consider applying all hazardous waste numbers indicated by the information to the subject waste stream but must assess and

evaluate the information to determine the appropriate hazardous waste numbers consistent with RCRA requirements.

Implementing procedures address the following AK processes:

- Identifying and assigning the physical waste form of the waste
- Delineating waste streams and assigning Summary Category Groups and waste matrix codes
- Resolving inconsistencies in AK documentation
- Radiography and VE, if applicable
- For newly generated waste, procedures describing process controls used to ensure prohibited items (specified in Section C) are documented and managed
- Procedures to ensure that radiography and VE include a list of prohibited items that the operator verifies are not present in each container (e.g., liquid exceeding TSDF-WAC limits, corrosives, ignitables, reactives, and incompatible wastes)
- Procedures for documenting how changes to waste matrix code, waste stream assignment, and associated hazardous waste numbers based on material composition are documented for any waste
- Procedures that ensure the assignment of EPA hazardous waste numbers is appropriate, consistent with RCRA requirements, and considers site historical waste management
- Procedures for estimating waste material parameter weights

C4-2c Additional Acceptable Knowledge Information

CCP shall obtain additional acceptable knowledge information. CCP shall collect information as appropriate to augment required information and provide any other information obtained to further delineate waste stream. Adequacy of this information shall be assessed by DOE during audits. CCP will use this information to compile the acceptable knowledge written record.

All additional specific, relevant acceptable knowledge documentation assembled and used in the acceptable knowledge process, whether it supports or contradicts any required acceptable knowledge documentation, shall be identified and an explanation provided for its use (e.g., identification of a toxicity characteristic). Additional

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documentation may be used to further document the rationale for the hazardous characterization results. The collection and use of additional information shall be assessed by DOE during site audits to ensure that hazardous waste characterization is supported, as necessary, by such information. Similar to required information, if discrepancies exist between additional information and the required information, then CCP may consider applying all hazardous waste numbers indicated by the additional information to the subject waste stream, but must assess and evaluate the information to determine the appropriate hazardous waste numbers consistent with RCRA requirements. All information considered must be documented and placed in the auditable record, including applicable discrepancy resolution documentation.

Additional AK documentation includes, but is not limited to, the following information:

- Process design documents (e.g., Title II Design)
- Standard operating procedures that may include a list of raw materials or reagents, a description of the process or experiment generating the waste, and a description of wastes generated and how the wastes are managed at the point of generation.
- Preliminary and final safety analysis reports and technical safety requirements
- Waste packaging records
- Test plans or research project reports that describe reagents and other raw materials used in experiments
- Site databases (e.g., chemical inventory database for Superfund Amendments and Reauthorization Act Title III requirements)
- Information from site personnel (e.g., documented interviews)
- Standard industry documents (e.g., vendor information)
- Analytical data relevant to the waste stream, including results from fingerprint analyses, spot checks, routine verification sampling or other processes that collected information pertinent to the waste stream. This may also include new information which augments required information (e.g., VE not performed in compliance with the WAP, radiography screening for prohibited items)
- Material Safety Data Sheet, product labels, or other product package information

- Sampling and analysis data from comparable or surrogate waste streams (e.g., residues, equivalent nonradioactive materials)

- Laboratory notebooks that detail the research processes and raw materials used in an experiment

C4-3 Acceptable Knowledge Training, Procedures, and Other Requirements

The CCP uses the following to characterize TRU waste by means of AK information:

1) compiling the required and supporting additional AK documentation in an auditable record;

2) auditing AK records, and

3) WSPF approval and waste confirmation.

C4-3a Qualifications and Training Requirements (Q2)

The CCP and site personnel responsible for compiling AK, assessing AK, and resolving discrepancies associated with AK are qualified and trained in the following areas, at a minimum:

- WAP and TSDF-WAC requirements;

- State and Federal RCRA regulations associated with solid and hazardous waste characterization;

- Discrepancy resolution and reporting; and

- CCP and site-specific procedures associated with waste characterization using AK.

Position-specific qualification and training requirements such as those listed above for functional positions within the CCP are established by the SPM and documented (Q2). The SPM ensures that personnel conducting AK activities are qualified and trained as specified.

C4-3b Acceptable Knowledge Assembly and Compilation

The CCP process allows for the consistent application of the AK process and requirements, and addresses the following requirements (T5):

- Written procedures outlining the specific methodology used to assemble AK records, including the origin of the documentation, how it is used, and any

limitations associated with the information (e.g., identify the purpose and scope of a study that included limited sampling and analysis data).

- Written procedures to compile the required AK record.

- Written procedures ensuring that unacceptable wastes (e.g., reactive, ignitable, corrosive) are identified and segregated from TRU waste populations sent to the WIPP.

- Procedures to evaluate AK and resolve discrepancies. For example, if different sources of information indicate hazardous wastes are present in a waste stream, the CCP includes all sources of information in its records and may choose to either conservatively assign hazardous waste numbers or assign only those numbers deemed appropriate and consistent with RCRA requirements. All information used to justify assignment of hazardous waste numbers must be placed in the auditable record. Further the assignment of hazardous waste numbers is traceable in the AK record to required documentation.

- Procedures to identify hazardous wastes and assign the appropriate hazardous waste numbers to each waste stream in accordance with the following minimum baseline requirements:

  - Compiling all of the required information in an auditable AK record.

  - Reviewing the compiled information and delineating waste streams. Delineation of waste streams must comply with the definition in C-0a and justify combining waste historically managed separately as TRU mixed and TRU non-mixed waste streams into a single waste stream.

  - Reviewing the compiled information to determine if the waste stream is compliant with the TSDF-WAC.

  - Reviewing the required information to determine whether the waste is listed under 20.4.1.200 NMAC (incorporating 40 CFR §261), Subpart D. Assigning all the hazardous waste numbers unless the CCP chooses to justify an alternative assignment and documents the justification in an auditable record.

  - Reviewing the required information to determine if the waste exhibits a hazardous characteristic or contains toxicity characteristic hazardous constituents specified in 20.4.1.200 NMAC (incorporating 40 CFR §261), Subpart C. If a toxicity characteristic contaminant is identified and is not included as a listed waste, sites may evaluate available data and assign the toxicity characteristic hazardous waste number consistent with RCRA

requirements. All data examined to reach the hazardous waste number determination must be placed in the auditable record and must present a clear justification for the hazardous waste number analyses.

- Reviewing the compiled information to provide an estimate of material parameter weights for each container to be stored or disposed of at WIPP.

- For newly generated wastes, procedures are developed and implemented to characterize hazardous waste using AK prior to packaging the waste.

- The CCP ensures that results of other audits of the CCP TRU waste characterization activities are available in the CCP files.

- The CCP identifies all process controls (implemented to ensure that the waste contains no prohibited items and to control hazardous waste content and/or physical form) that may have been applied to retrievably stored waste and/or may presently be applied to newly generated waste. Process controls are applied at the time of waste generation/packaging to control waste content, whereas any activities performed after waste generation/packaging to identify prohibited items, hazardous waste content, or physical form are waste characterization activities not process controls. The AK record must contain specific process controls and supporting documentation identifying when these process controls are used to control waste content. See Section C-2 for programmatic requirements related to process controls.

C4-3c Criteria for Assembling an Acceptable Knowledge Record and Delineating the Waste Stream

CCP-TP-005 describes the process for assembling AK documentation into an auditable record. The first step is to assemble the required AK information and any additional information regarding the materials and processes that generate a specific waste stream. AK records are generated in compliance with the following criteria (T5):

- AK information is compiled in an auditable record, including a road map for applicable information.

- The overview of the facility and TRU waste management operations in the context of the facility's mission is correlated to specific waste stream information.

- Correlations between waste streams, with regard to time of generation, waste generating processes, and site-facilities are described in the AK summary report (Section C4-2b). For newly generated wastes, the rate (or schedule) and quantity of waste to be generated are also maintained in the AK process descriptions compiled in the AK summary report.

- A reference list provided in Section C4-3b that identifies documents, databases, QA protocols, and other sources of information that support AK information.

Container inventories are delineated into waste streams by correlating the container identifications to all of the required AK information and additional information (T5). The CCP assigns a waste matrix code and waste stream description to each container of waste using AK.

C4-3d AK Sufficiency Determination Request Contents (T5)

The CCP may submit an AK Sufficiency Determination Request (Determination Request). The Determination Request shall include, at a minimum.

- A complete AK Summary that addresses the following technical requirements:

  - Executive Summary

  - Waste Stream Identification Summary including a demonstration that the waste stream has been properly delineated and meets the Permit definition of waste stream (Attachment C, Introduction);

  - Mandatory Program Information (including, but not limited to, facility location and description, mission, defense waste assessment, spent nuclear fuel and high-level waste assessment, description of waste generating processes, research/development [as necessary], facility support operations [as applicable], types and quantities of TRU waste generated, correlation of waste streams to buildings/processes, waste identification and categorization, physical form identifiers);

  - Mandatory Waste Stream Information (including, but not limited to, Area and Building of Generation, waste stream volume/period of generation) (including, for newly generated waste, the rate and quantity of waste to be generation), waste generating activities, types of waste generated, material input related to physical form and identification of percentage of each waste material parameter in the waste stream, chemical content information including hazardous constituents and hazardous waste identification, prohibited item content (including documented evidence that the waste meets the TSDF-WAC Permit Sections 2.3.3.1 through 2.3.3.10), waste packaging, presence of filter vents, number of layers of confinement;

  - Types of supporting information gathered;

  - Container specific data (if available and relevant); and

- A complete reference list including all mandatory and additional information.

- An AK roadmap (defined as a cross reference between mandatory programmatic and mandatory waste stream information, with references supporting these requirements).

- A complete reference list including all mandatory and additional documentation.

- Additional relevant information for the required programmatic and waste stream data addressed in the AK Summary, examples of which are presented in Section C4-2c.

- Identification of any mandatory requirements supported only by upper tier documents (i.e., there is insufficient supporting data).

- Description or other means of demonstrating that the AK process described in the Permit was followed (for example, AK personnel were appropriately trained; discrepancies were documented, etc.).

- Information showing that CCP has developed a written procedure for compiling the AK information and assigning hazardous waste numbers as required in Section C4-3b.

- Information showing that CCP has assessed the AK process (e.g., internal audits, Section C4-3b).

C4-3e Requirements for Re-evaluating Acceptable Knowledge Information (T5)

AK includes information on the waste physical form, base materials composing the waste, and the waste generating process. Waste testing (i.e., radiography/VE) may be used to augment AK information prior to waste shipment. If retrievably stored waste must be repackaged, either VE prior to or during waste packaging or radiography after waste packaging, shall be used to confirm acceptable knowledge information.

The WSPF and CIS (including the AK summary) will be reviewed by the Permittees for each waste stream prior to DOE approval of the WSPF. The Permittees review will ensure that the submitted AK information was collected under procedures that ensure implementation of the WAP, provides data sufficient to meet the DQOs in Section C-4a(1), and allow the Permittees to demonstrate compliance with the waste analysis requirements of the Permit. A detailed discussion of the Permittees' waste stream review and DOE's WSPF approval process is provided in Section C-1d.

Re-Evaluation Based on Visual Examination and Radiography

The CCP has established procedures for re-evaluating AK if the results of waste confirmation indicate that the waste to be shipped does not match the approved waste stream, or if data obtained from VE or radiography for waste streams without an AK Sufficiency Determination exhibit this discrepancy. The CCP procedures describe how waste AK is re-evaluated, the waste is reassigned, and appropriate hazardous waste numbers assigned. If the re-evaluation requires that the waste matrix code be changed for the waste stream or the waste does not match the approved waste stream, the following minimum steps are taken to re-evaluate AK:

- Existing information is reviewed based on the container identification number and all differences in hazardous waste number assignments are documented
- If differences exist between the hazardous waste numbers that were assigned, the information is re-assessed, and required AK information associated with the new designation is documented
- Reassess and document all testing data associated with the waste
- The reassignment of the waste matrix code is documented and verified (e.g., verification that the waste was generated within the specified time period, area, and building and waste generating process, and that the process material inputs are consistent with the waste material parameters of waste identified during VE or radiography)
- Changes to AK records are recorded
- If discrepancies exist in the AK information for the revised waste matrix code, the discrepancies are documented in an NCR in accordance with CCP-QP-005. The NCR documents the segregation of the affected portion of the waste stream, and defines the corrective actions necessary to fully characterize the waste.

C4-3f Acceptable Knowledge Data Quality Requirements (T5)

DQOs for testing techniques are described in Section C3. Testing results are used to augment the characterization of wastes based on AK. To ensure the process is consistently applied and ensure that AK information is accurate, complete, and is representative of the waste stream being evaluated, the CCP complies with data quality requirements for AK documentation in Section C3.

The CCP addresses quality control by tracking its performance with regard to the use of AK by:

- Assessing the frequency of inconsistencies among information

- Documenting the results of waste discrepancies identified by CCP during waste confirmation using radiography, review of radiography audio/video recordings, VE, or review of VE records

In addition, the AK process and waste stream documentation is evaluated through internal assessments by QA organizations and assessment by auditors or observers external to the CCP (i.e., DOE-CBFO, NMED, EPA).

C4-3g Audits of Acceptable Knowledge

The DOE conducts an initial audit of the CCP prior to certifying the CCP for shipment of waste to the WIPP. This audit establishes an approved baseline that is reassessed annually by the DOE. The CCP does not certify waste for disposal until all corrective actions have been completed.

C5 QUALITY ASSURANCE PROJECT PLAN REQUIREMENTS

C5-1 Quality Assurance Project Plans

The CCP has developed and implemented this QAPjP to address the applicable waste characterization requirements specified in the WAP (P1). This QAPjP includes the qualitative or quantitative criteria to ensure that waste characterization activities are being performed satisfactorily. The organization(s) and position(s) responsible for implementation of this QAPjP are identified in Section B. Throughout this QAPjP, CCP documents are referenced that detail how each of the required elements of the characterization project are performed.

This QAPjP follows the format of the WAP and is implemented by the CCP through procedures that address TRU waste characterization activities. Compliance with CCP documents ensures that tasks are performed in a consistent manner that results in achieving the quality required under the QA program. The organization, format, content, and designation of the CCP procedures is described in the CCP-QP-010, *CCP Document Preparation, Approval, and Control*.

C5-2 Document Review, Approval, and Control (Q10)

Prior to the implementation of characterization activities, the SPM ensures that written procedures have been developed for implementing the requirements of this QAPjP. Procedures ensure that tasks are performed in a consistent manner and achieve the quality required for the quality assurance program. The SPM is responsible for ensuring that the procedures meet the organization, format, content, and designation of standard operating procedures. CCP procedures are written so that they may be implemented at several sites simultaneously. Site-specific issues such as safety policies, technical specification requirements, or organizational necessities, may require the CCP to prepare site-specific procedures to supplement the procedures used to ensure WAP compliance. These procedures are identified in the SOW or site interface document. These procedures are prepared and controlled as are the other existing CCP operating

procedures and are subject to site specific review requirements. As a minimum, the following requirements are addressed in CCP procedures:

- Responsibilities of the organizations affected by the document,
- Technical, regulatory, quality assurance, or other program requirements.
- Sequential description of work to be performed,
- Quantitative or qualitative acceptance criteria sufficient for determining that activities were satisfactorily accomplished.

- Prerequisites, limits, precautions, process parameters, and environmental conditions,
- Special qualifications and training requirements,
- Verification points and hold points,
- Methods for demonstrating that the work was performed as required (such as provisions for recording inspection and test results, checklists, or sign-off blocks), and
- Identification and classification of QA records to be generated by the implementing procedure.

Procedures also include examples of data (e.g., reports, forms, and data validation checklists), as appropriate. Internal review and approval requirements are specified. In addition, CCP procedures are formatted, as follows:

- Purpose
- Scope
- Requirements
- Responsibilities
- Procedures
- Records

CCP procedures are reviewed for consistency with the QAPjP in accordance with the above listed requirements. The SPM is responsible for ensuring that the most current version of all procedures is readily available for use as needed by project personnel after procedures have been reviewed and approved for use.

The SPM ensures that the preparation, issuance, and change to documents that specify quality requirements or prescribe activities affecting quality for the CCP program be controlled to assure that correct and current documents are used and referenced. The CCP uses a document control format consisting of a unique document identification number, current revision number, data, and page number, which will be placed in the header on the individual pages of the document. CCP documents are delineated into five areas: quality procedures, denoted by CCP-QP-XXX; technical procedures, denoted by CCP-TP-XXX; health and safety plans denoted by CCP-HSP-XXX; configuration management denoted by CCP-CM-XXX; and CCP Project Office documents (i.e., this QAPjP), denoted by CCP-PO-XXX. “XXX” denotes a sequential number.

Qualified and independent personnel review all CCP documents (including this QAPjP) prior to approval and issuance. Reviews consider the technical adequacy, completeness, and correctness of CCP documents and the inclusion of and compliance

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with the requirements established by the WAP. Approval is indicated by a signature and date page included in the front of the document. The SPM ensures that:

- Revisions to site implementing documents are denoted by including the current revision number and date on the document title page and each page of the document.

- Revised pages are marked in redline/strikeout for expeditious review of the entire document.

- A vertical bar, indicating the change to the text, is included along the left-hand margin of the page, except in the case of full document revisions.

- Revised document submittals identify the changes, the reason for the changes, and the justification for concluding that the revised contents continue to satisfy the requirements of the QA program.

- Revisions that affect performance criteria or data quality (e.g., sampling or analytical methods, QAO, calibration requirements), other than editorial or minor changes, undergo the same level of review and approval as the baseline version of each document. These documents are reviewed and approved by the same functional organizations that performed the original review/approval, unless other organizations are specifically designated in accordance with approved procedures. Editorial or minor changes may be made without the same level of review and approval as the original or

  otherwise changed documents. The following items are considered editorial or minor changes:

  - Correcting grammar or spelling (provided the meaning has not changed),

  - Renumbering sections or attachments,

  - Updating organizational titles (*A change in an organizational title accompanied by a change in responsibilities is not considered an editorial change*),

  - Changes to non-quality-affecting schedules,

  - Revised or reformatted forms, providing the original intent is not altered, and

  - Attachments marked “Example” or exhibits clearly intended to be representative only

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- CCP personnel are responsible for reporting any obsolete or superseded information to the SPM

- All CCP changes are evaluated and approved by the SPM, the appropriate personnel are notified before implementation, and the affected documents are revised as necessary

- Changes that affect performance criteria or data quality, and would take the activity out of compliance because they alter a requirement are not made without prior approval by DOE.

In addition, the SPM is responsible for ensuring that non-administrative changes, non-editorial changes, or changes that could affect performance criteria or data quality, such as sample handling and custody requirements, sampling and analytical testing procedures, quality assurance objectives, calibration requirements, or QC sample acceptance criteria (i.e., those changes that require prior approval of DOE as defined in Section C5-2) shall be reported to DOE within five days of identification by the project level review. The SPM ensures that the document control system is implemented to control the process for initiating, revising, modifying, reviewing, and distributing project documents and changes to project documents. As potential changes to project information are identified by the SPM, documents are revised as necessary and distributed to affected organizations in accordance with this procedure.

C6 AUDIT AND SURVEILLANCE PROGRAM

C6-1 Introduction

The WIPP audit and surveillance program ensures that the CCP conducts testing of wastes in accordance with the current WAP and that waste certification information is being managed properly. The CCP addresses deficiencies identified during the audits. A deficiency is any failure to comply with an applicable requirement of the WAP.

C6-2 Audit Procedures

This section does not apply to the CCP.

C6-3 Audit Position Functions

This section does not apply to the CCP.

C6-4 Audit Conduct

During audit interviews or audit meetings, CCP may be advised of deficiencies identified within their areas of responsibility to establish a clear understanding of the identified condition.

The personnel will be given the opportunity to correct any deficiency that can be corrected during the audit period.

When a deficiency is identified by the DOE audit team, a Corrective Action Report (CAR) is issued to the CCP. The CCP reviews the CAR which is used to evaluate the extent and cause of the deficiency, and submits an approved response to the Permittees indicating remedial actions and actions taken to preclude recurrence. If these responses to the CAR are acceptable, DOE communicates the acceptance to the CCP.

The CCP completes the remedial actions and actions to preclude recurrence and requests DOE to close the CAR. Following the completion of corrective actions, the Permittees may schedule and perform a verification visit to assure that corrective actions have been completed and are effective.

The corrective action response includes a discussion of the investigation performed to determine the extent and impact of the deficiency, a description of the remedial actions taken, determination of root cause, and action taken to preclude recurrence.

The CCP responds to any deficiencies and observations within thirty (30) days of receipt of any CARs and indicates the corrective action taken or to be taken. If the corrective action has not been completed, the response indicates the expected date the action will be completed. CARs applicable to WAP requirements are resolved prior to waste shipment.

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C7 TRU WASTE CONFIRMATION

Introduction

This section of the QAPjP describes the actions that the Permittees will take to approve and accept waste for and disposal at the WIPP, including waste confirmation activities. Discussion of the Permittees' actions that are relevant to CCP will be included here. The Permittees demonstrate compliance with the WIPP-WAP by ensuring that the waste characterization processes performed by CCP produce data compliant with the WIPP-WAP and through the waste screening and verification processes. Verification occurs at three levels: 1) the data generation level, 2) the project level, and 3) the Permittee level. The Permittees also examine a representative subpopulation of waste prior to shipment to confirm that the waste contains no ignitable, corrosive, or reactive waste; and that assigned EPA Hazardous Waste Numbers are allowed by the WIPP RCRA Permit. The waste confirmation activities described herein occur prior to shipment of the waste from the CCP to WIPP.

C7-1 Permittee Confirmation of TRU Mixed Waste

This section does not apply to CCP.

C7-1a Permittee Confirmation of a Representative Subpopulation of the Waste

The Permittees will confirm that the waste contains no ignitable, corrosive, or reactive waste through radiography or the use of VE of a statistically representative subpopulation of the waste. Prior to shipment to WIPP, waste confirmation will be performed on randomly selected containers from each CH- and RH-TRU waste stream shipment.

C7-1b Radiography Methods Requirements

This section describes the portion of the Permittees' confirmation program that applies to CCP.

For containers that have been characterized using radiography by CCP in accordance with the method in Section C1-1, the Permittees may perform confirmation by review of CCP's radiography audio/video recordings.

When confirmation is performed by review of audio/video recorded scans produced by CCP as specified in Section C1-1, independent observations will be performed on two waste containers per shipment or two containers per day, whichever is less frequent.

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C7-1c Visual Examination Methods Requirements

This section describes the portion of the Permittees' confirmation program that applies to CCP.

VE may also be used as a waste confirmation method by the Permittees. VE shall be conducted by the Permittees in accordance with written standard operating procedures to describe the contents of a waste container. VE shall be conducted to identify and describe all waste items, packaging materials, and waste material parameters. VE may be used by the Permittees to examine a statistically representative subpopulation of the waste certified for shipment to WIPP to confirm that the waste contains no ignitable, corrosive, or reactive waste. This is achieved by confirming that the waste contains no liquid in excess of TSDF-WAC limits or compressed gases, and that the physical form of the waste matches the waste stream description documented on the WSPF. During packaging, the waste container contents are directly examined by trained personnel. This form of waste confirmation may be performed by the Permittees at the waste generator/storage site. VE may be documented on video and audio media, or by using a second operator to provide additional verification by reviewing the contents of the waste container to ensure correct reporting. When VE is performed using a second operator, each operator performing the VE shall observe for themselves the waste being placed in the waste container or the contents within the examined waste container when waste is not removed. The results of all VE shall be documented on data forms.

In order to keep radiation doses as low as reasonably achievable, the Permittees may use their own trained VE operators to perform VE for waste confirmation by reviewing CCP VE data, which includes VE data forms, waste packaging records, and may also include audit/video media. If the Permittees perform waste confirmation by review of video media, the video record of the VE must be sufficiently complete for the Permittees to confirm the Waste Matrix Code and waste stream description, and verify the waste contains no liquid in excess of TSDF-WAC limits or compressed gases. CCP VE video/audio media subject to review by the Permittees shall meet the following minimum requirements:

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

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

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

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

The Permittees may also use their own trained VE operators to perform VE for waste confirmation by reviewing VE data forms or packaging logs prepared by the generator during their packaging of the waste. To be acceptable, the CCP VE data must be signed by two CCP personnel who witnessed the packaging of the waste and must provide sufficient information for the Permittees to determine that the waste container contents match the waste stream description on the WSPF and the waste contains no liquid in excess of TSDF-WAC limits or compressed gases. The Permittees will document their review of CCP VE data on Permittee VE data forms. CCP VE forms or packaging records subject to review by the Permittees shall meet the following minimum requirements:

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

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

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

VE video media of containers which contain classified shapes shall be considered classified information. VE data forms will not contain classified information.

C7-2 Noncompliant Waste Identified During Waste Confirmation

This section describes the portion of the Permittees' confirmation program that applies to CCP.

If the Permittee identifies noncompliant waste during waste confirmation at a CCP site, (i.e., the waste does not match the waste stream description documented in the WSPF or there is liquid in excess of TSDF-WAC limits or compressed gases) the waste will not be shipped.

The DOE will suspend further shipments of the affected waste stream and issue a CAR to CCP. Shipments of affected waste streams will not resume until the CAR has been closed.

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As part of the corrective action plan in response to the CAR, CCP will evaluate whether the waste characterization information documented in the CIS or WSPF for the waste stream must be updated because the results of waste confirmation for the waste stream indicated that the TRU waste being examined did not match the waste stream description. CCP will thoroughly evaluate the potential impacts on waste that has been shipped to WIPP. The DOE will evaluate the potential that prohibited items were shipped to WIPP and what remedial actions should occur, if any. The results of these evaluations will be provided to NMED before shipments of affected waste stream resume. If the CIS and/or WSPF requires revision, shipments of the affected waste stream shall not resume until the revised waste stream waste characterization information has been reviewed and approved by the DOE. If CCP certifies noncompliant waste at a site more than once during a running 90-day period, the DOE will suspend acceptance of CCP's waste from that CCP site until the DOE finds that all corrective actions have been implemented and the site complies with all applicable requirements of the WIPP-WAP.

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ACRONYMS AND ABBREVIATIONS

AK	acceptable knowledge
BDR	Batch Data Report
CAR	Corrective Action Report
CBFO	Carlsbad Field Office
CCP	Central Characterization Program
CFR	Code of Federal Regulations
CH	contact-handled
CIS	Characterization and Information Summary
DA	data administrator
DOE	U.S. Department of Energy
DQO	data quality objective
EPA	U.S. Environmental Protection Agency
HWA	New Mexico Hazardous Waste Act
HWDU	Hazardous Waste Disposal Unit
HWFP	Hazardous Waste Facility Permit
ID	identification number
INL	Idaho National Laboratory
kV	kilovolts
LDR	Land Disposal Restrictions
nCi	nanocuries
NCR	nonconformance report
NDE	nondestructive examination
NMAC	New Mexico Administrative Code
NMED	New Mexico Environment Department
NWP	Nuclear Waste Partnership
OJT	on-the-job training
PCB	polychlorinated biphenyls
PDP	Performance Demonstration Program
QA	quality assurance
QAO	quality assurance objective
QAPD	Quality Assurance Program Document
QAPjP	quality assurance project plan
QC	quality control
RCRA	Resource Conservation and Recovery Act
RH	remote-handled
RIDS	records inventory and disposition schedule
SLB2	standard large box 2
SOP	standard operating procedure
SOW	Statement of Work
SPM	site project manager
SRS	Savannah River Site
SWB	standard waste box
TDOP	ten-drum overpack
TRU	transuranic

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ACRONYMS AND ABBREVIATIONS (Continued)

TRUCON	*TRUPACT Content (Code)*
TSDF-WAC	*Treatment, Storage, and Disposal Facility Waste Acceptance Criteria*
TWBIR	*Transuranic Waste Baseline Inventory Report*
VE	visual examination
VOC	volatile organic compound
WAP	Waste Analysis Plan
WDS	Waste Data System
WIPP	Waste Isolation Pilot Plant
WSPF	Waste Stream Profile Form
WWIS	WIPP Waste Information System

Attachment 1 – Implementing Procedures

Reference Number	Procedure Number	Procedure Title
Q1	CCP-QP-001	CCP Graded Approach
Q2	CCP-QP-002	CCP Training and Qualification Plan
Q5	CCP-QP-005	CCP TRU Nonconforming Item Reporting and Control
Q8	CCP-QP-008	CCP Records Management
Q10	CCP-QP-010	CCP Document Preparation, Approval, and Control
Q14	CCP-QP-014	CCP Quality Assurance Trend Analysis and Reporting
Q15	CCP-QP-015	CCP Procurement
Q16	CCP-QP-016	CCP Control of Measuring and Testing Equipment
Q17	CCP-QP-017	CCP Identification and Control of Items
Q18	CCP-QP-018	CCP Management Assessment
Q19	CCP-QP-019	CCP Quality Assurance Reporting to Management
Q21	CCP-QP-021	CCP Surveillance Program
Q22	CCP-QP-022	CCP Software Quality Assurance Plan
Q23	CCP-QP-023	CCP Handling, Storage and Shipping
Q26	CCP-QP-026	CCP Inspection Control
Q27	CCP-QP-027	CCP Test Control
Q28	CCP-QP-028	CCP Records Filing, Inventorying, Scheduling, and Dispositioning
Q29	CCP-QP-029	CCP Corrective Action Management
Q30	CCP-QP-030	CCP Written Practice for the Qualification of CCP Helium Leak Detection Personnel
Q40	CCP-QP-040	Support Training
T1	CCP-TP-001	CCP Project Level Data Validation and Verification

Attachment 1 – Implementing Procedures (Continued)

Reference Number	Procedure Number	Procedure Title
T2	CCP-TP-002	CCP Reconciliation of DQOs and Reporting Characterization Data
T5	CCP-TP-005	CCP Acceptable Knowledge Documentation
T6	CCP-TP-006	CCP Visual Examination Technique for Idaho National Laboratory (INL) Newly Generated TRU Waste
T28	CCP-TP-028	CCP Radiographic Test Drum and Training Container Construction
T30	CCP-TP-030	CCP CH TRU Waste Certification and WWIS/WDS Data Entry
T53	CCP-TP-053	CCP Standard Real-Time Radiography (RTR) Inspection Procedure
T86	CCP-TP-086	CCP CH Packaging Payload Assembly
T113	CCP-TP-113	CCP Standard Contact-Handled Waste Visual Examination
T163	CCP-TP-163	CCP Evaluation of Waste Packaging Records for Visual Examination of Records
T500	CCP-TP-500	CCP Remote-Handled Waste Visual Examination
T508	CCP-TP-508	CCP RH Standard Real-Time Radiography Inspection Procedure
T512	CCP-TP-512	CCP Remote-Handled Waste Sampling
T530	CCP-TP-530	CCP RH TRU Waste Certification and WWIS/WDS Data Entry

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Effective Date: MAY 3 1 2013

CCP-PO-002
Revision 27

CCP
Transuranic
Waste Certification Plan

Approved by: _____ Date: 5-30-13
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RECORD OF REVISION

Revision Number	Date Approved	Description of Revision
4	05/17/2002	Revised to reflect requirements of new Department of Energy (DOE)/WIPP 02-3122, *Contact-Handled Transuranic Waste Acceptance Criteria for the Waste Isolation Pilot Plant* (CH-WAC) (WIPP).
5	02/12/2003	Added CCP-TP-046, CCP-TP-047 AND CCP-TP-048 to Attachment 1, Table A.3-3, NDA Procedures.
6	06/11/2003	Updated to Revision 5 of the Quality Assurance Program Description (QAPD).
7	11/20/2003	Supplemented the description of the CCP organization in Section 4.1.1; added work planning criteria to Section 4.1.2[B]; revised Sections 4.10 and 4.10.2 to better describe how independent assessments are scheduled and conducted; updated procedure references.
8	01/08/2004	Added Procedures into Tables A-3.3, B-1, B-3, and B-4. Removed cancelled procedure (CCP-TP-080) from Table B-4.
9	03/15/2004	Incorporate changes to Revision 1 of DOE/WIPP-02-3122, Contact-Handled Transuranic Waste Acceptance Criteria for the Waste Isolation Pilot Plant and other editorial changes. Changed references to match WAC.
10	11/15/2004	Revised to add procedures into Tables B-1, B-2, B-3 and B-4 in Attachment 4: Procedure Tables. Editorial changes throughout document. Incorporated Revision 20 of the Transuranic Package Transporter Modell II (TRUPACT-II) Safety Analysis Report (SAR), Revision 3 of the HalfPACT SAR, Revision 2 of the WIPP Waste Acceptance Criteria. Incorporated Carlsbad Field Office (CBFO) Document Release Record (DRR) comments.
11	02/24/2005	Revised to incorporate LANL Off-Site Source Recovery (OSR) Project. The Facility Quality Assurance Officer (FQAO) responsibilities were removed from this document to address Environmental Protection Agency (EPA) concerns regarding document consistency.
12	03/10/2005	Added procedures to Table A-3.3, Table B-1, and Table B-3. Added new Table B-3A, Solids Sampling Procedures.
13	05/09/2005	Incorporated changes to Revision 3 of DOE/WIPP-02-3122, CH-WAC for the WIPP. Updated 2.0 in Attachment 8. Updated web links in Section 5.
14	12/29/2005	Incorporated changes to Table 3.3.22, ^{239}Pu FGE Limits for Packages and Rev. 2 of the CH-TRAMPAC and editorial changes.

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RECORD OF REVISION (Continued)

Revision Number	Date Approved	Description of Revision
15	03/22/2006	Revised to add procedures to Attachment 1, Radioassay Requirements for Contact-Handled Transuranic Waste, Table A-3.3, NDA Procedures and Attachment 4, Procedure Tables, and editorial corrections throughout. Updated Figure 2-1, Central Characterization Project (CCP) Organization. Changed all references to DOE O 414.1A to DOE O 414.1. Updated step 3.2.2(B) (B.1) and step 3.2.6(B)(B.2) to address Carlsbad Field Office (CBFO) Document Review Record (DRR) comments.
16	11/16/2006	Revised to incorporate Revision 5 of DOE/WIPP 02-3122, *Transuranic Waste Acceptance Criteria for the Waste Isolation Pilot Plant.*
17	11/16/2006	Revised in response to concerns raised during the Idaho National Laboratory (INL) Remote-Handled (RH) Audit A-06-21. Corrected Section 4.4.1[B] and Attachment 11.
18	11/16/2006	Revised to incorporate Revision 6.0 of DOE/WIPP 02-3122, *Transuranic Waste Acceptance Criteria for the Waste Isolation Pilot Plant.*
19	05/22/2007	Revised to change the references for quality planning, list CCP special processes, and add a new Section 5.7 addressing configuration management of CCP equipment.
20	11/02/2007	Revised for the addition of Remote Handled Waste shipments.
21	01/26/2009	Revised procedure lists to include new and modified procedures/titles. Also, revised to incorporate Revision 6.2 of DOE/WIPP 02-3122, *Transuranic Waste Acceptance Criteria for the Waste Isolation Pilot Plant*.
22	01/12/2010	Revised to incorporate Revision 6.4 of DOE/WIPP-02-3122, *Transuranic Waste Acceptance Criteria for the Waste Isolation Pilot Plant*.
23	04/07/2010	Revised to add Hanford Non-Destructive Assay (NDA) equipment.
24	06/30/2010	Revised to incorporate Revision 6.5 of DOE/WIPP-02-3122, *Transuranic Waste Acceptance Criteria for the Waste Isolation Pilot Plant*.
25	12/29/2010	Revised to incorporate Revision 7.0 of DOE/WIPP-02-3122, *Transuranic Waste Acceptance Criteria for the Waste Isolation Pilot Plant* and minor editorial changes.
26	07/14/2011	Revised to incorporate revision 7.1 and 7.2 of DOE/WIPP-02-3122, *Transuranic Waste Acceptance Criteria for the Waste Isolation Pilot Plant*, minor editorial changes, and delete Appendix 11.

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RECORD OF REVISION (Continued)

Revision Number	Date Approved	Description of Revision
27	05/31/2013	Revised to incorporate Revision 7.3 and Revision 7.4 of DOE/WIPP-02-3122, *Transuranic Waste Acceptance Criteria for the Waste Isolation Pilot Plant*, which incorporates the changes resulting for the Class 2 Permit modification entitled “Revised Waste Analysis Plan Waste Characterization Methods” which was approved by New Mexico Environment Department (NMED) on March 13, 2013, incorporate organizational changes to reflect the transition to Nuclear Waste Partnership (NWP), to clarify the hierarchy of quality assurance (QA) program documents, and minor editorial changes.

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1.0 INTRODUCTION

The Central Characterization Program (CCP) is tasked with characterizing and certifying Transuranic (TRU) waste for disposal at the Waste Isolation Pilot Plant (WIPP). Accordingly, the CCP must comply with DOE/WIPP 02-3122, *Transuranic Waste Acceptance Criteria for the Waste Isolation Pilot Plant* (WAC). The WAC establishes the specific physical, chemical, radiological, and packaging criteria for acceptance of defense TRU waste shipments at WIPP. The WAC also requires that the CCP produce documents, including a certification plan, that addresses applicable requirements and criteria pertaining to packaging, characterization, certification, and shipping of defense TRU waste to WIPP for disposal.

The CCP may provide its services to a site by contracting directly with that site. If this is the case, the scope of services provided by CCP is specified in a Statement of Work (SOW) issued by the site. The SOW also specifies health and safety requirements, quality requirements, and other requirements specific to that site. A site-specific interface document may also be prepared which provides more detail on the site-CCP interface. The CCP has the option to use data from established TRU waste characterization activities at a U.S. Department of Energy (DOE)-Carlsbad Field Office (CBFO)-certified site, per site-specific interface documents. Transportation services may be provided through the CCP Certified Program or by other DOE-CBFO certified sites.

The site has general management oversight responsibility for work performed by the CCP at the site. The site is responsible for ensuring that CCP conducts its activities in compliance with site requirements, as defined in the site-specific interface document for that location.

Figure 1-1, CCP Document Hierarchy for TRU Waste Characterization, Certification, and Transportation illustrates the hierarchy of regulatory requirements for TRU waste characterization, certification, and transportation, and reflects the flow-down of requirements from higher-level documents to site-level program documents and implementing procedures. To ensure that future changes to the WAC and other relevant requirements documents are appropriately reflected, this CCP Transuranic Waste Certification Plan (hereinafter referred to as the Plan) will be reviewed at least annually and updated as necessary.

This Plan establishes the programmatic framework and criteria within which the CCP ensures that TRU wastes can be certified as compliant with the WAC. This Plan includes the following sections:

- Section 2.0, ORGANIZATION OF THE CCP, describes the interaction between the characterization, certification, and transportation personnel, and lists the responsibilities of key CCP officials.

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- Section 3.0, COMPLIANCE PLAN FOR CH-WAC, describes CCP activities and specific documents that implement and verify compliance with each requirement.

- Section 4.0, WASTE ACCEPTANCE REQUIREMENTS AND CRITERIA FOR RH WASTE, describes CCP activities and specific documents that implement and verify compliance with each requirement.

- Section 5.0, QUALITY ASSURANCE PLAN, describes how the CCP complies with DOE/CBFO-94-1012, *U.S. Department of Energy Carlsbad Field Office Quality Assurance Program Document* (QAPD) (Reference 18), the WAC (Reference 47), DOE/WIPP-02-3214, *Remote-Handled TRU Waste Characterization Program Implementation Plan* (WCPIP) (Reference 17), and provides the QA Plan for transportation as required by Title 10 *Code of Federal Regulations* (CFR), *Energy,* Part 71, *Packaging and Transportation of Radioactive Material,* Subpart H, *Quality Assurance*.

This Plan and associated Quality Assurance (QA) Plan (Section 5.0), CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan* (QAPjP), CCP-PO-003, *CCP Transuranic Authorized Methods for Payload Control (CCP CH-TRAMPAC),* and CCP-PO-505, *Remote-Handled Transuranic Waste Authorized Methods for Payload Control* establish the programmatic framework for the CCP's waste characterization, certification, and transportation activities. The QA Plan (Section 5.0) within this Plan implements all of the applicable CBFO QAPD requirements. These documents are submitted to the CBFO for review and approval. CCP will not characterize, certify, or ship TRU wastes to the WIPP before CBFO approval of this Plan.

1.1 CBFO Organization and Responsibilities

1.1.1 DOE-CBFO Office Director, Office of (Quality Assurance Manager)

[A] The DOE-CBFO QA Manager provides independent oversight of QA activities of the CCP and approves this Plan. This will include audits and surveillances to ensure that CCP is in compliance with this Plan.

1.1.2 DOE-CBFO Office Director, Office of National TRU Program

[A] The DOE-CBFO Office Director, Office of National TRU Program provides overall policy direction and oversees the CCP characterization and certification activities and approves this Plan.

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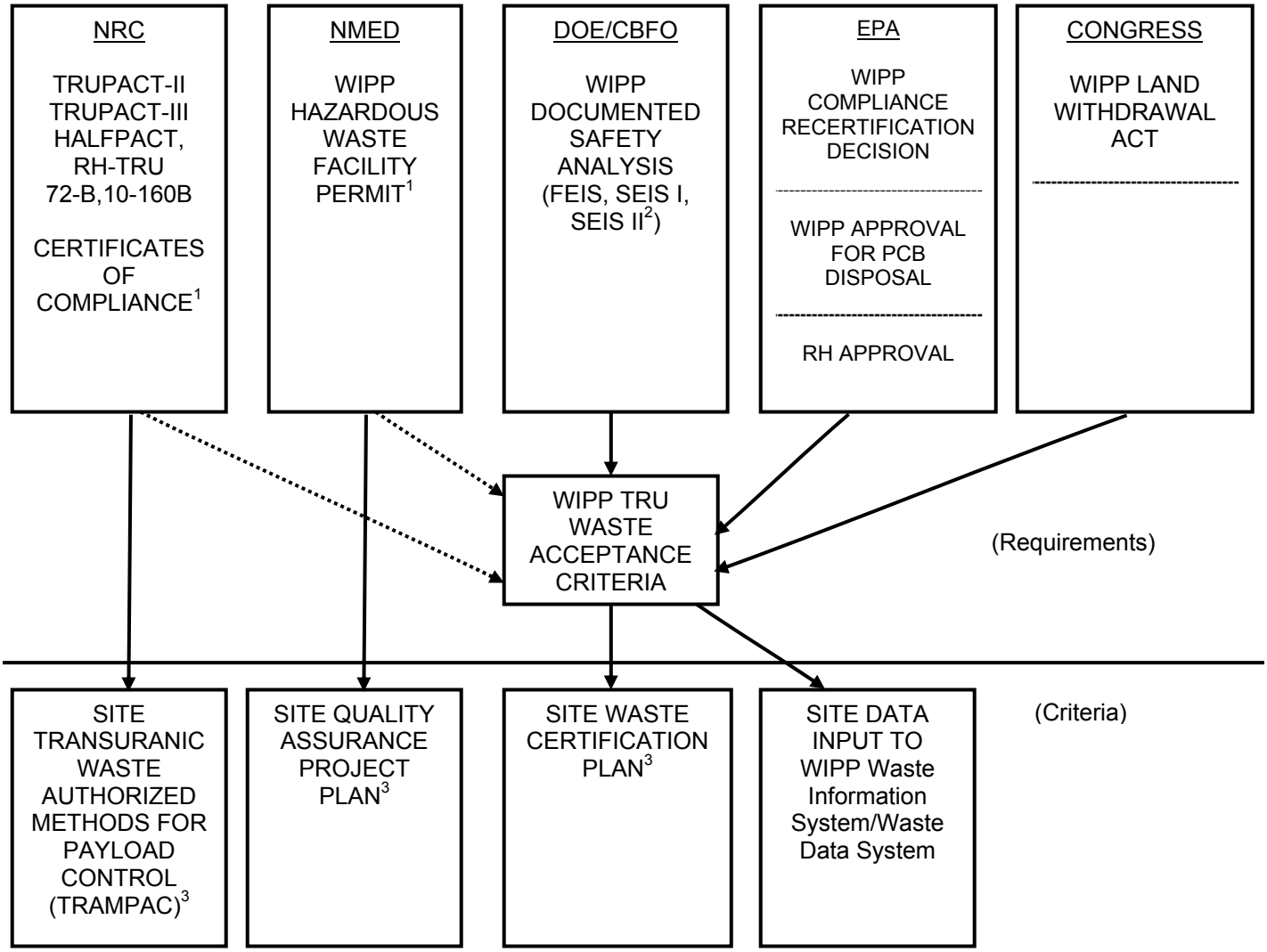
Figure 1-1. CCP Document Hierarchy for TRU Waste Characterization, Certification, and Transportation



Note 1: The TRAMPACs as referenced by the TRUPACT-II, TRUPACT-III, HalfPACT, and RH-TRU 72-B Certificates of Compliance, the Safety Analysis Report (SAR) as referenced by the 10-160B Certificate of Compliance, and the WIPP Hazardous Waste Facility Permit (HWFP) provide detailed requirements. This Plan provides only an overview of these requirements.

Note 2: Final Environmental Impact Statement (FEIS), Supplemental Environmental Impact Statement (SEIS).

Note 3: All work performed by the site for the CBFO must be performed under an approved QA program. The site-specific Transuranic Waste Authorized Methods for Payload Control (TRAMPAC) can be a separate document or can be embodied in the site waste certification plan. The 10-160B SAR does not require the preparation of a site-specific TRAMPAC. Instead, acceptable methods for payload compliance for the 10-160B package are implemented by a Nuclear Regulatory Commission (NRC)-approved site-specific Appendix to the 10-160B SAR.

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2.0 ORGANIZATION OF THE CCP

The responsibilities for TRU waste management of the CCP are distributed within various organizations. This section identifies the organizations involved in the CCP and describes the responsibilities of and interactions between these organizations.

2.1 Organization and Responsibilities

2.1.1 CCP Management

[A] CCP management has overall responsibility for successfully accomplishing activities subject to the QAPD. Management provides the necessary planning, organization, direction, control, resources, and support to achieve their defined objectives. Management is responsible for planning, performing, assessing, and improving the work.

[B] CCP management is responsible for establishing and implementing policies, plans, and procedures that control the quality of work, consistent with the provisions of the CBFO QAPD.

[C] Ensuring that adequate technical and QA training is provided for personnel performing activities subject to the CBFO QAPD.

[D] CCP management is responsible for ensuring that individual workers are knowledgeable of requirements for work they perform and are provided the necessary resources and administrative controls needed to accomplish assigned tasks.

[E] Ensuring compliance with all applicable regulations, DOE orders and requirements, and applicable federal, state, and local laws.

[F] Ensuring that personnel adhere to procedures for the generation, identification, control, and protection of QA records.

[G] Exercising the authority and responsibility to STOP unsatisfactory work such that cost and schedule do not override environmental, safety, or health considerations.

[H] Developing, implementing, and maintaining plans, policies, and procedures that implement the CBFO QAPD.

[I] Identifying, investigating, reporting, and correcting quality problems.

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[J] Members of CCP management are responsible for achieving and maintaining quality in their area. Quality achievement is the responsibility of those performing the work. Quality achievement is verified by persons or organizations not directly responsible for performing the work.

[K] CCP management empowers employees by delegating authority and decision making to the lowest appropriate level in the organization.

[L] Figure 2-1, CCP Organization, is a functional organization chart pertaining to TRU waste characterization and certification activities at the CCP. The following subsections identify the organizations that oversee the CCP and describe the roles and responsibilities of key positions within the CCP charged with implementing the requirements defined in this Plan.

2.1.2 NTPC Certification Manager

[A] The National TRU Program Certification (NTPC) Manager is responsible for the day-to-day management and direction of CCP activities. The NTPC Certification Manager is responsible for:

[A.1] Ensuring successful CCP/site interface.

[A.2] Ensuring CCP plans and operations are coordinated, integrated, and consistent with DOE-CBFO programs, policies, and guidance.

[A.3] Coordinating CCP activities and functioning as principal point-of-contact (POC) with DOE-CBFO and other regulating agencies.

[A.4] Reviewing and approving this Plan.

2.1.3 CCP Certification Manager

[A] The CCP Certification Manager is the principal POC with DOE (including CBFO and National TRU Program [NTP]) for technical activities associated with TRU waste. The CCP Certification Manager performs the Site Project Manager (SPM) duties described in Appendix E of the CBFO QAPD. The CCP Certification Manager may delegate specific individuals within CCP to perform functions that are the responsibility of an SPM. The use of the term “SPM” in this Certification Plan refers to those delegated individuals. This delegation is documented by the completion and approval of an SPM Qualification Card in accordance with CCP-QP-002.

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The CCP Certification Manager coordinates with the CCP Waste Certification Official (WCO) and Transportation Certification Official (TCO) and oversees CCP activities to ensure that TRU waste is characterized and certified compliant with WIPP requirements. Specific responsibilities assigned to the CCP Certification Manager include the following:

[A.1] Reviewing and approving this Plan.

[A.2] Developing, maintaining, reviewing, approving, and implementing CCP procedures and plans. Development, approval, and implementation of procedures and plans will occur at the earliest time consistent with the schedule for accomplishing the activities.

[A.3] Scheduling revisions and distributing CCP procedures and plans and forwarding these documents (if significantly revised) to DOE-CBFO for review and approval before implementation. The term “significantly revised” means non-editorial changes in accordance with the CBFO QAPD, Section 1.4.3.

[A.4] Ensuring CCP personnel receive appropriate training and are properly qualified, so that suitable proficiency is achieved and maintained.

[A.5] Obtaining Acceptable Knowledge (AK) information from waste generators regarding U.S. Environmental Protection Agency (EPA) hazardous waste numbers.

[A.6] Reviewing and approving interface documents.

[A.7] Waste selection and tracking.

[A.8] Halting characterization or certification activities if problems affecting the quality of certification processes or work products exist.

[A.9] Validating and verifying characterization data.

[A.10] Reconciling verified data with data quality objectives (DQOs).

[A.11] Evaluating and reconciling AK information with characterization data.

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[A.12] Preparing and submitting SPM Data Validation Summaries, Waste Stream Profile Forms (WSPFs), Characterization Information Summaries, Waste Stream Characterization Packages, and QA/Quality Control (QC) reports to DOE-CBFO.

[B] The CCP Certification Manager may delegate any of these activities to another individual; however, the CCP Certification Manager retains ultimate responsibility for ensuring that CCP certification requirements are met.

2.1.4 CCP Transportation Certification Official (TCO)

[A] The CCP TCO documents and certifies that payload containers and assemblies to be transported meet the requirements of CCP-PO-003. Specific responsibilities of the TCO include the following:

[A.1] Reviewing the applicable CCP transportation plans and transportation procedures.

[A.2] Interfacing with the SPM, CCP Certification Manager, WCO, and QA on matters associated with waste transportation.

[A.3] Reviewing and maintaining CCP-PO-003.

[A.4] Ensuring that data used in completion of the transportation documents are accurate and demonstrate that the waste is acceptable for transportation.

[A.5] Preparing and signing Payload Container Transportation Certification Documents (PCTCDs) and Overpack Payload Container Transportation Certification Documents (OPCTCDs).

[A.6] Preparing and signing Payload Assembly Transportation Certification Documents (PATCDs).

[A.7] Assisting QA with preparation of responses to deficiency reports in transportation matters.

[A.8] Ensuring that the transportation data entered into the WIPP Waste Information System/Waste Data System (WWIS/WDS) are accurate and demonstrate that waste is acceptable for disposal at WIPP.

[A.9] Reviewing interface documents.

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[A.10] Halting transportation certification activities if problems affecting the certification or work process exist.

2.1.5 NWP Quality Assurance (QA) Manager

[A] The (NWP) Nuclear Waste Partnership QA Manager has the overall responsibility and authority to perform independent assessments to verify the organization's achievement of quality and assure the effective implementation of the QA program. The NWP QA Manager has the responsibilities and authorities described in Section 1.1.5 of WP 13-1, Nuclear Waste Partnership LLC Quality Assurance Program Description (NWP QAPD).

2.1.6 Quality Assurance (QA)

[A] QA provides QA oversight and planning for TRU waste characterization and certification, verifies the implementation of the QAPjP and the QA requirements of this Plan, and provides day-to-day guidance to CCP staff on quality-related matters. QA has the authority to STOP CCP work activities if quality is not assured or controlled. QA has no assigned responsibilities unrelated to the QA Program that would prevent appropriate attention to QA matters. QA is responsible for verifying the achievement of quality by those performing the work. As shown in the organization chart in Figure 2-1, the Assurance Programs Manager reports to the NWP QA Manager, so that required authority and organizational freedom are provided, including sufficient independence from cost and schedule considerations. The Assurance Programs Manager performs the duties and has the responsibilities and authorities described for the site project QA manager in Appendix E of the CBFO QAPD. QA specific responsibilities include the following:

[A.1] Reviewing and approving CCP procedures and plans including this Plan.

[A.2] Coordinating and participating in internal and external audits and assessments to verify compliance.

[A.3] Tracking compliance and evaluating trends in compliance with QA objectives (QAOs).

[A.4] Performing assessments of testing facilities.

[A.5] Tracking and trending CCP nonconformances and corrective action reports (CARs).

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[A.6] Verifying CCP corrective actions.

[A.7] Submitting semi-annual and other QA/QC reports to the CCP Certification Manager and DOE-CBFO.

[A.8] Participating in the development of responses to Corrective Action Reports generated by DOE-CBFO or other external assessment organizations.

[A.9] Reviewing and approving supplier and subcontractor QA Plans.

[A.10] Reviewing interface documents.

[A.11] Providing guidance to all CCP organizations concerning identification, control, and protection of QA records.

[A.12] STOPPING work if quality is not ensured or controlled.

[A.13] Providing day-to-day guidance on quality-related matters to CCP staff.

[A.14] Maintaining liaison with participant QA organizations and other affected organizations.

[A.15] Developing, establishing, and interpreting QA policy and ensuring effective implementation.

[A.16] Interfacing, as appropriate, with the DOE-CBFO staff, participants, and other stakeholders on QA matters.

[A.17] Assisting CCP organizations with quality planning, documentation, quality measurement, and problem identification and resolution.

[A.18] Initiating, recommending, or providing solutions to quality problems through designated channels.

[A.19] Ensuring that further processing, delivery, installation, or use is controlled until proper disposition of a nonconformance, deficiency, or unsatisfactory condition has occurred.

[A.20] Coordinating with responsible management on resolution of differences of opinion involving the definition and implementation of QA Program requirements. If not resolved, progressively elevating

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the issues to successively higher levels of management as necessary.

[A.21] Ensuring that a graded approach is used to exercise control over activities affecting quality to an extent consistent with their importance.

[A.22] Interfacing with the CCP WCO and TCO on matters related to waste certification and transportation.

[A.23] Providing inspection services for procurement, including source inspections

[A.24] Providing vendor qualification and maintenance of the NWP Qualified Suppliers List (QSL) for vendors used by the CCP.

[B] QA may delegate one or more individuals to perform the above functional responsibilities; however, QA retains ultimate responsibility for ensuring compliance with QA requirements.

2.1.7 CCP Waste Certification Official (WCO)

[A] The CCP WCO is responsible for reviewing data and information necessary to document TRU waste payload containers prepared for shipment to WIPP meet specified criteria. The WCO coordinates activities related to waste certification. Specific duties and responsibilities of the WCO include the following:

[A.1] Certifying that waste packages meet WAC requirements.

[A.2] Interfacing with the CCP Certification Manager, SPM, TCO, and QA on matters related to waste certification.

[A.3] Stopping waste certification activities if problems affecting the quality of certification processes or work products exist.

[A.4] Ensuring that certification data entered into the WIPP WWIS/WDS are accurate and demonstrate the acceptability of the waste for transport to and disposal at the WIPP.

[A.5] Reviewing the applicable CCP plans and procedures and any other waste certification-related documents.

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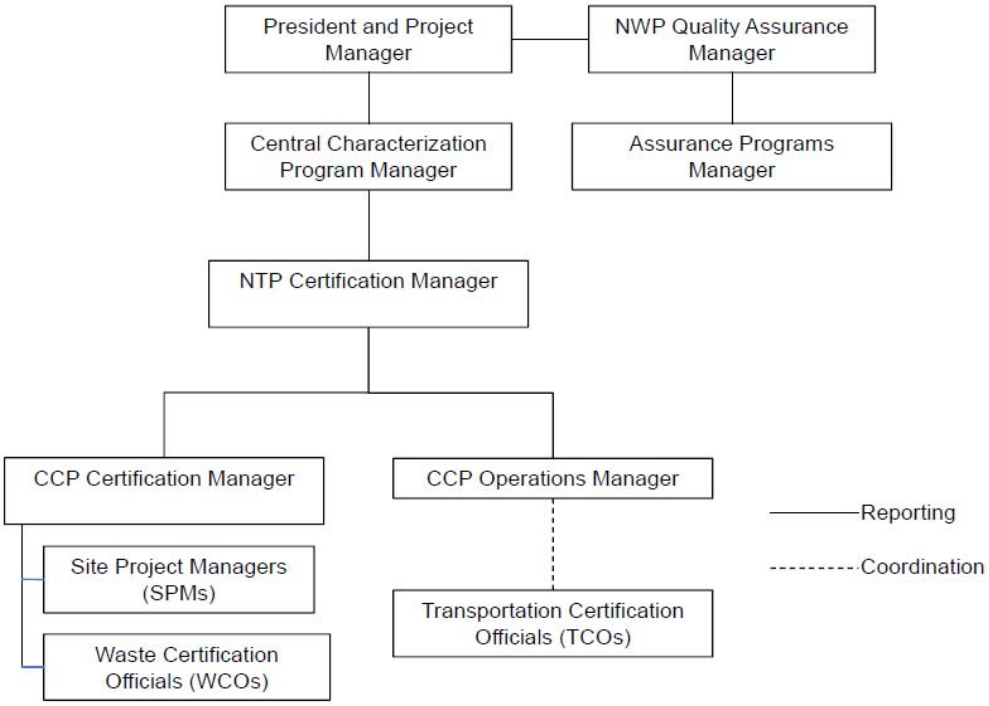
[A.6] Reviewing this Plan.

[A.7] Preparing responses to deficiency reports.

[B] The WCO may delegate one or more individuals to perform the above responsibilities; however, the WCO retains ultimate responsibility for ensuring compliance with WAC requirements.

Figure 2-1. CCP Organization



3.0 COMPLIANCE PLAN FOR CH-WAC

This section describes how the CCP complies with the requirements of the WIPP WAC and associated requirements contained in the WIPP Documented Safety Analysis (DSA) (Reference 4), the Transuranic Package Transporter II (TRUPACT-II), Transuranic Package Transporter III (TRUPACT-III), and/or HalfPACT Certificates of Compliance (References 5 and 6), the WIPP Land Withdrawal Act (LWA) (Reference 2) the WIPP HWFP (Reference 9), the Compliance Recertification Decision (Reference 10), the Initial Report for Polychlorinated Biphenyl (PCB) Disposal Authorization (Reference 11), the EPA letter of approval to land dispose non-liquid PCBs at WIPP (References 12 and 13), and the Revision to the Record of Decision for the DOE's WIPP Disposal Phase and associated WIPP National Environmental Policy Act (NEPA) database (References 14 and 15).

3.1 Organization of Requirements

WAC requirements are organized under five major categories: container properties, radiological properties, physical properties, chemical properties, and data package contents. Sections 3.2 through 3.6 correlate with the organization in the WAC for Contact-Handled (CH) TRU waste requirements and identify methods of compliance to meet each requirement. Procedures that implement the process controls, techniques, tests, and other actions to be applied to each TRU payload container, waste stream, and shipment are also identified. Revisions of requirements in referenced documents controlled by agencies or organizations other than DOE (e.g., EPA, NMED, and NRC) shall have precedence over values quoted in this Plan. Changes incorporated in future revisions of the CH-WAC will be reflected in future revisions of this Plan.

Regarding any discussions of compliance and verification methods, if a requirement is not met, personnel will initiate a Nonconformance Report (NCR) or a CAR in accordance with CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control*. Corrective action will be taken in accordance with CCP-QP-029, *CCP Corrective Action Management,* to resolve nonconformances. Section 5.3 of this Plan provides additional details about the NCR/CAR process. Only waste from a properly characterized waste stream will be certified as meeting the requirements and associated criteria contained in this Plan. Waste containers for a waste stream that has not been represented by an approved WSPF will not be shipped to WIPP for disposal (Reference 9, Part 2, Section 2.3.3.10). The required characterization, certification, and shipment data will be transmitted to WIPP using the WWIS/WDS.

3.1.1 DOE Operations and Safety Requirements for WIPP

[A] The WIPP DSA (Reference 4) addresses TRU waste handling and emplacement operations. The waste acceptance for emplacement in the WIPP will conform to the WAC.

3.1.2 NRC Transportation Safety Requirements for Type B Packages

[A] Acceptable methods for payload compliance control are defined in the TRUPACT-II, TRUPACT-III and HalfPACT Certificates of Compliance and implemented by the CH-TRAMPAC (References 23a and 23b). For shipments to WIPP, the CCP has prepared a CCP CH-TRAMPAC (CCP-PO-003) and a CCP TRUPACT-III TRAMPAC (CCP-PO-050 *CCP Trupact-III TRU Waste Authorized Methods For Payload Control [CCP TRUPACT-III TRAMPAC]*) describing compliance with each payload parameter. The CCP CH-TRAMPAC and CCP TRUPACT-III TRAMPAC will contain sufficient detail to allow reviewers to adequately understand and evaluate the compliance methodology for each payload parameter.

[B] The QA Program in Section 5.0 of this Plan defines the QA activities that apply to the use of NRC-approved transportation packaging in accordance with Title 10 CFR Part 71, Subpart H (Reference 24).

3.1.3 NMED Hazardous Waste Facility Permit Requirements

[A] TRU waste is classified as TRU mixed waste if it contains hazardous constituents regulated under the New Mexico Hazardous Waste Act (Reference 25). Only TRU mixed waste and TRU waste that have been characterized in accordance with WIPP Waste Analysis Plan (WIPP WAP) and that meet the treatment, storage, and disposal facility waste acceptance criteria as presented in permit Sections 2.3.3.1 through 2.3.3.10 will be shipped to WIPP for disposal. The CCP QAPjP describes compliance with the WIPP WAP.

3.1.4 EPA Compliance Recertification Decision Requirements

[A] Title 40 CFR §194.24(c) (Reference 26) requires the DOE to specify the limiting values for waste components to be emplaced in the repository. The EPA's Recertification Decision specifies waste components (including free water,

metals, and cellulose, plastic, and rubber) and their limits that are associated with the waste proposed for disposal at WIPP.

[B] CCP estimates or determines the weight of cellulose, plastics, and rubber, and reports this estimate in the WWIS/WDS on a container basis. In addition, CCP quantifies and reports the activity values of each of the following radionuclides for purposes of tracking the inventory curie content: ^{241}Am, ^{238}Pu, ^{239}Pu, ^{240}Pu, ^{242}Pu, ^{233}U, ^{234}U, ^{238}U, ^{90}Sr, and ^{137}Cs. The presence or absence of these radionuclides is determined using AK documentation and radioassay in accordance with Appendix A of the WAC. The results of these determinations are reported in the WWIS/WDS on a payload container basis. TRU waste payload containers shall contain more than 100 nanocuries per gram (nCi/g) of waste of alpha-emitting TRU isotopes with half-lives greater than 20 years, as specified in Section 3.3.3.

3.1.5 EPA Approval for PCB Disposal

PCB contaminated TRU and PCB contaminated TRU waste mixed with a hazardous waste including PCB remediation waste, PCB Articles, and PCB bulk product waste may be stored and disposed at the WIPP (References 11, 12, 13, 14, and 15). Waste streams identified as containing PCBs shall be brought to the attention of the CBFO in order that a determination can be made regarding their acceptability at WIPP. Applicable waste acceptance criteria are addressed in Sections 3.2.5, 3.4.1, and 3.5.6.

3.1.6 Land Withdrawal Act Requirements (Public Law 102-579)

[A] WIPP can only accept radioactive waste generated by atomic energy defense activities of the United States (Reference 1). A TRU waste is eligible for disposal at the WIPP if it has been generated in whole or in part by one or more of the following functions (References 27 and 28):

- Naval reactors development
- Weapons activities, including defense inertial confinement fusion
- Verification and control technology

- Defense nuclear materials production
- Defense nuclear waste and materials by-products management
- Defense nuclear materials security and safeguards and security investigations
- Defense research and development

Using AK, CCP determines that each waste stream to be disposed at WIPP is “defense” TRU waste.

[B] High-level radioactive waste or spent nuclear fuel shall neither be transported, emplaced, nor disposed of at the WIPP. Also, no TRU waste may be transported by or for the DOE to or from the WIPP, except in Type B packages:

- the design of which has been certified by the NRC, **AND**
- that have been determined by the NRC to satisfy its QA requirements.

3.2 Container Properties Criteria and Requirements

3.2.1 Payload Container Description

[A] Requirements

[A.1] Each payload container shall be assigned to a payload shipping category (References 23a and 23b). Authorized payload containers are listed in Table 1, Authorized Payload Container Contents. Payload containers shall meet U.S. Department of Transportation (DOT) Specification 7A, Type A, packaging requirements delineated in 49 CFR 173.465 (Reference 4, Section 2.6.2; Reference 9, Attachment A1, Section A1-1b, Reference 12, Section VI.F). Payload containers must be made of steel and be in good and unimpaired condition prior to shipment from the generator/storage sites. To demonstrate compliance with the requirement that payload containers be in good and unimpaired condition, the exterior of all payload containers shall undergo 100 percent visual inspection prior to loading into a Type B package. The results of this visual inspection

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shall be documented using Appendix 7, Payload Container Integrity Checklist, of this Plan. A payload container in good and unimpaired condition, 1) does not have significant rusting, 2) is of sound structural integrity, and, 3) does not show signs of leakage. Significant rusting is a readily observable loss of metal due to oxidation (e.g., flaking, bubbling, or pitting) that causes degradation of the payload container's structural integrity. Rusting that causes discoloration of the payload container surface or consists of minor flaking is not considered significant. A payload container is not of sound structural integrity if it has breaches or significant denting/deformation. Breaching is defined as a penetration in the payload container that exposes the internals of the container. Significant denting/deformation is defined as damage to the payload container that results in creasing, cracking, or gouging of the metal, or damage that affects payload container closure. Dents or deformations that do not result in creasing, cracking, or gouging or affect payload container closure are not considered significant. CCP will report to the WWIS/WDS the number and types of payload containers planned for shipment to the WIPP.

[B] Compliance and Verification

[B.1] The CCP procures payload containers (e.g., drums, Standard Waste Box [SWBs], Standard Large Box2 [SLB2] and Ten-Drum Overpack [TDOPs]) that meet the following requirements:

(a) SWBs, SLB2s, and TDOPs are procured to the same standards and specifications as the containers used in Type A testing.

(b) New 55-gallon drums are procured as UN1A2 reusable drums, in accordance with applicable requirements of 49 CFR 173, which is allowable per CBFO memo CBFO:NTP:JFS97-1144UFC5822. Drums may also be procured to the same standards and specifications as the drums used in Type A testing.

[B.2] Recovered drums are inspected to ensure that they are DOT Specification 17C or 17H or meet

UN1A2 requirements for reusable drums. Permanent markings embossed on the bottom of the drums are used to verify the drum type if procurement records are not available. Alternatively, if the markings are not visible (e.g., drums that are galvanized through a dipping process, which obscures the embossing), the drums are inspected and inspection results are compared to requirements for 17C, 17H, or UN1A2 drums. Personnel examine retrievably stored containers for compliance with the applicable requirements and verify that the containers are in good condition in accordance with site-specific container management procedures (See Appendix 4, Procedure Tables, Table B-1), and CCP-TP-033, *CCP Shipping of CH-TRU Waste*. CCP-TP-033 contains Appendix D from the WAC, and is used to document compliance with the Payload Container Integrity Checklists.

[B.3] Personnel document their procurement acceptance and/or visual inspections. If packages cannot be shown to meet the above requirements by procurement records and/or physical examination, CCP personnel take corrective action (e.g., repackage the waste into a certifiable container) to resolve the nonconformance.

[B.4] Personnel will report the number and types of containers to WIPP using WWIS/WDS, in accordance with CCP-TP-030, *CCP CH-TRU Waste Certification and WWIS/WDS Data Entry*.

Table 1. Authorized Payload Container Contents

Payload Container	Contents
55-gallon drum	Either direct loaded or containing a pipe component (commonly referred to as a pipe overpack container [POC])
85-gallon drum[1]	Either direct loaded or containing a 55-gallon drum
100-gallon drum	Direct loaded
Shielded container	Containing a 30-gallon steel drum
SWB	Either direct loaded or containing up to four 55-gallon drums, up to three 85-gallon drums, up to two 100-gallon drums, or one bin
SLB2	Direct loaded or containing various individual containers (4 x 4 x 7-foot boxes and 5 x 5 x 8-foot boxes as well as other containers of smaller sizes)
TDOP	Either direct loaded or containing up to ten 55-gallon drums or up to six 85-gallon drums or one SWB

[1]The term "85-gallon drum" includes 75-gallon to 88-gallon drums.

3.2.2 Container Weight and Center-of-Gravity

[A] Requirements

[A.1] See the CH-TRAMPAC for weight limits and center-of-gravity requirements (Reference 23a). See the TRUPACT-III TRAMPAC for applicable weight limits (Reference 23b).

3.2.3 Assembly Configurations

[A] Requirements

[A.1] See the CCP CH-TRAMPAC and TRUPACT-III TRAMPAC for payload assembly configuration requirements (References 23a and 23b).

3.2.4 Removable Surface Contamination (Payload Containers)

[A] Requirements

[A.1] The removable surface contamination for each CH-TRU waste payload container, payload assembly and packaging must be measured and documented prior to shipment. Removable surface contamination

on CH-TRU waste payload containers, container assemblies, and packaging shall not be greater than 20 disintegrations per minute (dpm) per 100 square centimeters (cm^2) for alpha-emitting radionuclides and 200 dpm per 100 cm^2 for beta-gamma-emitting radionuclides (Reference 9, Attachment A1, Section A1-1d[2]; References 29 and 30).

[A.2] Fixing surface contamination to meet the above criterion is not permitted.

[B] Compliance and Verification

[B.1] A Host site Radiological Control Technician (RCT) surveys TRU waste payload containers, payload assemblies and packaging, for removable surface contamination before they are loaded for shipment. The RCT assesses removable contamination and documents the results in accordance with Host site radiological survey procedures. If the RCT determines that removable contamination exceeds 20 dpm per 100 cm^2 for alpha-emitting radionuclides or 200 dpm per 100 cm^2 for beta-gamma-emitting radionuclides, personnel determine whether surface contamination can be removed to meet established limits. If compliance with removable surface contamination limits cannot be achieved, personnel segregate and disposition noncompliant container(s) in accordance with CCP-QP-005. The survey results are added to the container data package. The WCO confirms removable surface contamination survey results in accordance with Host site radiological survey procedures. CCP-TP-033 is utilized to comply with requirements of this section.

3.2.5 Container Identification/Labeling

[A] Requirements

[A.1] Each CH-TRU waste payload container shall be uniquely identified by means of bar code labels permanently attached in conspicuous locations. (Reference 23a, Section 2.4; Reference 23b, Section 2.3). The unique payload container identification number shall include a site identifier as a prefix (References 23a and 23b, Section 6.2.1).

[A.2] The container identification number shall be in medium to low density Code 39 bar code symbology as required by American National Standards Institute (ANSI) Standard ANSI/Association for Automatic Identification and Mobility (AIM) BC1-1995 (Reference 31) in characters at least 1-in. high, and alphanumeric characters at least 0.5-in. [inch] high. In the case of a 55-gallon, 85-gallon, or 100-gallon drum, or a shielded container, a minimum of three bar code identification labels shall be placed at approximately equal intervals around the circumference of the drum or shielded container (e.g.,120 degrees for three labels, 90 degrees for four labels) so that at least one label is clearly visible when drums or shielded containers are assembled into a payload assembly (e.g., a label must be visible after slip sheets and wrapping are applied). The bar code labels are required on the flat sides of SWBs. For TDOPs and SLB2s, a minimum of one bar code is required.

[A.3] Payload containers shall be marked “Caution Radioactive Material” using a yellow and magenta label as specified in 10 CFR Part 835 (Reference 30).

[A.4] Payload containers whose content are also Resource Conservation and Recovery Act (RCRA) regulated (mixed-TRU) shall be additionally marked “Hazardous Waste” as specified in 40 CFR §262.32 (Reference 33).

[A.5] For TRU and mixed-TRU wastes containing PCBs, the payload containers shall be marked in accordance with 40 CFR §761.40 (Reference 13).

[A.6] Additionally, DOT Type B packages (i.e., the TRUPACT-II, TRUPACT-III and HalfPACT) containing PCBs must be properly marked in accordance with the EPA letter of approval and 40 CFR §761.40 (References 12 and 13).

[A.7] If an empty drum or shielded container is used as dunnage to complete a shipment to the WIPP, the drum shall be labeled with a unique payload identification number and “EMPTY” or “DUNNAGE.”

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[A.8] If a seven-pack of 55-gallon drums, a four-pack of 85-gallon drums, a three-pack of 100-gallon drums, or a SWB is shipped as dunnage to fill a TRUPACT-II, the drums or SWB will be labeled as “EMPTY” or “DUNNAGE” but will not be labeled with the unique site-specific payload container identification numbers (CINs) or included in WWIS/WDS data.

[B] Compliance and Verification

[B.1] Fifty-five gallon, 85-gallon, 100-gallon drums or shielded container certified will have a minimum of three bar code labels equally spaced around the drum that identify the site and contain a unique identification number in accordance with the Host site-specific container management procedure(s). Bar code labels will be affixed on the flat side of SWBs, while on a TDOP, a minimum of one bar code will be affixed.

[B.2] After verifying payload parameters, personnel ensure each container is marked with the appropriate site and container identification number in accordance with the host site-specific container management procedures. The TCO verifies the container marking (e.g., barcode, Radiation Material, PCB, or Hazardous Waste labels) in accordance with CCP-TP-033.

[B.3] Refer to Section 3.2.6[B] of this Plan for compliance with the dunnage requirements and verifications.

3.2.6 Dunnage

[A] Requirements

[A.1] See the CCP CH-TRAMPAC for dunnage requirements (Reference 23a).

[A.2] The use of dunnage shall be minimized.

[A.3] In the event the use of dunnage cannot be avoided, the preferred practice for maximizing the efficiency of waste handling and the utilization of disposal room capacity is to ship them in assemblies (e.g., a seven-pack assembly of 55-gallon drums).

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[B] Compliance and Verification

[B.1] The minimization of the use of dunnage is through load management. The use of dunnage drums is reviewed and approved concurrently with the review and approval of shipment assemblies by the WWIS/WDS Data Administrator on a case-by-case basis.

3.2.7 Filter Vents

[A] Requirements

[A.1] Payload containers that have been stored in an unvented condition (i.e., no filters and/or unpunctured liner) shall be aspirated for a specific length of time as described in the CH-TRAMPAC to ensure equilibration of any gases that may have accumulated in the closed payload container (References 23a and 23b, Section 5.3.1). All payload containers (including overpacks, but not dunnage containers) shall be vented with one or more filters to control gas concentration and pressure (Reference 4, Section 2.6.2; Reference 47, Reference 23a, Section 2.5.1; Reference 23b, Section 2.4.1; Reference 9, Attachment A1, Section A1-1b[2]). Filters shall meet the specifications described in the WIPP Hazardous Waste Facility Permit and the CH-TRAMPAC, and TRUPACT-III TRAMPAC (Reference 9, Attachment A1, Section A1-1d [1]; Reference 23a, Section 2.5.1; Reference 23b, Section 2.4.1). The model number of each filter vent or combination of filter vents will be reported using the WWIS/WDS.

[B] Compliance and Verification

[B.1] Personnel will procure approved filters for use on TRU waste containers. Filters will be selected from the DOE-CBFO-approved filter list. Filters will be procured in accordance with CCP-QP-015, *CCP Procurement*.

[B.2] The personnel visually verify that filter vents, if present, have been installed properly. If filter vents are not installed, personnel procure filter vents that meet specifications and install the correct number of

filter vents. The WCO confirms payload venting in accordance with CCP-TP-030. When a payload container does not meet the payload container filter requirements, an NCR is initiated. Nonconforming filters are replaced as necessary.

3.3 Radiological Properties

3.3.1 Radionuclide Composition

[A] Requirements

[A.1] The radionuclide composition of each waste container being characterized must be quantified and reported for purposes of tracking the inventory curie content. The activities and masses of the following radionuclides must be reported: ^{241}Am, ^{238}Pu, ^{239}Pu, ^{240}Pu, ^{242}Pu, ^{233}U, ^{234}U, ^{238}U, ^{90}Sr, and ^{137}Cs. The estimated activities and masses, including their associated total measurement uncertainties (TMU) expressed in terms of one standard deviation for these ten radionuclides shall be reported to the WWIS/WDS on a payload container basis. For any of these ten radionuclides whose presence can be substantiated from AK, direct measurement, computations, or a combination thereof, and whose measured data are determined to be below the lower limit of detection (LLD) for that radionuclide, the site shall report the character string “< LLD” to the WWIS/WDS for the activity and mass of that radionuclide; otherwise a value of zero shall be reported. Quantitative estimates for LLD shall not be used when calculating related radiological properties of the waste such as TRU alpha activity concentration, ^{239}Pu Fissile Gram Equivalent (FGE), decay heat, etc.

[A.2] In addition, all radionuclides other than the ten WIPP-tracked radionuclides (i.e., ^{241}Am, ^{238}Pu, ^{239}Pu, ^{240}Pu, ^{242}Pu, ^{233}U, ^{234}U, ^{238}U, ^{90}Sr, and ^{137}Cs) that contribute to 95 percent of the radioactive hazard for the payload container shall be reported on the bill of lading or manifest in accordance with Title 49 CFR, *Transportation* §172.203, (Reference 36) and Title 49 CFR §173.433, (Reference 37). The activities and masses of these other radioisotopes shall also be reported to the WWIS/WDS along with their

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associated TMU, expressed in terms of one standard deviation for each waste container.

[B] Compliance and Verification

[B.1] CCP uses AK and measurements to determine radionuclide composition. The requirements for nondestructive assay (NDA) are presented in Appendix 1, Radioassay Requirements for Contact-Handled Transuranic Waste. NDA personnel quantify radionuclide values in accordance with the applicable procedures listed in Appendix 1, Table A-2.1, NDA Procedures. NDA personnel use AK data and assay measurements and calculations to create an isotopic profile of each waste container. The activities and masses of the ten WIPP-tracked radionuclides including TMU (one standard deviation) and all radionuclides other than the ten WIPP-tracked radionuclides including TMU (one standard deviation) that contribute to 95 percent of the radioactive hazard for the payload container being characterized will be reported for each container using WWIS/WDS in accordance with procedure CCP-TP-030. In addition, all radionuclides other than the ten WIPP-tracked radionuclides that contribute to 95 percent of the radioactive hazard for the payload container shall be reported on the bill of lading or manifest in accordance procedure CCP-TP-033.

[B.2] For any of the ten WIPP-tracked radionuclides whose presence can be substantiated from AK, direct measurement, or a combination thereof, and whose measured data are determined to be below the LLD for that radionuclide, the CCP will report the character string “< LLD” to the WWIS/WDS for the activity and mass of that radionuclide; otherwise a value of zero will be reported.

3.3.2 Fissile Material Quantity (^{239}Pu FGEs)

[A] Requirements

[A.1] For each payload container, the sum of ^{239}Pu FGE plus two times its associated TMU, expressed in terms of one standard deviation, shall comply with the limits in Table 2, ^{239}Pu FGE Limits for Payload Containers (Reference 4, Section 6.4.2 References 23a and 23b, Section 3.1.1). The values calculated for ^{239}Pu FGE and its associated TMU, expressed in terms of one standard deviation, shall be reported to the WWIS/WDS for each payload container.

[A.2] See the CCP CH-TRAMPAC for ^{239}Pu FGE limits applicable to the TRUPACT-II and/or HalfPACT packaging (Reference 23a).

[A.3] See the CCP CH-TRUPACT-III TRAMPAC for ^{239}Pu FGE limits applicable to the TRUPACT-III packaging (Reference 23b).

Table 2. ^{239}Pu FGE Limits for Payload Containers

Waste Container Type	Be/BeO Limits	Special Waste Container Geometry/Material Requirements	^{239}Pu FGE Limit
Non-Machine Compacted Waste			
55- (excluding pipe overpacks), 85-, and 100-gallon drums	≤ 1% by weight of the waste	None	≤ 200
55-gallon drum configured as a pipe overpack (i.e., a standard, S100, S200, or S300 pipe overpack)	≤ 1% by weight of the waste	None	≤ 200
Shielded Container	≤ 1% by weight of the waste	None	≤ 200
SLB2	≤ 1% by weight of the waste	The minimum ^{240}Pu content in grams for the SLB2 waste container, denoted in the adjacent ^{239}Pu FGE Limit column as a parenthetical, shall be determined after the subtraction of two times the error (i.e., two standard deviations)	≤ 325 ≤ 340 (5) ≤ 360 (15) ≤ 380 (25)
SWB	≤ 1% by weight of the waste	None	≤ 325
TDOP	≤ 1% by weight of the waste	None	≤ 325
55- (excluding pipe overpacks), 85-, and 100-gallon drums	>1% by weight of the waste up to 100 kg	None	≤ 100
SWB	>1% by weight of the waste	None	≤ 100
TDOP	>1% by weight of the waste	None	≤ 100

Table 2. ^{239}Pu FGE Limits for Payload Containers (Continued)

Waste Container Type	Be/BeO Limits	Special Waste Container Geometry/Material Requirements	^{239}Pu FGE Limit
Machine Compacted Waste			
Pipe overpacks (i.e., a standard, S100, S200 , or S300 pipe overpack)	> 1% by weight of the waste	None	≤ 140
55- (excluding pipe overpacks), 85-, and 100-gallon drums	≤ 1% by weight of the waste	Partially compacted waste. Applies to waste that has been compacted such that the distribution and form of polyethylene in the waste does not exceed 0.646 gram/cubic centimeter (g/cm^3), i.e., 70% of the theoretical full density of polyethylene (0.923 g/cm^3).	≤ 200
55- (excluding pipe overpacks), 85-, and 100-gallon drums	≤ 1% by weight of the waste	Fully compacted waste without design vertical spacing. Applies to waste that has been compacted such that the distribution and form of polyethylene in the waste exceeds 0.646 g/cm^3, i.e., 70% of the theoretical full density of polyethylene (0.923 g/cm^3).	≤ 170
55- (excluding pipe overpacks), 85-, and 100-gallon drums	≤ 1% by weight of the waste	Fully compacted waste with design vertical spacing. Applies to waste that has been compacted such that the distribution and form of polyethylene in the waste exceeds 0.646 g/cm^3, i.e., 70% of the theoretical full density of polyethylene (0.923 g/cm^3), and the dimensions of the payload containers (e.g., 100-gallon drums) ensure a minimum 0.5-in. separation between their compacted waste contents and other axially adjacent payload containers.	≤ 200
Shielded Container	≤ 1% by weight of the waste	None	≤ 200

Table 2. ^{239}Pu FGE Limits for Payload Containers (Continued)

Waste Container Type	Be/BeO Limits	Special Waste Container Geometry/Material Requirements	Waste Container
Machine Compacted Waste			
SWB/TDOP	≤ 1% by weight of the waste	Fully compacted waste with design vertical spacing. Applies to waste that has been compacted such that the distribution and form of polyethylene in the waste exceeds 0.646 g/cm^3, i.e., 70% of the theoretical full density of polyethylene (0.923 g/cm^3), and contains one 16-gauge steel 100-gallon drum having a top and bottom design spacing of 0.75 and 0.50-inches, respectively, with no loose material or other drums of waste in the SWB/TDOP.	≤ 250
SWB/TDOP	≤ 1% by weight of the waste	Fully compacted waste with design vertical spacing. Containing one 55-, 85-, or 100-gallon drum whose design ensures a minimum of 0.5-in. vertical spacing between drum contents and the exterior top and bottom of the drum (e.g., a recessed lid) with no loose material or other drums of waste in the SWB/TDOP.	≤ 200
SWB/TDOP	≤ 1% by weight of the waste	Partially compacted waste. Containing one 55-, 85-, or 100-gallon drum whose contents have been compacted such that the distribution and form of polyethylene in the waste does not exceed 0.646 g/cm^3, i.e., 70% of the theoretical full density of polyethylene (0.923 g/cm^3) with no loose material or other drums of waste in the SWB/TDOP.	≤ 200
SWB/TDOP	≤ 1% by weight of the waste	Fully compacted waste with design vertical spacing. Applies to waste that has been compacted such that the distribution and form of polyethylene in the waste exceeds 0.646 g/cm^3, i.e., 70% of the theoretical full density of polyethylene (0.923 g/cm^3).	≤ 185

[B] Compliance and Verification

[B.1] Personnel obtain the CH-TRU waste fissile content in accordance with the processes described in Appendix 1, Radioassay equipment is qualified under the corresponding Performance Demonstration Program (PDP) requirements. CCP calculates the fissile or fissionable radionuclide content of the CH-TRU waste container as ^{239}Pu FGE according to approved calculation methods in accordance with CCP-TP-033.

[B.2] Personnel compile and review AK to make initial determinations about radionuclide content and concentrations. CCP confirms AK by obtaining information on the isotopic composition of the waste through radioassay of the filled payload container.

[B.3] Personnel compute the container ^{239}Pu FGE and container ^{239}Pu FGE TMU manually or using a computational algorithm. Individual radionuclide mass quantities and TMUs are converted to ^{239}Pu FGE by multiplying the mass value (g) by ^{239}Pu FGE conversion factors (FGE/g) listed in Table 3.1.2 of the CH-TRAMPAC (Reference 23a) and Table 3.1-1 of the TRUPACT-III TRAMPAC (Reference 23b). The ^{239}Pu FGE of each payload container shall be calculated from the isotopic composition and quantity of radionuclides. The ^{239}Pu FGE value plus two times the measurement error shall be less than the applicable limit for each payload container.

[B.4] The total ^{239}Pu FGE error is the square root of the sum of the squares of the individual ^{239}Pu FGE TMUs. Two times this error shall be added to the ^{239}Pu FGE of the Type B package payload and compared to the limit. The ^{239}Pu FGE of the radionuclides in each payload container will be reported to the WIPP using the WWIS/WDS and the TRUPACT-II and TRUPACT-III payload total FGE will be recorded on the PATCD. Payload containers shipped to the WIPP will meet both the Type B package and the WIPP repository requirements for criticality.

3.3.3 TRU Alpha Activity Concentration

[A] Requirements

[A.1] TRU waste containers to be disposed of at the WIPP shall contain greater than 100 nCi/g of waste of alpha-emitting TRU isotopes, with half-lives greater than 20 years. Without taking into consideration the TMU, the TRU alpha activity concentration for a payload container is determined by dividing the TRU alpha activity of the waste by the weight of the waste. The weight of the waste is the weight of the material placed into the payload container (i.e., the net weight of the container). The weight of the waste is typically determined by subtracting the tare weight of the payload container (including the weight of the rigid liner and any shielding external from the waste, if applicable) from the gross weight of the payload container. In the event waste containers (e.g., 55-gallon, 85-gallon or 100-gallon drums) that have been radioassayed are overpacked in a payload container (e.g., in a SWB), CCP shall sum the

individual TRU alpha activity values of the individual waste containers and divide by the sum of the individual net waste weights (i.e., less container, shielding, and liner weights as appropriate) to determine the activity per gram for the payload container. Should CCP utilize load management by overpacking waste containers, the determination of the payload container's TRU alpha activity concentration shall be in accordance with Appendix 8, Payload Management of TRU Alpha Activity Concentration. Loading a 55-gallon pipe-overpack with cans is considered direct loading, not overpacking for the purposes of calculating the weight of the container. The TRU alpha activity concentration shall be reported to the WWIS/WDS; however, there are no reporting requirements for its associated TMU (Reference 35, Chapter 4).

[B] Compliance and Verification

[B.1] Personnel measure TRU alpha activity concentration in accordance with the NDA processes described in Appendix 1. Personnel calculate the TRU alpha activity concentration of the CH TRU waste container manually or using computational algorithms. Personnel will subtract the tare weight of the containers before calculating the TRU alpha activity concentration. Personnel validate and verify calculation programs, before the data are used in accordance with CCP-QP-022, *CCP Software Quality Assurance Plan*. Assay data are validated and verified, and submitted in batch data reports (BDRs) to the CCP Project Office. The WCO confirms the reported TRU alpha activity concentration is appropriately calculated and above the specified limit.

3.3.4 ^{239}Pu Equivalent Activity

[A] Requirements

[A.1] ^{239}Pu equivalent curie (PE-Ci) limits are shown in Table 3, PE-Ci Limits. PE-Ci quantities shall be calculated in accordance with Appendix 5 for each payload container and reported to the WIPP using the WWIS/WDS (Reference 4, Section 3.3.2.3.1 and Table 3.3-6). There are no reporting requirements for the associated TMU.

Table 3. PE-Ci Limits

Payload Container	Packing Configuration	PE-Ci Limit
55-, 85-, and 100-gallon drum	Direct loaded – all approved waste forms other than solidified/vitrified waste	≤ 80 PE-Ci
Shielded Container	Direct loaded – vented 30-gallon inner steel drum – all approved waste forms other than solidified/vitrified waste	≤ 80 PE-Ci
SLB2	Direct loaded – all approved waste forms other than solidified/vitrified waste	≤560 PE-Ci
SWB	Direct loaded (or a bin) – all approved waste forms other than solidified/vitrified waste	≤ 560 PE-Ci
TDOP	Direct loaded – all approved waste forms other than solidified/vitrified waste	≤ 800 PE-Ci
85-gallon drum	Overpacking an undamaged[1] 55-gallon drum – all approved waste forms other than solidified/vitrified waste	≤ 1100 PE-Ci
SWB, TDOP	Overpacking an assembly of undamaged[1] 55- or 85-gallon drums with no single payload container within the assembly exceeding 1100 PE-Ci – all approved waste forms other than solidified/vitrified waste	≤ 1200 PE-Ci
TDOP	Overpacking an undamaged[1] SWB – all approved waste forms other than solidified/vitrified waste	≤ 1200 PE-Ci
Pipe Overpacks (Standard, S100, S200, and S300)	All approved waste forms	≤ 1800 PE-Ci
All	Solidified/vitrified waste	≤ 1800 PE-Ci

[1] An undamaged container provides an additional barrier should a breach occur in the overpack. When overpacking one or more damaged waste containers, direct loaded PE-Ci limits apply.

[B] Compliance and Verification

[B.1] Personnel calculate the activity of the CH-TRU waste container as PE-Ci according to the methodology in Appendix 5 of this Plan and CCP-TP-030. Personnel identify payload containers exceeding limits stated in Table 2, segregate them, and disposition them in accordance with approved nonconformance and corrective action management procedures. The WCO verifies compliance of the PE-Ci limits. Personnel will report the PE-Ci activity to the WIPP using the WWIS/WDS.

3.3.5 Radiation Dose Equivalent Rate

[A] Requirements

[A.1] The external radiation dose equivalent rate of individual payload containers shall be:

[A.2] ≤200 milliroentgen equivalent man (mrem)/hour (hr) at the surface with the exception of the S100 and S300 pipe overpacks which are limited to ≤179 mrem/hr and ≤155 mrem/hr, respectively, at the surface (References 23a and 23b, Section 3.2; Reference 4, Sections E1 and 2.1). Internal payload container shielding shall not be used to meet this criterion, except for authorized shielded payload container configurations such as the use of 55-gallon drums containing a pipe component or a shielded container (Reference 23a, Section 2.9). Total dose equivalent rate and the neutron contribution to the total dose equivalent rate shall be reported for each payload container in the WWIS/WDS.

[A.3] See the CCP CH-TRAMPAC and TRUPACT-III TRAMPAC for associated package requirements (References 23a and 23b).

[B] Compliance and Verification

[B.1] A Host site RCT measures surface dose rates of the individual payload containers in accordance with site radiological survey procedures using the beta-gamma and neutron dose rates for each container at the surface, and records the results for each payload container. If the combined beta-gamma and neutron dose rate exceeds the dose rate specified in step 3.3.5[A] at the surface for any container, the container is rejected, marked, and segregated. Total dose equivalent rate and the neutron contributions to the total payload container dose rate will be reported separately using the WWIS/WDS in accordance with CCP-TP-030.

3.3.6 Decay Heat

[A] Requirements

[A.1] See the CCP CH-TRAMPAC and TRUPACT-III TRAMPAC for decay heat requirements (References 23a and 23b).

[B] Compliance and Verification

[B.1] Personnel will compute the payload container decay heat and the measurement error manually or using a computational algorithm in accordance with CCP-TP-030. Personnel will ensure that the results of the calculations are equal to or less than the limits of the assigned shipping category. Individual radionuclide mass quantities and errors are converted to decay heat by multiplying the mass values (g) by decay heat conversion factors (W/g). Table 3.1-2 in the CH-TRAMPAC and TRUPACT-III TRAMPAC (References 23a and 23b) lists ^{239}Pu FGE, decay heat, and specific activity for many radionuclides. The values calculated for decay heat and its associated TMU (expressed in terms of one standard deviation) shall be reported to the WWIS/WDS for each payload container in accordance with CCP-TP-030.

3.4 Physical Properties

3.4.1 Observable Liquid

[A] Requirements

[A.1] Liquid waste is not acceptable at the WIPP. Observable liquid containing PCBs is prohibited at the WIPP.

Liquid in the quantities delineated below is acceptable:

- Observable liquid shall be less than 1 percent[1] by volume of the outermost container at the time of radiography or visual examination (VE) (Reference 9).

[1]The limit of “less than 1 percent” is taken from the CH-TRAMPAC and TRUPACT-III TRAMPAC and is more restrictive than the limit of “no more than 1 percent” in the HWFP.

- Internal containers with more than 60 milliliters (ml) or 3 percent by volume observable liquid, whichever is greater, are prohibited.

- Containers with Hazardous Waste Number U134 assigned shall have no observable liquid.

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

(Reference 9, Part 2, Section 2.3.3.1, Attachment C, Sections C-1c and C-3b; Reference 23a, Section 2.6.1; Reference 23b, Section 2.5.1; Reference 35, Appendix TRU Waste; Reference 12, Conditions of Approval, II.A.2).

[B] Compliance and Verification

[B.1] Initially, AK is used to determine container contents. Personnel estimate liquid volume by radiography and/or VE, in accordance with site-specific radiography and VE procedures (See Appendix 4, Tables B-2 and B-3). During VE, if personnel detect any liquid waste in non-transparent internal containers by shaking the internal container, they will assume that the internal container is completely filled and add the entire volume of the internal container to the total liquid in the container being characterized using VE. Personnel reject payload containers whose liquid volumes exceed the limits defined in 3.4.1 [A.1]. If necessary, personnel repackage noncompliant waste containers in accordance with site-specific VE procedures (See Appendix 4, Table B-3).

3.4.2 Sealed Containers

[A] Requirements

[A.1] Sealed containers that are greater than four liters (L) (nominal) are prohibited except for solid inorganic waste (Waste Material Type II.2) packaged in a metal container (Reference 23a, Section 2.8.1; Reference 23b, Section 2.7.1).

[B] Compliance and Verification

[B.1] Personnel will ensure that payload containers are verified to be free of sealed containers greater than four liters. Personnel use VE and/or Real-Time Radiography to ensure prohibited physical waste forms are not present in waste containers (See Appendix 4, Table B-2 through B-3).

Payload containers rejected for sealed containers greater than four liters or more are marked and segregated. The container is repackaged and reprocessed to verify the criteria are met. The WCO confirms the sealed container criteria in accordance with CCP-TP-030.

3.5 Chemical Properties

3.5.1 Pyrophoric Materials

[A] Requirements

[A.1] Radioactive pyrophoric materials shall be present only in small residual amounts (<1 percent by weight) in payload containers and shall be generally dispersed in the waste. Radioactive pyrophorics in concentrations greater than 1 percent by weight and all nonradioactive pyrophorics shall be reacted (or oxidized) and/or otherwise rendered nonreactive prior to placement in the payload container (References 23a and 23b, Section 4.1.1). Nonradionuclide pyrophoric materials are not acceptable at the WIPP (Reference 4, Section 11.4.1; Reference 9, Attachment C, Section C-1c; Reference 9, Part 2, Section 2.3.3.2; References 23a and 23b, Section 4.1.4).

[B] Compliance and Verification

[B.1] Personnel verify compliance with pyrophorics restriction by obtaining information documented in AK. VE and radiography verify there is no indication and document that waste does not contain pyrophorics or other prohibited material (See list of real-time radiography [RTR] and VE procedures in Appendix 4, Tables B-2 and B-3). Personnel review and evaluate AK to verify that waste-producing processes included

no pyrophorics or other prohibited materials. AK includes sampling and analysis data, documentation of waste stream descriptions, or actions to treat or stabilize the waste to eliminate specific characteristics.

3.5.2 Hazardous Waste

[A] Requirements

[A.1] Hazardous wastes not occurring as co-contaminants with TRU wastes (non-mixed hazardous wastes) are not acceptable at the WIPP. Each CH-TRU-mixed waste container shall be assigned one or more EPA hazardous waste codes as appropriate. Only EPA hazardous waste codes listed as allowable in the WIPP Hazardous Waste Facility Permit may be managed at the WIPP. Some of the waste may also be identified by unique state hazardous waste codes. These wastes are acceptable at the WIPP as long as the Treatment, Storage, and Disposal Facility WAC are met (Reference 9, Attachment C, Section C-1b; Reference 9, Part 2, Section 2.3.4). Wastes exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA hazardous waste numbers of D001, D002, or D003) are not acceptable at WIPP. In the context of this Plan, hazardous waste codes are synonymous with hazardous waste numbers (Reference 9, Attachment C, Section C-1c; Reference 9, Part 2, Sections 2.3.3.3, 2.3.3.7, and 2.3.4).

[B] Compliance and Verification

[B.1] Personnel will ensure that each individual waste payload container is assigned to a waste stream identified by acceptable EPA hazardous waste codes and documented on a DOE-approved WSPF. Personnel will report the hazardous waste codes for each container to the WIPP via the WWIS/WDS in accordance with CCP-TP-030. EPA hazardous waste codes are assigned based on AK. CCP uses CCP-TP-005, CCP Acceptable Knowledge Documentation, to compile, review, evaluate, confirm and report AK documentation. The AK Summary Report delineates waste streams and assigns hazardous waste codes. If data are insufficient to

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demonstrate that the concentration of the constituent is less than the regulatory level, the EPA hazardous waste number for the identified constituent is applied to the waste stream. CCP will report hazardous waste codes in accordance with CCP-TP-002, *CCP Reconciliation of DQOs and Reporting Characterization Data*; CCP-TP-005 and CCP-TP-030.

3.5.3 Chemical Compatibility

[A] Requirements

[A.1] TRU waste containing incompatible materials or materials incompatible with payload container and packaging materials, shipping container materials, other wastes, repository backfill, or seal and panel closure materials are not acceptable for transport in the TRUPACT-II, TRUPACT-III, or HalfPACT or for disposal at the WIPP. Chemical constituents shall conform to the lists of allowable materials in Tables 4.3-1 through 4.3-8 of the CH-TRAMPAC. Other chemicals or materials not identified in these tables are allowed provided that they meet the requirements as specified in Section 4.3.1 of the CH-TRAMPAC and TRUPACT-III TRAMPAC (Reference 9, Attachment C, Section C-1c; Reference 9, Part 2, Section 2.3.3.4; References 23a and 23b, Sections 4.3 and 4.4).

[B] Compliance and Verification

[B.1] Personnel ensure compliance with the chemical compatibility requirements based on AK. Only wastes that have been shown to meet the approved chemical lists in Tables 4.3-1 through 4.3-8 of the CH-TRAMPAC and Tables 4.3-1 through 4.3-7 of the TRUPACT-III TRAMPAC are acceptable at the WIPP. The WCO confirms compliance with the chemical compatibility criteria in accordance with CCP-TP-030. If necessary, personnel repackage CH TRU waste containers not meeting the chemical compatibility requirement.

3.5.4 Explosives, Corrosives, and Compressed Gases

[A] Requirements

[A.1] Waste shall contain no explosives, corrosives, or compressed gases (pressurized containers) (Reference 9, Attachment C, Section C-1c; Reference 9, Part 2, Sections 2.3.3.5 and 2.3.3.7; References 23a and 23b, Section 4.2.1).

[B] Compliance and Verification

[B.1] Personnel ensure that explosives, compressed gases, and corrosive liquids are not present in payload containers. Chemicals (e.g., oxidizers) capable of forming explosive mixtures under some conditions are also prohibited from the waste. Waste-generation processes are assessed for safety hazards such as potential explosion hazards and potential inadvertent production of explosive materials in accordance with CCP-TP-005. Corrosives must be either excluded from the payload container or processed to neutralize the corrosive material or otherwise render it noncorrosive. CCP operating procedures describe the specific actions taken to ensure compliance with the corrosive material prohibition, (e.g., site-specific radiography and VE procedures [See Appendix 4, Tables B-2 and B-3]).

[B.2] Personnel verify compliance with the prohibited items requirement by obtaining AK information (e.g., administrative, operating, QA procedures, and safety assessments) documenting that waste does not contain explosives, corrosives, or pressurized containers. Personnel review and evaluate AK to verify that waste-producing processes included no prohibited or restricted materials. AK includes sampling and analysis data, documentation of waste stream descriptions, or actions to treat or stabilize the waste to eliminate specific characteristics. Personnel verify that prohibited materials are not in the waste container through radiography or VE (See list of RTR and VE procedures in Appendix 4, Tables B-2 and B-3).

3.5.5 HSG VOC Concentrations

[A] Requirements

[A.1] The headspace gas (HSG) of payload containers shall be determined in accordance with a site-specific TRAMPAC (References 23a and 23b, Section 5.2), as required.

[B] Compliance and Verification

[B.1] CCP Personnel ensure that the required QAOs meet the requirements specified for gas generation rates in the Gas Generation QAPjP. For those payload containers that exceed the flammable volatile organic compound (VOC) limit, a determination of compliance with the flammable (gas/VOC) concentration limit as described in the CH-TRAMPAC allows the payload container to be shipped in the Type B package under the test category.

[B.2] Test category payload containers are tested by direct measurement in accordance with gas generation testing (GGT) procedures (See Appendix 4, Table B-4) to quantify the hydrogen/methane, VOC, and total gas generation rates (as appropriate) for purposes of determining if all applicable limits are met in accordance with CCP-TP-030.

[B.3] Representative sampling of HSG may be used to quantify the hydrogen/methane, VOC, and total gas generation rates (as appropriate) for purposes of determining if all applicable limits are met in accordance with CCP-TP-030.

3.5.6 Polychlorinated Biphenyl (PCB) Concentration

[A] Requirements

[A.1] For TRU and mixed-TRU wastes containing PCBs meeting the condition of approval in Reference 12, the payload container data entered into the WWIS/WDS shall include the earliest date of waste generation (i.e., the date of removal from service for disposal), the date of waste certification for disposal, and the date the waste was sent to the WIPP for disposal (Reference 12, Section III.D.4). Additionally,

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the estimated weight of the PCBs in kilograms (kg) (as recorded on the Uniform Hazardous Waste Manifest [UHWM]) and a description of the type of PCB waste (e.g., PCB Articles, PCB remediation waste), shall be entered into the WWIS/WDS (Reference 13, § 761.207 [a][2] and § 761.180). Hanford, Idaho National Laboratory, Savannah River Site, Oak Ridge National Laboratory, Knolls Atomic Power Laboratory, and Los Alamos National Laboratory are authorized to ship their TRU and TRU-mixed wastes containing PCBs to WIPP (References 14 and 15).

[B] Compliance and Verification

[B.1] Personnel use AK obtained from CCP-TP-005, and/or verification, and testing to demonstrate compliance with the PCB requirement. Personnel use nondestructive examination (NDE) (VE and RTR) procedures (See Appendix 4, Tables B-2 and B-3) during packaging of newly generated waste to identify the presence of PCBs. For retrievably stored debris waste, personnel compile, record, and evaluate AK to demonstrate compliance with the PCB limitation. The WCO verifies compliance with the PCB requirements.

3.6 Data Package Contents

3.6.1 Characterization and Certification Data

[A] Requirements

[A.1] Sites shall prepare a WSPF for each waste stream. Each WSPF shall be approved by the DOE-CBFO prior to the first shipment of that waste stream. Characterization and certification information for each payload container shall be submitted to the WWIS/WDS and approved by the WWIS/WDS Data Administrator. Sites are required to estimate the cellulose, plastics, and rubber (CPR) weights and report these estimates in the WWIS/WDS on a payload container basis. Any payload container from a waste stream that has not been preceded by an appropriate certified WSPF is not acceptable at the WIPP (Reference 9, Part 2, Section 2.3.3.10).

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[B] Compliance and Verification

[B.1] Personnel will verify compliance with the data package requirements by reviewing data packages in accordance with CCP-TP-001, *CCP Project Level Data Validation and Verification,* and CCP-TP-005. Personnel will prepare and submit the WSPF to DOE-CBFO in accordance with procedure CCP-TP-002. The WCO ensures that the WWIS/WDS data are entered into the system and transmitted to the DOE-CBFO for approval before waste shipment in accordance with CCP-TP-030. Waste containers will be certified under an approved WSPF prior to shipment.

3.6.2 Shipping Data

[A] Requirements

[A.1] Sites shall prepare either a Bill of Lading or a UHWM for CH-TRU waste shipments as required by the transportation requirements. The Land Disposal Restriction (LDR) notification for CH-TRU mixed waste shipments shall state that the waste is not prohibited from land disposal (Reference 9, Attachment C, Section C-5b(2); References 23a and 23b, Section 6).

[B] Compliance and Verification

[B.1] Personnel verify compliance with the data package requirements by reviewing the data packages in accordance with CCP-TP-001 and CCP-TP-005. The TCO and WCO ensure that the WWIS/WDS data are entered into the system and transmitted to DOE-CBFO for approval before waste shipment in accordance with CCP-TP-030 and CCP-TP-033.

[B.2] The TCO prepares a PCTCD/OPCTCD for each payload container and a PATCD for each payload assembly in accordance with the CCP CH-TRAMPAC prior to loading the container into a Type B package. The TCO completes the PCTCD/OPCTCD and PATCD to certify an individual payload container and a PATCD to certify the payload assembly for shipping in accordance with CCP-TP-033, which is based on

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Section 6.0 of the CCP CH-TRAMPAC. The PCTCDs, OPCTCDs, and the PATCDs are completed prior to shipping the Type B package. The LDR Exemption Notification form is completed for mixed waste shipments in accordance with CCP-TP-033. The shipping site's transportation personnel or personnel prepare a bill of lading or UHWM. For non-mixed waste shipments, a Bill of Lading is prepared. A UHWM is prepared for mixed waste shipments. If the TCO is the shipper of record, shipping data are prepared in accordance with CCP-TP-033.

[B.3] CCP Transportation is tasked with the final review of the payload assembly and documentation. The final approval of the assembly and documentation (UHWM or Bill of Lading) is done by CCP Transportation or other certified Host site program.

4.0 WASTE ACCEPTANCE REQUIREMENTS AND CRITERIA FOR RH WASTE

This section describes how the CCP complies with the requirements of the WIPP WAC for RH waste and associated requirements contained in the WIPP DSA (Reference 4), RH TRU 72-B and 10-160B Certificates of Compliance (References 7 and 8), WIPP LWA (Reference 2), WIPP Hazardous Waste Facility Permit (Reference 9), Compliance Recertification Decision (Reference 10), Initial Report for PCB Disposal Authorization (Reference 11), EPA letter of approval to land dispose non-liquid PCBs at WIPP (References 12 and 13), Revision to the Record of Decision for the DOE's WIPP Disposal Phase and associated WIPP NEPA database (References 14 and 15), EPA's letter of approval of DOE's RH TRU Waste Characterization Program (Reference 16), and the WCPIP (Reference 17).

4.1 Organization of Requirements

The purpose of Section 4.0 and related appendices is to describe the compliance methods and rationale for the requirements and associated criteria that must be met for RH TRU waste to be transported to, managed at, and disposed of in the WIPP. The requirements/criteria and associated compliance methods are organized under five major headings: Container Properties, Radiological Properties, Physical Properties, Chemical Properties, and Data Package Contents. Sections 4.7 through 4.11 correlate with the organization in the WIPP WAC for RH TRU waste requirements and identify methods of compliance to meet each requirement. Procedures that implement the process controls, techniques, tests, and other actions to be applied to each RH-TRU payload container, waste stream, and shipment are also identified. Revisions of requirements in referenced documents controlled by agencies or organizations other than DOE (e.g., EPA, NMED and NRC) shall have precedence over values quoted in this Plan. Changes incorporated in future revisions of the WIPP WAC for RH waste will be reflected in future revisions of this Plan.

In addition to the discussion described in this section, a CCP RH-TRU Waste Certification Plan for 40 CFR Part 194 compliance is presented in Appendix 11, CCP RH TRU Waste Certification Plan for 40 CFR Part 194 Compliance to this Plan. This Appendix satisfies the WCPIP requirement for a waste certification plan that provides, among other things, a listing of the DQOs specified in the WCPIP and the identification of methods and a description of the rationale that will be used to assess compliance with those DQOs.

Regarding any discussions of compliance and verification methods, if a requirement is not met, personnel will initiate an NCR or a CAR in accordance with CCP-QP-005. Corrective action will be taken in accordance with CCP-QP-029 to resolve nonconformances. Section 5.3

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provides additional details about the NCR/CAR process. Only waste from a properly characterized waste stream will be certified as meeting the requirements and associated criteria contained in this Plan. Waste containers for a waste stream which has not been represented by an approved WSPF will not be shipped to WIPP for disposal (Reference 9, Part 2, Section 2.3.3.10). The required characterization, certification, and shipping data will be transmitted to the WIPP using the WWIS/WDS.

4.2 DOE Operations and Safety Requirements for WIPP

4.2.1 The WIPP DSA addresses waste handling and emplacement operations. Waste acceptance for emplacement in the WIPP will conform to the WAC to meet the DSA (Reference 4).

4.3 NRC Transportation Safety Requirements

4.3.1 Acceptable methods for payload compliance are defined in the RH-TRU 72-B and 10-160B Certificates of Compliance (References 7 and 8).

Acceptable methods for payload compliance for the RH-TRU 72-B are implemented by the RH-TRAMPAC (Reference 41). CCP-PO-505 describes how CCP will ensure compliance with each payload parameter. The CCP RH-TRAMPAC contains sufficient detail to allow reviewers to adequately understand and evaluate the compliance methodology for each payload parameter.

The payload requirements for the 10-160B package and site-specific compliance are specified by the 10-160B SAR (Reference 38). Prior to use of the 10-160B package, CCP will prepare a CCP Appendix if applicable. For shipments in the 10-160B package, CCP verifies compliance to the requirements for the applicable site-specific appendix to the 10-160B SAR. The 10-160B SAR does not require the preparation of a site-specific “TRAMPAC.”

4.3.2 The QA Program described in Section 5.0 defines the QA activities that apply to the use of NRC-approved transportation packaging in accordance with 10 CFR Part 71, Subpart H (Reference 24).

4.4 NMED Hazardous Waste Facility Permit Requirements

4.4.1 TRU waste is classified as TRU-mixed waste if it contains hazardous constituents regulated under the New Mexico Hazardous Waste Act (Reference 25). Only TRU-mixed waste and TRU waste that have been characterized in accordance with the WIPP WAP and that meet the Treatment, Storage and Disposal Facility (TSDF) WAC as presented in permit Sections 2.3.3.1 through 2.3.3.10 will be shipped to WIPP for disposal. The CCP QAPjP describes compliance with the WIPP WAP.

4.5 EPA Compliance Recertification Decision Requirements

4.5.1 Title 40 CFR § 194.24(c) requires the DOE to specify the limiting values for waste components to be emplaced in the repository (Reference 26). The EPA's Compliance Recertification Decision (Reference 10) identifies the repository limits for several waste components including free water, metals, and CPR.

4.5.2 CCP estimates or determines the weight of CPR and reports this estimate in the WWIS/WDS on a container basis. The repository limit for CPR is a maximum of 2.2×10^7 kg. In addition, CCP quantifies and reports the activity values of each of the following radionuclides for purposes of tracking the inventory curie content: ^{241}Am, ^{238}Pu, ^{239}Pu, ^{240}Pu, ^{242}Pu, ^{233}U, ^{234}U, ^{238}U, ^{90}Sr, and ^{137}Cs. The presence or absence of these radionuclides is determined using AK documentation and radiological characterization techniques performed in accordance with the WCPIP. The results of these determinations are reported in the WWIS/WDS on a payload container basis. TRU waste payload containers shall contain more than 100 nCi/g of alpha-emitting TRU isotopes with half-lives greater than 20 years, as specified in Section 4.8.3 (Reference 47).

4.5.3 EPA Approval for PCB Disposal

PCB-contaminated TRU and PCB-contaminated TRU waste mixed with a hazardous waste including PCB remediation waste, PCB articles, and PCB bulk product waste may be stored and disposed at the WIPP (References 11, 12, 13, 14 and 15). Applicable waste acceptance criteria are addressed in Sections 4.7.5 (Identification/Labeling), 4.9.1 (Observable Liquids), and 4.10.6 (Polychlorinated Biphenyls).

Waste streams identified as containing PCBs shall be brought to the attention of the CBFO in order that a determination can be made regarding their acceptability at WIPP.

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4.6 WIPP Land Withdrawal Act Requirements (Public Law 102-579)

4.6.1 WIPP can accept only radioactive waste generated by atomic energy defense activities of the United States (Reference 2, Section 2[19]). A TRU waste is eligible for disposal at WIPP if it has been generated in whole or in part by one or more of the following functions (References 27 and 28):

- naval reactors development
- weapons activities, including defense inertial confinement fusion
- verification and control technology
- defense nuclear materials production
- defense nuclear waste and materials by-products management
- defense nuclear materials security and safeguards and security investigations
- defense research and development

Using AK, CCP determines that each waste stream to be disposed of at WIPP is "defense" TRU waste (Reference 2).

4.6.2 High-level radioactive waste or spent nuclear fuel shall neither be transported, emplaced, nor disposed of at WIPP (Reference 2, Section 12). Also, no TRU waste may be transported by or for the DOE to or from WIPP, except in packages:

- the design of which has been certified by the NRC, and
- that have been determined by the NRC to satisfy its QA requirements.

4.7 Container Properties

4.7.1 Description

[A] Requirements

[A.1] The only payload containers authorized for receipt of RH-TRU waste in the RH bay of the Waste Handling Building at WIPP include 55-gallon drums and RH-TRU waste canisters shipped in 10-160B and RH-TRU 72-B packaging, respectively (references 7 and 8). The site shall report the number and type of payload containers to WIPP using the WWIS/WDS.

[A.2] Payload containers must meet DOT Type 7A standards (Reference 4, Section 2.5.2). Prior to loading in the transportation packaging, the exterior of a payload container must undergo 100 percent visual inspection to ensure compliance with the requirement that payload containers be in good and unimpaired condition. The results of this visual inspection must be documented. Inspection of 55-gallon drums shall be documented using the payload container integrity checklist contained in Appendix 7. A payload container is in good and unimpaired condition if it does not have significant rusting, is of sound structural integrity, and does not show signs of leakage.

The RH-TRU waste canister shall comply with the specifications in the CCP RH-TRAMPAC (Reference 7).

[B] Compliance and Verification

[B.1] CCP only uses RH-TRU 72-B waste canisters for use in the RH-TRU 72-B cask as payload containers for RH waste. The only authorized payload container of RH-TRU waste for shipment in the 10-160B to WIPP is a 55-gallon drum. CCP reports the number and type of payload containers to WIPP using the WWIS/WDS in accordance with procedure CCP-TP-530, *CCP RH TRU Waste Certification and WWIS/WDS Data Entry*.

[B.2] The CCP procures canisters in accordance with procedure CCP-QP-015 to comply with specifications

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of Appendix 1.3.4 of the DSA for the RH-TRU 72-B Cask.

One hundred percent visual inspection of the exterior of the payload container is performed to ensure that the payload container is in good and unimpaired condition. The results of this inspection are documented. Inspection of payload containers for compliance to requirements is performed in accordance with CCP-TP-507, *CCP Shipping of Remote-Handled Transuranic Waste*.

All payload containers are assigned to a Content Code per procedure CCP-TP-530.

4.7.2 Weight Limits

[A] Requirements

[A.1] Each payload container shall comply with the following maximum weight limit:

- Removable Lid Canister (direct loaded or drum loaded) – 4,240 lbs (Reference 39)
- Welded Lid Canister (direct loaded) – 5,250 lbs (Reference 40)
- Welded Lid Canister (drum loaded) – 5,980 lbs (Reference 40)
- NS15 Neutron Shielded Canister – 3100 lbs (Reference 41)
- NS30 Neutron Shielded Canister – 3100 lbs (Reference 41)
- 1,000 lbs (453.59 kg) per 55-gallon drum (Reference 17, Section 2.4.1; Reference 4, Section 2.5.2.2)

See the RH-TRU 72-B and/or 10-160B packaging Certificates of Compliance for applicable package weight limits (References 7 and 8).

[B] Compliance and Verification

[B.1] CCP verifies the weight limits of the canister and the RH-TRU 72-B cask are within tolerance using DOE/WIPP 02-3284, *RH Packaging Operations Manual.* The TCO certifies compliance to applicable weight limits on the Packaging Transportation Certification Document (PTCD) in accordance with CCP-TP-507.

[B.2] CCP verifies the weight limits of the payload containers and the 10-160B cask are within tolerance using DOE/WIPP 06-3336, 10-160B RH Cask Program Guidance. The TCO certifies compliance to applicable weight limits in accordance with CCP-TP-507.

4.7.3 Assembly Configurations

[A] Requirements

[A.1] See the RH-TRU 72-B and/or 10-160B packaging Certificates of Compliance for assembly configuration requirements (References 7 and 8).

[B] Compliance and Verification

[B.1] Loading of waste, either direct loading or loading with drums, into RH-TRU canisters is performed in accordance with site-specific canister loading procedures.

[B.2] Loading of waste drums, into a 10-160B Cask is performed in accordance with 10-160B loading procedures.

4.7.4 Removable Surface Contamination

[A] Requirements

[A.1] Removable surface contamination on TRU waste payload containers, payload assemblies, and packagings shall not exceed 20 dpm/100 cm^2 alpha and 200 dpm/100 cm^2 beta-gamma (Reference 9, Attachment A1, Section A1-1d[2]; References 29 and 30). The fixing of surface contamination to meet these criteria is not allowed by WIPP in accordance

with best management practices for ensuring worker radiation dose is within the as low as reasonably achievable (ALARA) guidelines.

[B] Compliance and Verification

[B.1] Compliance is achieved by measurement using radiological contamination surveys. Specifically, a Host site RCT surveys RH-TRU waste canisters for removable surface contamination prior to loading into the cask. Packaging (i.e., cask) is surveyed for removable surface contamination after completion of cask loading and prior to shipment. Survey results are then compared to removable surface contamination limits to determine compliance per procedure CCP-TP-530. If removable contamination exceeds limits, surfaces may be wiped and cleaned and resurveyed to achieve compliance. Fixing of surface contamination is prohibited.

4.7.5 Identification/Labeling

[A] Requirements

[A.1] Each payload container shall be labeled with a unique payload container identification number permanently applied in a conspicuous location. The unique payload container identification number shall include a site identifier as a prefix.

[A.2] For the RH-TRU waste canisters, payload container labeling shall be as follows:

- Each canister shall be labeled with a unique payload container identification number (ID) that includes a site identifier as a prefix.
- The characters composing the canister ID number shall be approximately 2-inches high and of a color contrasting with their background.
- A minimum of three canister ID numbers shall be placed at approximately equal intervals around the circumference of the canister and within 18-inches of the top of the canister.

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[A.3] Exceptions to the labeling/identification requirements may be granted upon request to and approval from the CBFO.

[A.4] The 10-160B 55-gallon payload container identification shall be in medium to low density Code 39 bar code symbology as required by ANSI, standard ANSI/AIM BC1-1995 (Reference 31) in characters at least 1-in. high and alphanumeric characters at least ½-in. high. In the case of 55-gallon drums, the labels must be placed approximately 120 degrees apart so that one label is visible once the containers are assembled into a 5-drum carriage.

[A.5] Payload containers shall be marked "Caution Radioactive Material" using a yellow and magenta label as specified in 10 CFR Part 835 (Reference 30). Those payload containers whose contents are also RCRA regulated (mixed-TRU), shall be additionally marked "Hazardous Waste" as specified in 40 CFR §262.32 (Reference 33). For TRU and TRU-mixed wastes containing PCBs, the payload containers shall be marked in accordance with 40 CFR §761.40 (References 12 and 13). Additionally, DOT Type B packages containing PCBs must be properly marked in accordance with 40 CFR §761.40 (References 12 and 13).

[A.6] If an empty 55-gallon drum is used as dunnage to complete a payload configuration in the 10-160B package, the dunnage container shall be labeled with the following information:

- Unique payload container identification number
- “EMPTY” or “DUNNAGE”

[A.7] If a five-drum carriage of only dunnage 55-gallon drums is used in the 10-160B, the containers shall be labeled only “EMPTY” or “DUNNAGE,” and the unique container identification number label is not required for these containers.

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[B] Compliance and Verification

[B.1] CCP verifies canisters are labeled in accordance with CCP-TP-507 procedure. This procedure must include instructions to satisfy the following requirements:

- Each canister is labeled with a unique ID that includes a site identifier as a prefix.
- Characters composing the canister ID number on labels are approximately 2-inches high and of a color contrasting with their background.
- A minimum of three canister ID labels are placed on a canister at approximately equal intervals around the circumference of the canister and within 18-inches of the top of the canister.
- Alternate labeling of payload containers may be used only after a request to use an alternate labeling approach is submitted and approved by CBFO on a case-specific basis.

[B.2] CCP verifies payload containers are marked in accordance with CCP-TP-507 procedure. These procedures must contain instructions to ensure the following:

- All RH-TRU and TRU mixed payload containers are marked “Caution Radioactive Material” using a yellow and magenta label.
- All RH-TRU mixed waste payload containers are marked “Hazardous Waste.”
- All RH-TRU DOT Type B packages containing PCBs are marked in accordance with 40 CFR § 761.40.

[B.3] CCP verifies 10-160B 55-gallon payload containers are labeled in accordance with procedure CCP-TP-507.

4.7.6 Dunnage

[A] Requirements

[A.1] See the 10-160B packaging Certificate of Compliance for dunnage requirements (Reference 8).

To maximize the efficiency of operations at the WIPP, CCP will minimize the use of dunnage drums.

[B] Compliance and Verification

[B.1] The use of dunnage is not applicable to the RH-TRU 72-B shipping package. The minimization of the use of dunnage for the 10-160B Cask is through payload configuration. The use of dunnage drums is reviewed and approved concurrently with the review and approval of shipment assemblies by the WWIS/WDS Data Administrator on a case-by-case basis.

[B.2] CCP verifies 10-160B 55-gallon dunnage containers are labeled in accordance with procedure CCP-TP-507.

4.7.7 Filter Vents

[A] Requirements

[A.1] Each payload container and any sealed secondary or internal containers (greater than four liters in size), in the payload container shall meet the filter vent specifications of Reference 4, Section 2.5.2; Reference 7; Reference 8; Reference 9, Attachment A1, Section A1-1b[2]; and Reference 41; Section 2.4.1. These filter vents shall meet the specification of the 10-160B SAR and RH-TRAMPAC (Reference 38; Reference 41, Section 2.4.1).

The model number of each filter vent or combination of filter vents installed on a payload container shall be reported to the WWIS/WDS database (Reference 48).

[B] Compliance and Verification

[B.1] The TCO verifies the presence and model of filter(s) installed on individual payload containers in accordance with CCP-TP-507. CCP verifies any sealed secondary or internal containers (greater than

four liters in size), overpacked in the payload container shall be either vented or filtered to meet the specifications of Reference 7 or Appendix 1.3.5 of Reference 8 by VE using CCP-TP-500, *CCP Remote-Handled Waste Visual Examination,* or an evaluation of the AK record. CCP procures filters in accordance with CCP-QP-015 to specifications that comply with all applicable requirements for filter vents. Only filters identified on the listing of approved CBFO filter vent models are procured by CCP.

[B.2] The model numbers of each filter vent or combination of filter vents installed on a payload container (and internal containers, as applicable) are reported to the WWIS/WDS in accordance with procedure CCP-TP-530.

4.8 Radiological Properties

With respect to the required radiological properties identified within this Section, they can be divided into two distinct groups.

The first group includes the activities and masses of the ten WIPP-tracked radionuclides (i.e., ^{241}Am, ^{238}Pu, ^{239}Pu, ^{240}Pu, ^{242}Pu, ^{233}U, ^{234}U, ^{238}U, ^{90}Sr, and ^{137}Cs), and the TRU alpha activity concentration (i.e., >100 nCi/g of alpha-emitting TRU isotopes with half lives greater than 20 years), of the waste. Total activity will be quantified and tracked to ensure compliance with the LWA limits for RH-TRU waste including limiting activity to 23 curies per liter (Ci/l) per canister, limiting disposed RH-TRU waste to 5.1 million curies, and limiting surface dose rates of canister to 1000 roentgen equivalent man per hour (rem/hr). No more than 5 percent by volume of the RH-TRU waste received at WIPP may have a surface dose rate in excess of 100 rem/hr. Estimates of their activities and masses shall be derived from a system of controls certified by CBFO that includes AK, computations, measurements, and sampling (Reference 35). CCP RH-TRU Waste Certification Plan for 40 CFR Part 194, Compliance, provides the methods and requirements used to characterize the radiological composition of the RH-TRU waste.

The second group includes the remaining radionuclides contributing to the FGE, the PE-Ci, and the decay heat of the payload container. This set of radiological data is regulated both by the NRC as specified in the RH transportation documentation (References 7 and 8), and the CBFO as required by the WIPP DSA (Reference 4). PE-Ci quantities shall be calculated for each payload container in accordance with Appendix 5. Any method that complies with the Certificate of Compliance may be used to quantify the remaining radiological properties at the discretion of the shipping facility.

However, the resulting data (e.g., AK from Safeguards and Security data), the source and method from which the data was generated, and the basis for the reliability of the data shall be submitted to and approved by CBFO prior to use.

4.8.1 Radionuclide Composition

[A] Requirements

[A.1] RH-TRU waste received at the WIPP shall not exceed 23 curies per liter maximum activity level (averaged over the volume of the canister) (Reference 2, Section 7).

[A.2] Contents of the 10-160B may include fissile material contaminants provided the mass limits of the 10 CFR 71.15 are not exceeded and the plutonium content does not exceed 0.74 tera-bequerel (20 curies) (Reference 8). The quantity of radioactive material must not exceed 3,000 times the Type A quantity (Reference 8).

[A.3] The activities and masses of ^{241}Am, ^{238}Pu, ^{239}Pu, ^{240}Pu, ^{242}Pu, ^{233}U, ^{234}U, ^{238}U, ^{90}Sr, and ^{137}Cs shall be established on a payload container basis for purposes of tracking their contributions to the total WIPP radionuclide inventory (Reference 35). The estimated activities and masses, including their associated TMU expressed in terms of one standard deviation, for these ten radionuclides shall be reported to the WWIS/WDS on a payload container basis. For any of these ten radionuclides whose presence can be substantiated from AK, direct measurement, computations, or a combination thereof, and for which measured data are determined to be below the LLD for that radionuclide, the site shall report the character string “< LLD” to the WWIS/WDS for the activity and mass of that radionuclide; otherwise a value of zero shall be reported (Reference 17, Section 2.4.6).

[A.4] In addition, all radionuclides other than the ten WIPP-tracked radionuclides (i.e., ^{241}Am, ^{238}Pu, ^{239}Pu, ^{240}Pu, ^{242}Pu, ^{233}U, ^{234}U, ^{238}U, ^{90}Sr, and ^{137}Cs), that contribute to 95 percent of the radioactive hazard for the payload container shall be reported on the RH-TRU 72-B or 10-160B bill of lading or manifest. The activities and masses of these other

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radioisotopes shall also be reported to the WWIS/WDS along with their associated TMU, expressed in terms of one standard deviation, for each waste container (Reference 35).

[B] Compliance and Verification

[B.1] CCP determines the radionuclide composition and quantity through a combination of AK and established radionuclide measurement methods (e.g., CCP-TP-504, *CCP Dose-to-Curie Survey Procedure for Remote-Handled Transuranic Waste*). The radionuclide measurement methods that may be used are described in greater detail in Appendix 11. Radionuclide measurement is either performed directly on the payload container or on all of the smaller waste containers composing the payload container. If radionuclide measurement is not performed directly on the payload container itself, then, the measurement values (and uncertainties) for the payload container are calculated from the associated measurement results for all of the smaller containers composing the payload container.

CCP uses radionuclide measurement results to calculate and quantitate the total activity averaged over the volume of the payload container in the RH-TRU 72-B Cask to determine compliance with the 23 Ci/l limit.

CCP uses radionuclide measurement results to quantitate the activity and masses of the ten WIPP-tracked radionuclides and all other radionuclides that contribute to 95 percent of the radioactive hazard in a payload container. The activities and masses of these radionuclides, including their associated TMU (expressed in terms of one standard deviation), are reported to the WWIS/WDS on a payload container basis per procedure CCP-TP-530 and are reported on the Bill of Lading or UHWM. For any of the ten WIPP-tracked radionuclides that are measured below the LLD and whose presence can be substantiated from AK, direct measurement, computations, or a combination thereof, are reported as “< LLD” for its activity and mass to the WWIS/WDS.

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[B.2] The contents of the 10-160B may include fissile material contaminants provided the mass limits of the 10 CFR 71.15 are not exceeded and the plutonium content does not exceed 0.74 tera-bequerel (20 curies) (Reference 8). The quantity of radioactive material must not exceed 3,000 times the Type A quantity (Reference 8). Compliance to these requirements are accomplished and verified through procedures CCP-TP-507 and 10-160B loading procedures.

4.8.2 ^{239}Pu Fissile Gram Equivalent/^{235}U Fissile Equivalent Mass (FEM)

[A] Requirements

[A.1] Each canister must comply with the limits in either Table 4 or Table 6. For a canister, either the sum of the ^{239}Pu FGE plus two times its associated TMU, expressed as one standard deviation, shall comply with the applicable limits in Table 4 or the ^{235}U Fissile Equivalent Mass (FEM) weight percentage plus two times is associated TMU, with TMU expressed in terms of one standard deviation, shall comply with the applicable limit in Table 6 (Reference 7).

[A.2] See the 10-160B packaging Certificates of Compliance for applicable ^{239}Pu FGE requirements (Reference 8 and Table 5 for associated drum requirements).

[A.3] The values calculated for the ^{239}Pu FGE or ^{235}U FEM and their associated TMUs (expressed in terms of one standard deviation) shall be reported to the WWIS/WDS for each payload container.

Table 4. ^{239}Pu FGE Limits for a Canister Shipped in an RH-TRU 72-B Package

Payload Contents	^{239}Pu FGE Limit (Removable/Welded Lid Canister)	^{239}Pu FGE Limit (Neutron Shielded Canister)
Non-Machine-Compacted Waste		
Be/BeO limited to ≤ 1 percent by weight of the waste	≤ 315	≤ 245
Be/BeO limited to ≤ 1 percent by weight of the waste including credit taken for ≥ 5g of ^{240} Pu Poisoning[1]	≤ 325	≤ 245
Be/BeO limited to ≤ 1 percent by weight of the waste including credit taken for ≥ 15g of ^{240}Pu Poisioning[1]	≤ 350	≤ 245
Be/BeO limited to ≤ 1 percent by weight of the waste including credit taken for ≥ 25g of ^{240}Pu Poisioning[1]	≤ 370	≤ 245
Be/BeO > 1 percent by weight of the waste and is chemically or mechanically bound	≤ 305	Unauthorized
Be/BeO > 1 percent by weight of the waste and is not chemically or mechanically bound	≤ 100	Unauthorized
Machine-Compacted Waste		
Be/BeO limited to ≤ 1 percent by weight of the waste	≤ 245	≤ 245
Be/BeO > 1 percent by weight of the waste	Unauthorized	Unauthorized

[1]The minimum ^{240} Pu content for the RH-TRU waste canister shall be determined after the subtraction of two times the error.

Table 5. ^{239}Pu FGE Limits for Drums Shipped in a 10-160B Package

Payload Contents	^{239}Pu FGE Limit
Non-Machine-Compacted Waste	
55-gallon drum (Be/BeO limited to ≤ 1 percent by weight of the waste)	≤ 200 g
55-gallon drum (Be/BeO > 1 percent by weight of the waste)	≤100 g
Machine-Compacted Waste	
55-gallon drum (Be/BeO limited to ≤1 percent of the weight of the waste)	≤ 170 g
55-gallon drum (Be/BeO limited ≤ 1 percent of the weight of the waste). 1.0-in. design spacing must be maintained between drum content and exterior top and bottom	≤ 200 g

Table 6. ^{235}U FEM Limit for a Canister Shipped in an RH-TRU 72-B Package

Payload Contents	Weight % ^{235}U FEM (Removable/Welded Lid Canister)	Weight % ^{235}U FEM (Neutron Shielded Canister)
Non-machine compacted homogenous solid/sludge with a particle size characteristic dimension of 1 in. or less that is primarily uranium (in terms of heavy metal component) with waste matrix distributed to not exceed enrichment limit (Reference 41).	≤ 0.96	Not Applicable

[B] Compliance and Verification

[B.1] CCP determines the quantity of fissile material in a payload container using established radionuclide measurement methods performed on the contents of the payload container as described in Appendix 11. Radionuclide measurement results are used to calculate the ^{239}PuFGE and associated uncertainty (expressed as one standard deviation) for a payload container.

[B.2] CCP determines the presence and quantity of beryllium on a waste stream basis by AK and is documented in the associated waste stream AK Summary Report. AK documentation is collected, evaluated and reported in accordance with CCP-TP- 005 and is summarized on a waste stream basis in AK Summary Reports.

[B.3] CCP compares the measured/calculated FGE plus two times uncertainty for a payload container and cask to the applicable FGE limits based on beryllium content.

[B.4] CCP reports the values calculated for the FGE and its associated uncertainty for each payload container to the WWIS/WDS as two separate items in accordance with CCP-TP-530.

4.8.3 TRU Alpha Activity Concentration

[A] Requirements

[A.1] TRU waste payload containers shall contain more than 100 nCi/g of alpha-emitting TRU isotopes with half-lives greater than 20 years (Reference 2, Section 2 [18]). Without taking into consideration the TMU, the TRU alpha activity concentration for a payload container is determined by dividing the TRU alpha activity of the waste by the weight of the waste.

The TRU alpha activity concentration shall be reported to the WWIS/WDS (Reference 35, Chapter 4; Reference 17, Section 2.4.5).

[B] Compliance and Verification

[B.1] CCP uses established radionuclide measurement methods (see Appendix 11) to quantitate the amount of alpha-emitting TRU isotopes with half-lives greater than 20 years (i.e., TRU alpha activity) in the waste contents of payload containers. Calibrated scales are used to determine the weight of waste material in payload containers (i.e., determine the net weight). The TRU alpha activity concentration is calculated by dividing the measured TRU alpha activity (without uncertainty) in a payload container by its net weight. Calculations are performed either manually or with the use of validated computational algorithms. If containers (e.g., 55-gallon or 30-gallon drums) are loaded into a canister, the TRU alpha activity concentration for the canister is determined by dividing the summation of the individual TRU alpha activity values of the individual waste containers by the summation of the individual net weights. Methods used to determine the TRU alpha activity

concentration have a lower limit of detection of 100 nCi/g or less.

The TRU alpha activity concentration for a payload container is reported to the WWIS/WDS in accordance with CCP-TP-530.

4.8.4 ^{239}Pu Equivalent Activity

[A] Requirements

[A.1] PE-Ci limits are shown in Table 7.

[A.2] PE-Ci quantities shall be calculated for each payload container (see Appendix B), and reported to WIPP using the WWIS/WDS (Reference 4, Section 3.3.2.3.1 and Table 3.3-6). There are no reporting requirements for the associated TMU (Reference 44).

Table 7. PE-Ci Limits

Payload Container	Packing Configuration	PE-Ci Limit
RH TRU Waste Canister 55-Gallon Drum (shipped in a 10-160B)	All approved waste forms other than solidified/vitrified waste	≤ 240 ≤ 80
RH TRU Waste Canister 55-Gallon Drum (shipped in a 10-160B)	Solidified/vitrified waste	≤ 1,800

[B] Compliance and Verification

[B.1] CCP uses established radionuclide measurement methods (see Appendix 11) to quantitate the amount of radioactive material in payload containers. The measurement results are used to calculate the PE-Ci for each payload container as specified in Appendix 5. CCP compares the calculated PE-Ci (without uncertainty) value to the applicable PE-Ci limits for a payload container, assembly or drum to determine compliance with applicable limits.

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CCP reports the calculated PE-Ci quantities for each payload container to WIPP using the WWIS/WDS in accordance with CCP-TP-530.

4.8.5 Radiation Dose Equivalent Rate

[A] Requirements

[A.1] The external surface radiation dose equivalent rate of individual containers must be ≥ 200 mrem/hr and ≤ 1,000 rem/hr (Reference 2, Sections 2 and 7).

[A.2] Total dose equivalent rate and the neutron contribution to the total dose equivalent rate shall be reported for each payload container in the WWIS/WDS (Reference 2, Section 16 and Reference 17, Section 2.4.4).

[A.3] See the RH-TRU 72-B and/or 10-160B packaging Certificates of Compliance for applicable radiation dose equivalent rate requirements (References 7 and 8).

[B] Compliance and Verification

[B.1] CCP using Host site personnel or records, measure container dose equivalent rates in accordance with site radiological survey procedures. The measurements are compared to applicable radiation dose equivalent rate limits and restrictions to determine compliance. The total dose equivalent rate and the neutron contribution to the total dose equivalent rate for each payload container are reported to the WWIS/WDS in accordance with CCP-TP-530.

4.8.6 Decay Heat

[A] Requirements

[A.1] See the RH-TRU 72-B and/or 10-160B packaging Certificates of Compliance for applicable decay heat requirements (References 7 and 8).

[B] Compliance and Verification

[B.1] CCP uses established radionuclide measurement methods (see Appendix 11) to quantitate the activity and mass of the radionuclides contained within the payload container. The measurement results are used to calculate the total decay heat (and TMU) for each payload container and payload assembly.

CCP compares the calculated decay heat value plus TMU (expressed in terms of one standard deviation) to the applicable decay heat limit for a payload container and payload assembly, as applicable, to determine compliance.

CCP reports the calculated decay heat values and associated TMU (expressed in terms of one standard deviation) for each payload container to WIPP using the WWIS/WDS in accordance with CCP-TP-530.

4.9 Physical Properties

4.9.1 Observable Liquid

[A] Requirements

[A.1] Liquid waste is not acceptable at the WIPP. Observable liquid containing PCBs is prohibited at the WIPP. Liquid in the quantities delineated below is acceptable.

- Observable liquid shall be less than 1 percent[1] by volume of the outermost container at the time of radiography or visual examination (Reference 9).
- Internal containers with more than 60 ml or 3 percent by volume observable liquid, whichever is greater, are prohibited.
- Containers with Hazardous Waste Number U134 assigned shall have no observable liquid.

[1]The limit of “less than 1 percent” is taken from the RH-TRAMPAC and is more restrictive than the limit of “no more than 1 percent” in the HWFP.

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

For sites that use VE, the detection of any liquid in non-transparent internal containers, detected from shaking the internal container, will be handled by assuming that the internal container is filled with liquid and adding this volume to the total liquid in the container being characterized using VE (Reference 9, Part 2, Section 2.3.3.1; Reference 9, Attachment C, Sections C-1c and C-3b; Reference 41, Section 2.5.1; Reference 35; Reference 12, Conditions of Approval, II.A.2).

[B] Compliance and Verification

CCP initially uses AK to determine container contents. AK documentation is collected and compiled in accordance with DOE/WIPP-02-3214 and/or CCP-TP-005. Personnel estimate liquid volume by AK, radiography or VE of the waste. Personnel reject payload containers found to exceed the criteria in 4.9.1[A.1].

4.9.2 Sealed Containers

[A] Requirements

[A.1] Sealed containers that are greater than four liters (nominal), are prohibited except for metal containers packaging solid inorganic waste: this packaging configuration does not generate flammable gas (Reference 41, Section 2.7.1).

[B] Compliance and Verification

[B.1] CCP achieves compliance through AK, radiography or VE of the waste contents of payload containers. VE is performed in accordance with procedure CCP-TP-500 and radiography is performed in accordance with procedure CCP-TP-508, *CCP RH Standard Real-Time Radiography Inspection Procedure*. Unvented rigid containers greater than four liters in volume are identified and controlled by an

NCR in accordance with CCP-QP-005 and dispositioned appropriately.

4.9.3 Physical Form

[A] Requirements

[A.1] Debris waste (S5000), shall be reported in WWIS/WDS as plastic using the volume of the waste container multiplied by 620 kg/cubic meters (m^3), up to the net weight of the waste. Soils and gravel (S4000) shall be reported to WWIS/WDS as the net weight of the waste with the waste material parameter type of "soil." Homogeneous solids (S3000) shall be reported to the WWIS/WDS as the net weight of the waste with the waste material parameter type appropriate to the waste. Debris included in containers of S3000 or S4000 waste shall be reported to WWIS/WDS as plastic with an estimated weight. Plastic packaging will also be reported to WWIS/WDS (as packaging), (Reference 17, Section 2.4.3).

[B] Compliance and Verification

[B.1] CCP using CCP-TP-530, reports the data to WWIS/WDS as follows: Debris waste (S5000), as plastic using the volume of the waste container multiplied by 620 kg/m^3, up to the net weight of the waste. If the net weight of the waste is greater than the calculated plastic, the excess is assigned to the material parameters by the percentages described in the AK Report. Soils and gravel (S4000), as the net weight of the waste with the waste material parameter type of "soil." Homogenous solids (S3000), as the net weight of the waste with the waste material parameter type appropriate to the waste. Debris included in containers of S3000 or S4000 waste shall be reported to WWIS/WDS as plastic with an estimated weight. Plastic packaging will also be reported to WWIS/WDS (as packaging).

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4.10 Chemical Properties

4.10.1 Pyrophoric Materials

[A] Requirements

[A.1] Radioactive pyrophoric materials shall be limited to residual amounts (<1 percent by weight), in payload containers and shall be generally dispersed in the waste. Radioactive pyrophorics in concentrations ≥1 percent by weight and all nonradioactive pyrophorics shall be reacted (or oxidized), and rendered nonreactive prior to placement in the payload container (Reference 41, Section 4.4.1). Nonradionuclide pyrophoric materials are not acceptable at WIPP (Reference 4, Section 11.4.1; Reference 9, Attachment C, Section C-1c; Reference 9, Part 2, Section 2.3.3.2.

[B] Compliance and Verification

[B.1] CCP demonstrates compliance through acceptable knowledge documentation. Radiography and VE will be used, when necessary, to examine a waste container to verify its physical form. Specifically, AK is used to demonstrate that nonradionuclide pyrophoric materials are not present in a waste stream and that pyrophoric radioactive materials are limited to residual amounts. Waste streams for which AK documentation indicates the possible presence of radioactive pyrophorics in concentrations greater than or equal to 1 percent by weight are reacted (or oxidized), and rendered nonreactive. AK documentation is collected and compiled in accordance with DOE/WIPP-02-3214 and CCP-TP-005 and is summarized on a waste stream basis in AK Summary Reports.

4.10.2 Hazardous Waste

[A] Requirements

[A.1] Hazardous wastes not occurring as co-contaminants with TRU wastes (non-mixed hazardous wastes), are not acceptable at WIPP. Each RH-TRU mixed waste container shall be assigned one or more hazardous waste numbers as appropriate. Only EPA hazardous waste numbers listed as allowable in the Hazardous Waste Facility Permit may be managed at WIPP. Some of the waste may also be identified by unique state hazardous waste codes. These wastes are acceptable at WIPP as long as the TSDF waste acceptance criteria are met (Reference 9, Attachment C, Section C-1b; Reference 9, Part 2, Sections 2.3.3.3 and 2.3.4). Wastes exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA hazardous waste numbers of D001, D002, or D003), are not acceptable at WIPP (Reference 9, Attachment C, Section C-1c; Reference 9, Part 2, Sections 2.3.3.7 and 2.3.4).

[B] Compliance and Verification

[B.1] CCP assigns EPA hazardous waste numbers to waste streams based on AK. AK is the basis for demonstrating compliance that hazardous waste, if present in TRU waste, occurs only as co-contaminants with the TRU waste. A more detailed description of the AK process used to assign EPA hazardous waste numbers to a waste stream is presented in the QAPjP. AK documentation is compiled, evaluated and reported in accordance with DOE/WIPP-02-3214 and CCP-TP-005 and is summarized by waste stream in an AK Summary Report.

4.10.3 Chemical Compatibility

[A] Requirements

[A.1] TRU waste containing incompatible materials or materials incompatible with payload container and packaging materials, shipping container materials, other wastes, repository backfill, or seal and panel closure materials are not acceptable for transport in

the RH-TRU 72-B or 10-160B packages or for disposal at the WIPP. Chemical constituents shall conform to the lists of allowable materials in the RH-TRU 72-B RH-TRAMPAC and Appendix 4.10.2 of the 10-160B SAR (References 41 and 38).

[A.2] The total quantity of the trace chemicals/materials (materials that occur in the waste in quantities less than 1 percent [weight]), not listed in Table 4.3-1, in the payload container is restricted to less than 5 percent weight (Reference 41). Chemical constituents in a payload of a particular waste-specific content code shall conform to the allowable chemical list for that content code. The content code must be reported to the WWIS/WDS for each payload container (References 7 and 8).

[B] Compliance and Verification

[B.1] Personnel ensure compliance with the chemical compatibility requirements based on AK. The WCO confirms compliance with the chemical compatibility criteria in accordance with CCP-TP-530. If necessary, personnel repackage waste containers not meeting the chemical compatibility requirement.

4.10.4 Explosives, Corrosives, and Compressed Gases

[A] Requirements

[A.1] Waste shall contain no explosives, corrosives, or compressed gases (pressurized containers), (Reference 9, Attachment C, Section C-1c; Reference 9, Part 2, Sections 2.3.3.5 and 2.3.3.7; Reference 41, Section 4.2.1).

[B] Compliance and Verification

[B.1] CCP assesses compliance through acceptable knowledge documentation. Specifically, AK is used to determine if explosives, corrosives, and/or compressed gases may be present in a waste stream. Radiography and VE will be used, when necessary, to examine a waste container to verify its physical form. AK documentation is collected and compiled in accordance with procedure CCP-TP-005 and is

summarized on a waste stream basis in AK Summary Reports.

4.10.5 Headspace Gas Concentrations

[A] Requirements

[A.1] The headspace gas of payload containers shall meet the requirements of the TRAMPAC (if shipping in RH-TRU 72-B packaging), or Appendix 4.10.2 (if shipping in the 10-160B packaging) (References 9, 41, and 38 respectively).

[B] Compliance and Verification

[B.1] CCP demonstrates compliance through the following methods:

- AK that demonstrates that the concentration of flammable VOCs in the headspace of waste containers of a waste stream is less than 500 parts per million (ppm).

AK documentation is collected, evaluated and reported in accordance with DOE/WIPP-02-3214 and CCP-TP-005 and is summarized on a waste stream basis in AK Summary Reports. Headspace gas sampling is performed in accordance with approved procedures.

4.10.6 Polychlorinated Biphenyls (PCBs)

[A] Requirements

[A.1] For TRU and TRU-mixed wastes containing PCBs meeting the conditions of approval in Reference 12, the payload container data entered into the WWIS/WDS shall include the earliest date of waste generation (i.e., the date of removal from service for disposal), the date of waste certification for disposal, and the date the waste was sent to the WIPP for disposal (Reference 12, Section III.D.4). Additionally, the estimated weight of the PCBs in kilograms (as recorded on the UHWM) and a description of the type of PCB waste (e.g., PCB remediation waste, PCB bulk product waste, etc.), shall be entered into the WWIS/WDS (Reference 13, §761.207(a)(2) and

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§761.180). Hanford, Idaho National Laboratory, Savannah River Site, Oak Ridge Reservation, Knolls Atomic Power Laboratory, and Los Alamos National Laboratory are authorized to ship their TRU and TRU-mixed wastes containing PCBs to WIPP (References 14 and 15).

[B] Compliance and Verification

[B.1] CCP uses AK (which may include results of sampling and analysis) to identify waste streams that may contain PCBs. For waste streams that are identified as PCB contaminated, the AK record also includes a description of the type of PCB waste present (e.g., PCB remediation waste, PCB bulk product waste). AK documentation is collected, evaluated and reported in accordance with DOE/WIPP-02-3214 and CCP-TP-005 and is summarized on a waste stream basis in AK Summary Reports. Special information identified below is entered into the WWIS/WDS for each affected payload container in accordance with procedure CCP-TP-530.

1. Date of removal from service.

2. Date of waste certification for disposal.

3. Date the waste was sent to the WIPP for disposal.

4. The estimated weight of the PCBs in kilograms.

5. Description of the type of PCB waste.

CCP only certifies and ships PCB contaminated TRU waste from sites with an approved EPA PCB waste disposal authorization.

4.11 Data Package Contents

4.11.1 Characterization and Certification Data

[A] Requirements

[A.1] Sites shall prepare a WSPF for each waste stream. Each WSPF shall be approved by the Permittees prior to the first shipment of that waste stream.

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Characterization and certification information for each payload container shall be submitted to the WWIS/WDS and approved by the Data Administrator. Any payload container from a waste stream that has not been preceded by an appropriate certified WSPF is not acceptable at WIPP (Reference 9, Part 2, Section 2.3.3.10).

[A.2] See the WCPIP (Reference 17) for additional characterization and certification data requirements.

[B] Compliance and Verification

[B.1] CCP prepares and submits WSPFs to the Permittees for review and approval per the instructions given in procedure CCP-TP-002. Characterization data for each payload container used to prepare the WSPF and the Characterization Reconciliation Report is submitted to the WWIS/WDS in accordance with procedure CCP-TP-530. CPR weights are estimated and input into the WWIS/WDS as described in Section 4.5.

4.11.2 Shipping Data

[A] Requirements

[A.1] Sites shall prepare either a bill of lading or a UHWM for RH TRU waste shipments as required by the transportation requirements. The land disposal restriction notification for RH TRU mixed waste shipments shall state that the waste is not prohibited from land disposal (Reference 9, Attachment C, Section C-5b(2); Reference 41).

[B] Compliance and Verification

[B.1] CCP prepares and completes the UHWM and/or Bill of Lading in accordance with CCP-TP-507. The Land Disposal Restriction Exemption Notification is completed for mixed waste shipments in accordance with procedure CCP-TP-507 and states that the waste is not prohibited from land disposal.

5.0 QUALITY ASSURANCE PLAN

The CBFO QAPD establishes QA program requirements for the programs, projects, and activities sponsored by CBFO. The NWP QAPD describes how NWP applies the QA program requirements of the CBFO QAPD to NWP activities, including CCP. This QA plan describes and implements the NWP QAPD requirements for the CCP. It is based on the NWP QAPD as it applies to the characterization, certification, and transportation of TRU waste as performed by CCP, and therefore incorporates the applicable requirements from the regulatory and commitment QA program source documents identified in the CBFO QAPD. This QA plan also fulfills the requirements for a transportation QA plan as required in 10 CFR Part 71, Subpart H. The scope of the integrated Quality Assurance Program Requirements for Nuclear Facilities (NQA)-1 Program is to ensure that all items and activities that are important to the safe containment of TRU Waste in the WIPP are in compliance with Program objectives. Applicable criteria are also identified in the individual element descriptions contained in this QA Plan.

The QA program is developed and maintained through an ongoing process that selectively applies QA criteria as appropriate to the function or work activity being performed. The organization of this QA Plan is generally based on the CBFO QAPD elements.

The QA program is implemented in accordance with a set of Quality Procedures that are applicable to all CCP activities, independent of the location where these activities are performed. The QA program also includes Technical Procedures and other documentation, some of which are site-specific and some of which are applicable across CCP. Implementing Technical Procedures are listed in the tables in Appendix 4.

QA program document references are included, as applicable, in each of the individual QA element descriptions throughout this QA Plan.

5.1 Organization and Quality Assurance Program

(Applicable Criteria: 10 CFR 830.122 Criterion 1
40 CFR 194.22(a)(2)(i)
ASME NQA-1-1989, Criterion 1
DOE O 414.1 Criterion 1
CBFO QAPD, Section 1.1
NWP QAPD, Section 1.1)

This QA program applies to items and activities affecting waste characterization, certification, and transportation by the CCP. The QA program elements are integrated into CCP items and activities through reviews, assessments, inspections, and approval and control of records and documents. The CCP has identified the Program Manager, the

Certification Program Manager, SPM, Assurance Programs Manager, TCO, and WCO as being responsible for ensuring QA within CCP. The responsibilities of each of these positions, as well as other personnel involved with TRU waste characterization and certification, are summarized in this Plan (Section 2.1).

Figure 1-1 (see Section 1.0) illustrates the hierarchy and interrelationships of QA documents governing the QA program. Quality management documents are audited and/or assessed to ensure they meet CCP requirements.

Personnel plan certification activities and document the planning process. Planning documentation is subject to review by subject matter experts (SMEs). CCP planning documentation consists of this Plan, the WIPP WAP, the WAC, the QAPjP, the CH-TRAMPAC, RH-TRAMPAC, the GGT QAPjP, implementing procedures, QA plans, training plans, and facility and certification process designs.

5.1.1 Organization

(Applicable criteria: 10 CFR Part 830.122 Criterion 1
DOE O 414.1 Criterion 1
ASME NQA-1-1989, Criterion 1
CBFO QAPD Section 1.1.1
NWP QAPD, Section 1.1)

The organization structure, functional responsibilities, levels of authority, and lines of communication for activities affecting quality are documented in this Plan, and CCP implementing procedures. Specific duties and responsibilities assigned to CCP management are summarized in the Plan, Section 2.1.1, and in CCP-PO-001.

The QA organization is responsible for ensuring the implementation of the QA program and verifying that activities affecting quality have been correctly performed. They have sufficient authority, access to work areas, and organizational freedom to identify quality problems; initiate, recommend, or provide solutions to quality problems; verify implementation of solutions; and ensure that further processing, delivery, installation, or use is controlled until proper disposition of nonconformances, deficiencies, or unsatisfactory conditions has occurred. QA personnel have direct access to responsible management at a level where appropriate action can be effected. They report to a management level such that required authority and organizational freedom are provided, including sufficient independence from cost and schedule considerations. Specific duties and responsibilities assigned to QA are summarized in the Plan, Section 2.1.4, and in CCP-PO-001.

The organizational structure of CCP, and the assignment of responsibilities, is based on the following QA principles, such that:

- Quality is achieved and maintained by those who have been assigned responsibility for performing work.
- Quality achievement is verified by personnel or organizations that are not directly responsible for performing the work.
- The individuals or organizations responsible for establishing and executing the QA program may delegate any or all of the work, but shall retain responsibility therefore.
- Responsibility for the control of further processing, delivery, installation, or operation of nonconforming items shall be designated in writing.
- When more than one organization is involved in the execution of activities covered by this document, the responsibility and authority of each organization shall be clearly established and documented.
- The external interfaces between organizations and the internal interfaces between organizational units, and changes thereto, shall be documented.
- Interface responsibilities shall be defined and documented.

All personnel involved with TRU waste certification and packaging are responsible for achieving and maintaining the quality of their activities and products. All personnel are responsible for promptly reporting existing, developing, or potential conditions adverse to quality to responsible management for evaluation and action. Management personnel are responsible for achieving and maintaining quality in the work activities under their control.

[A] Communication and Interface Responsibilities

(Applicable Criteria: CBFO QAPD Section 1.1.1.4
NWP QAPD, Section 1.1.10 and 1.1.11)

CCP management communicates to all levels of the organization timely information pertinent to quality performance, including status of the quality program, status and resolution of significant quality problems, lessons learned, quality management practices and improvements, and trend analysis results.

The responsibility and authority of the CCP and each participating organization are clearly established and documented in an interface document for each site. The external interfaces between CCP participant organizations, the internal interfaces between organizational units, and interface changes are documented. Interface responsibilities are defined and documented and include the requirements for management, performance, and assessment. Interfaces between CCP and the waste generating sites are detailed in project-level Interface Agreement documents specifically written for each site. Interfaces between CCP and NWP support organizations are defined in CCP implementing procedures.

[B] Reports to Management

(*Applicable Criteria: CBFO QAPD Appendix E, Section 8*
NWP QAPD, Section 1.1.8)

QA provides the QA interface between facilities and the CCP Certification Manager and SPM. QA oversees the NCR/CAR process for CCP related deficiencies and coordinates with the CCP Certification Manager and SPM to track and notify the appropriate personnel of nonconformances, and verify corrective action completion in accordance with CCP-QP-005. QA at project sites report the results of their surveillance assessments to the Assurance Programs Manager, and together they track assessment results and corrective actions. QA prepares and transmits a semi-annual QA report to the CCP Certification Manager and the DOE.

[C] Delegation of Work

(Applicable Criteria: CBFO QAPD Section 1.1.1.5
NWP QAPD, Section 1.1.6)

Management empowers employees by delegating authority and decision making to the lowest appropriate level in the organization. If work is delegated, the individual making the delegation retains responsibility for the delegated work. QA is responsible for determining the effectiveness of the QA program, which is accomplished through internal reporting procedures, audits, and assessments.

[D] Resolution of Disputes

(Applicable Criteria: CBFO QAPD Section 1.1.1.6
NWP QAPD, Section 1.1.7)

Disputes related to QA program requirements will be resolved by QA and cognizant personnel. If not resolved, the issues will be elevated progressively to successively higher levels of management as necessary.

[E] QA Management

(Applicable Criteria: CBFO QAPD, Section 1.1.3.A
NWP QAPD, Section 1.1.5)

QA Management shall:

[E.1] Schedule and conduct QA assessments.

[E.2] Maintain liaison with participant QA organizations and other affected organizations.

[E.3] Ensure preparation, review, and issuance of QA plans and procedures that implement the provisions of the NWP QAPD.

[E.4] Review and approve supplier and subcontractor QA plans.

[E.5] Track or perform trend analysis of quality problems, and report quality problem areas.

[E.6] Provide for the administrative processing of documentation of concerning conditions adverse to quality.

[E.7] Have direct access to responsible management at a level where appropriate action can be effected.

[E.8] Be sufficiently independent from cost and schedule considerations.

[E.9] Have the organizational freedom to communicate with management.

[E.10] Have no assigned responsibilities unrelated to the QA program that would prevent appropriate attention to QA matters.

[E.11] Develop, establish, and interpret QA policy and ensure effective implementation.

[E.12] Interface, as appropriate, with the CBFO staff, participants, and other stakeholders on QA matters.

[E.13] Assist subordinate organizations with quality planning, documentation, quality measurement, and problem identification and resolution.

[E.14] Provide guidance to all applicable subordinate organizations concerning identification, control, and protection of QA records.

[F] The QA organization shall have sufficient authority, access to work areas, and organizational freedom to:

(Applicable Criteria: CBFO QAPD, Section 1.1.1.3.B
NWP QAPD, Section 1.1.5)

[F.1] Identify quality problems.

[F.2] Recommend solutions.

[F.3] Verify implementation of solutions.

[F.4] Ensure that unsatisfactory conditions are controlled until proper disposition has occurred.

5.1.2 Implementation of the QA Program

(Applicable criteria: 40 CFR 194.22(a)(1)
ASME NQA-1-1989, Criterion 2
CBFO QAPD Section 1.1.2
NWP QAPD, Section 1.1.8)

The QA program is planned, implemented, and maintained in accordance with the requirements found in the CBFO QAPD, NWP QAPD, American Society of Mechanical Engineers (ASME) NQA-1-1989, 40 CFR § 194.22, and 10 CFR § 830.122. The QA program identifies the activities and items to which it applies, and provides control over activities affecting quality to an extent consistent with their importance. The QA program has been implemented during the process of program development, start-up, and operation.

The QA program provides for the planning and accomplishment of activities affecting quality under suitable controlled conditions.

Controlled conditions include the use of appropriate equipment, suitable environmental conditions for performing waste characterization and transportation activities, and assurance that prerequisites have been satisfied. This program also provides for special controls, processes, test equipment, tools, and skills to attain the required quality and for verification of quality.

[A] Grading Items and Activities and Applying Management Controls

(Applicable Criteria: CBFO QAPD Section 1.1.2.3
NWP QAPD, Section 1.1.8.2)

The graded approach to application of QA controls is used by the CCP to determine the importance of the item or activity with respect to the CCP mission, regulatory requirements, hazards, and life-cycle of the item or activity. Management controls are applied commensurate with the determined importance of the item or activity. The CCP uses the graded approach in accordance with CCP-QP-001, *CCP Graded Approach*, to comply with CBFO QAPD and NWP QAPD requirements for grading items and activities and applying management controls. Revisions to CCP-QP-001 are submitted to CBFO for approval prior to implementation.

[B] Work Planning

(Applicable Criteria: CBFO QAPD Section 1.1.2.4
NWP QAPD, Section 1.1.12)

CCP performs and documents planning to ensure that work is accomplished under suitably controlled conditions. CCP implements planning in accordance with CCP-QP-010, *CCP Document Preparation, Approval and Control,* and CCP-QP-026*, CCP Inspection Control*. As appropriate, planning elements include:

[B.1] Definition of work scope, objectives, and a listing of the primary tasks involved.

[B.2] Identification of scientific approaches or technical methods used to collect, analyze or study results of applicable work.

[B.3] Identification of field and testing standards and quality criteria.

[B.4] Identification of applicable implementation documents; appropriate nationally recognized standards will be used whenever possible.

[B.5] Identification of field and testing equipment or other equipment.

[B.6] Identification of, or provisions for the identification of, required records and the recording of objective evidence of the results of the work performed.

[B.7] Identification of prerequisites, special controls, specific environmental conditions, processes, or skills.

[B.8] Identification of computer software.

[C] Peer Review

(Applicable criteria: CBFO QAPD Section 1.1.2.5
NWP QAPD, Section 1.1.12)

When peer reviews are required, they are accomplished in accordance with CCP-TP-511, *CCP Peer Review*.

5.2 Personnel Qualification and Training

(Applicable criteria: 10 CFR 830.122 Criterion 2
ASME NQA-1-1989, Criterion 2
DOE O 414.1 Criterion 2
CBFO QAPD Section 1.2
NWP QAPD, Section 1.2)

The QA program provides for training and qualification, as necessary, of personnel performing activities affecting quality to ensure that suitable proficiency is achieved and maintained. Personnel performing work in support of CCP receive QA training and are qualified to ensure that proficiency is achieved and maintained in the performance of their assigned tasks. Records documenting qualifications and completed training programs are maintained and controlled. Training and qualification are performed in accordance with CCP-QP-002, *CCP Training and Qualification Plan* and CCP-QP-040, *Support Training.*

5.2.1 Qualification Requirements

(*Applicable criteria: CBFO QAPD Section 1.2.1*
NWP QAPD, Section 1.2.1)

The CCP Certification Manager and Training determine qualification standards for each job category relevant to the CCP and ensure that qualifications of personnel, including minimum education and experience, have been verified. Personnel maintain minimum qualifications in accordance with CCP-QP-002. The CCP Certification Manager determines which positions relevant to the CCP require minimum qualifications. The period of effectiveness for qualification associated with special processes and operations that require special skills and the requalification criteria are specified or referenced in CCP-QP-002. The CCP Certification Manager ensures that auditable records documenting personnel qualifications are maintained as described in CCP-QP-008, *CCP Records Management*. Records of qualified personnel, their areas of qualification, and qualification periods (as appropriate) are retained in the records files.

5.2.2 Training Requirements

(Applicable criteria: CBFO QAPD Section 1.2.2
NWP QAPD, Section 1.2.2)

The CCP Certification Manager and Training ensure that personnel receive indoctrination and training on the scope, purpose, and objectives and the specific QAOs of the tasks being performed. Personnel performing activities affecting quality are trained according to the training plan to ensure they achieve and maintain proficiency. Personnel receive initial and continuing training requisite with their activities and level of responsibility, as described in CCP-QP-002.

Training is designed, developed, conducted, and evaluated in accordance with requirements described in CCP-QP-002. Training programs may include classroom instruction; practical hands-on experience; supervised on-the-job training (OJT); self-paced individual study; and written, oral, or practical demonstration of worker competence. The CCP Certification Manager analyzes job positions and determines task responsibilities for personnel to ensure education, experience, and training is commensurate with minimum requirements specified. The CCP Certification Manager is responsible for ensuring that auditable records documenting the required training and qualifications are maintained in accordance with CCP-QP-002.

5.3 Quality Improvement

(Applicable Criteria: 10 CFR 830.122 Criterion 3
ASME NQA-1-1989, Criteria 15 & 16
DOE O 414.1 Criterion 3
CBFO QAPD Section 1.3
NWP QAPD, Section 1.3)

Quality improvement is a management process, carried out to improve items, services, products, or processes. All aspects of quality work activities and the management system are subject to continuous improvement through the assessment and feedback processes.

Conditions adverse to quality are identified promptly and corrected as soon as practical. In the case of a significant condition adverse to quality, the cause of the condition is determined and corrective action taken to preclude recurrence. The identification, cause, and corrective action for significant conditions adverse to quality are documented and reported to appropriate levels of management. Follow-up action is taken to verify implementation of corrective actions.

Items that do not conform to specified requirements are controlled to prevent inadvertent installation or use. Controls are provided for identification, documentation, evaluation, segregation when practical, and disposition of nonconforming items, and for notification to affected organizations.

Personnel continually evaluate and improve project activities. QA ensures that quality improvement is achieved by identifying and controlling conditions adverse to quality, analyzing trends, reporting and tracking nonconformances, and implementing corrective actions. These quality improvement activities detect and prevent unacceptable quality problems and thereby increase accuracy and reliability, and reduce variability. Data analysis and trending are performed in accordance with CCP-QP-014, *CCP Quality Assurance Trend Analysis and Reporting.*

A condition adverse to quality is an all-inclusive term used in reference to failures; malfunctions; deficiencies; and nonconforming items, materials, parts, or components, and processes. Personnel ensure that nonconforming items, materials, parts, or components are adequately identified and segregated from acceptable items and materials to preclude their inadvertent use. CCP and Host site personnel have the authority to stop certification, packaging, and transportation activities and/or refuse to accept work products or services (e.g., procured items, documentation, packaging, and waste shipments) that do not conform to requirements. Personnel report conditions adverse to quality to QA personnel, who ensure that the condition adverse to quality is investigated and that corrective action is taken as described in this section. Employees have

the responsibility to stop work that poses a clear and imminent danger to the safety and health of employees, subcontractors, visitors, or the environment.

Personnel notify QA of conditions adverse to quality affecting waste to be shipped to WIPP and forward CARs related to violations of the WIPP Hazardous Waste Facility Permit to QA for tracking. Conditions adverse to quality are documented, evaluated for significance, corrected, tracked, and reported in accordance with CCP-QP-029 and CCP-QP-005. All violations of the WIPP Hazardous Waste Facility Permit will be managed as significant conditions adverse to quality.

Deficiencies are uncontrolled and unapproved deviations from an approved plan, procedure, or expected result. Deficiencies specific to the CCP also include documentation or management practices that do not meet the requirements related to waste certification or payload container preparation, which are identified in the WIPP WAP, RH-TRAMPAC, CH-TRAMPAC, WAC, QAPD, and applicable federal and state regulations. Personnel are responsible for identifying any condition that affects compliance with these requirements. Assessments may often identify systems, processes, products, or services that do not meet performance criteria established in planning documents. When deficiencies are found, personnel take prompt action to rectify the situation.

Any individual who identifies a condition adverse to quality initiates an NCR or CAR in accordance with CCP-QP-005 or CCP-QP-029. If the safety or quality of the certification process could be compromised by continued use of a nonconforming item, the item is taken out of service and tagged or otherwise identified to prevent reuse or acceptance until the nonconformance is corrected. QA or the QA personnel at the facility where the nonconformance is identified ensures that an NCR is initiated and that corrective action is taken to resolve the nonconformance.

NCRs and CARs are forwarded to the CCP Project Office QA personnel. QA is responsible for validating and tracking CCP-related deficiencies to ensure that corrective action is implemented and that the corrective action resolves the nonconformance. Significant conditions adverse to quality are evaluated by QA and other affected organizations to determine if a work suspension is necessary. If necessary, work will be suspended until the condition is corrected and verified by QA. Personnel notify DOE-CBFO within seven calendar days of identification of any non-administrative nonconformance related to applicable requirements specified in the WIPP WAP, which are first identified at the SPM's signature release level. Personnel submit the NCR to DOE-CBFO within 30 calendar days of identification of the deficiency. QA ensures dissemination of information that may prevent problems or help improve

parallel processes in other waste generator or activities and re-evaluates system performance after corrective actions have been implemented. The CCP Certification Manager provides the resources necessary to accomplish corrective actions. Any containers with unresolved discrepancies associated with waste characterization cannot be certified for disposal; this includes containers affected by CAR's applicable to WIPP WAP and WAC requirements.

QA and the CCP Certification Manager are jointly responsible for identifying the following:

- Trends in nonconformances
- Root causes of nonconformances
- Specific, measurable corrective actions to resolve current problems and prevent recurrence
- Personnel responsible for implementing corrective actions
- Schedules for completing corrective actions

5.4 Documents

(Applicable Criteria: 10 CFR 830.122 Criterion 4
ASME NQA-1-1989, Criteria 6
DOE O 414.1 Criterion 4
CBFO QAPD Section 1.4
NWP QAPD, Section 1.4)

The preparation, issue, and change of documents that specify quality requirements or prescribe activities affecting quality are controlled to assure that correct documents are being employed. These documents, including changes, are reviewed for adequacy and approved for release by authorized personnel.

Personnel prepare and control documents supporting the quality of the CCP in accordance with CCP-QP-010. Document control coordinators will ensure that:

- Documents are controlled during the review and approval process.
- Applicable criteria for the review are identified. Criteria will consider technical adequacy, accuracy, completeness and compliance with requirements.
- Pertinent background information or data is made available to the reviewer.

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- Reviews are performed by individuals other than the originator, who are also technically competent in the subject area.

- Organizations or technical disciplines affected by the document review the document.

- QA reviews documents that translate CBFO QAPD, WAC, WIPP WAP, CH-TRAMPAC, RH-TRAMPAC and WCPIP requirements.

- Review comments are resolved and evidence of review comment resolution is maintained.

- Documents are approved for release and distributed in accordance with CCP-QP-010. These documents include:

  - Program planning documents such as this Plan, the QAPjP, the TRAMPAC

  - Plans and procedures implementing TRU waste characterization, certification and packaging

  - Procedures implementing QA requirements

- Changes to documents, other than those designated as editorial changes, are reviewed by the same organizations that performed the original review and approval.

NWP controlled procedures are used for functions that NWP performs in support of CCP. These functions include procurement support, source inspection support, independent assessments, vendor audits, and QSL maintenance.

5.5 Records

(Applicable Criteria: 10 CFR Part 21
10 CFR Part 71
10 CFR 830.122 Criterion 4
ASME NQA-1-1989, Criterion 17
ASME NQA-2a-1990, Addenda, Part 2.7
ASME NQA-3 1989
Waste Isolation Pilot Plant Hazardous Waste Facility Permit
DOE O 414.1 Criterion 4
CBFO QAPD Section 1.5
NWP QAPD, Section 1.5
DOE O 414.1
DOE O 266.1
DOE G-414.1-2A
SNT-TC-1A-1980
NRC Certificate Number 9212
NRC Certificate Number 9218
NRC Certificate Number 9279
NRC Certificate Number 9204
NUREG-1297 (1988)
NUREG/BR-0167 (1993)
40 CFR Part 191
40 CFR Part 194)

Records that furnish documentary evidence of quality are specified, prepared, and maintained. Records are legible, identifiable, and retrievable. Records are protected against damage, deterioration, or loss. Requirements and responsibilities for record transmittal, distribution, retention, maintenance, and disposition are established and documented.

A QA record is an authenticated record that provides objective evidence of the quality of items and/or activities. The minimum lifetime and nonpermanent QA records are identified in the QAPjP. QA records are controlled and maintained to certify compliance with requirements and to reflect completed work. QA records are indexed, classified, controlled, and maintained by records management personnel as described in CCP-QP-008. The Records Inventory and Disposition Schedule (RIDS) is also defined in CCP-QP-028, *CCP Records Filing, Inventorying, Scheduling, and Dispositioning*.

Waste characterization data and QA/QC records related to TRU waste to be shipped to WIPP are designated as either Lifetime Records, or Non-Permanent Records. Records that are designated as Lifetime Records are maintained for the life of the waste characterization program

plus six years; **OR** transferred for permanent archival storage to the WIPP Records Archive. Waste characterization records designated as Non-Permanent Records will be maintained for ten years from the date of record generation and then dispositioned according to their approved RIDS.

5.6 Work Process

(Applicable Criteria: 10 CFR 830.122 Criterion 5
DOE O 414.1 Criterion 5
CBFO QAPD Section 2.1
NWP QAPD, Section 2.1)

The work processes and items supporting and affecting quality are controlled through plans and procedures identified in this Plan, the QAPjP, and the TRAMPAC.

Characterization, fabrication, installation, and inspection processes affecting the quality of items or services are controlled by procedures. Special processes that control or verify quality, such as those used in welding, heat treating, and nondestructive examination, are performed by qualified personnel using qualified procedures in accordance with specified requirements.

5.6.1 Work

(Applicable Criteria: CBFO QAPD Section 2.1.1
ASME NQA-1-1989, Criterion 1
NWP QAPD, Section 2.1.1)

The CCP Certification Manager ensures that activities are controlled and conducted in accordance with facility-specific procedures that describe and control work processes applicable to TRU waste characterization or certification.

Individual operating procedures provide controls for performance of special processes. Special process training and qualification requirements are described in CCP-QP-002.

Each individual performing work is responsible for ensuring that work processes are controlled and comply with established criteria. The CCP Certification Manager is responsible for ensuring that workers have the correct procedures, materials, and training to perform the required work. Instructions and procedures are maintained current with a documented and controlled method of revision. Instructions, procedures, and drawings are readily

available to personnel at locations requiring their use through either hard copy or electronic media.

5.6.2 Implementing Procedures

(Applicable criteria: ASME NQA-1-1989, Criterion 5
CBFO QAPD Section 2.1.2
NWP QAPD, Section 2.1.2)

Activities affecting quality are prescribed by and performed in accordance with documented instructions, procedures, or drawings of a type appropriate to the circumstances. These documents include or reference appropriate quantitative or qualitative acceptance criteria for determining that the prescribed activities have been satisfactorily accomplished.

Procedures and plans are developed, reviewed, approved, revised, and distributed in accordance with CCP-QP-010. CCP technical and QA personnel comply with the applicable technical standards and administrative controls described in procedures, which are reviewed and approved by the CCP Certification Manager and QA in accordance with CCP-QP-010. The CCP Certification Manager ensures personnel perform work following established procedures. For work processes such as procurement, source inspection, and independent assessments, applicable NWP non-CCP specific procedures are also used. CCP specific implementing procedures describe the required interfaces with applicable NWP general use procedures.

The procedures identified in this Plan, the QAPjP, and the TRAMPAC provide the following information:

- organizational and individual responsibilities
- training and qualification requirements
- technical, regulatory, and QA requirements
- step-by-step instructions for the process
- equipment specifications
- identification and control of items used or installed
- prevention of damage or loss and minimization of deterioration of items and materials during handling, storage, and shipment of items

- methods and criteria for ensuring and verifying the acceptability of equipment and materials used in the process (e.g., calibration)
- prerequisites, precautions, process parameters, and other limiting conditions
- products of the process
- quantitative and/or qualitative criteria for determining that prescribed process activities have been performed satisfactorily
- records generated by the process
- package and design control of equipment and materials

5.6.3 Item Identification and Control

(Applicable Criteria: ASME NQA-1-1989, Criterion 8
CBFO QAPD Section 2.1.3
NWP QAPD, Section 2.1.3)

Controls have been established to assure that only correct and accepted items are used or installed. Identification is maintained on items or in documents traceable to the items, or in a manner which assures that identification is established and maintained.

Items are identified and traced from time of receipt through end use. Physical markings, labels, tags or segregation are used to provide item identification and status. Specific details are provided in CCP-QP-017, *CCP Identification and Control of Items*.

5.6.4 Special Processes

(Applicable Criteria: ASME NQA-1-1989, Criterion 9
CBFO QAPD Section 2.1.4
NWP QAPD, Section 2.1.5)

Special processes that control or verify quality, such as those used in nondestructive examination, are performed by qualified personnel using qualified procedures in accordance with specified requirements.

Processes are considered to be special processes if:

- results are highly dependent on the control of the process
- results are highly dependent on the skill of the operator, or

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- quality of the results cannot be readily determined by inspection or test of the product.

Implementing procedures have been developed to control special processes: NDE, NDA, DTC, Flammable Gas Analysis, GGT, and Helium Leak Detection. Training and qualification requirements for operators are identified in CCP-QP-002.

5.6.5 Handling, Storage, and Shipping

(Applicable Criteria: ASME NQA-1-1989, Criterion 13
CBFO QAPD Section 2.1.5
NWP QAPD, Section 2.1.6)

Handling, storage, cleaning, packaging, shipping, and preservation of items are controlled to prevent damage or loss and to minimize deterioration. Controls are provided through work and inspection procedures, shipping instructions, or other appropriate documents.

Measures are established in CCP-QP-015 and CCP-QP-023, *CCP Handling, Storage and Shipping*, to ensure that systems, components and items used for repair work for maintenance purposes or packaging purposes are adequately identified to preclude the use of incorrect or defective items. Also, where replacement of limited shelf life items is specified, measures are established to preclude use of items whose shelf life or time in operation has expired. Handling, storage, cleaning, shipping, and other means of preserving, transporting, and packaging of items are controlled in accordance with CCP-QP-023.

5.7 Configuration Management

(Applicable Criteria: CBFO QAPD Section 2.2
NWP QAPD, Section 2.2)

5.7.1 Equipment Configuration

CCP applies configuration management controls to characterization equipment, including vendor owned equipment, operated by CCP and its subcontractors on behalf of CBFO. In accordance with CCP-CM-001, *CCP Equipment Change Authorization and Documentation*, personnel:

- Coordinate the reviews of new equipment and changes/modifications/repairs to existing equipment.
- Establish and apply unique equipment numbering.

- Develop all required equipment change/modification/repair requests.
- Determine training needs due to equipment changes/modifications/repairs.
- Obtain appropriate approvals for equipment modifications, changes, repairs, and process drawing and document changes when required.
- Coordinate with host facility representatives in their reviews to ensure that proposed modifications comply with host facility Authorization Basis requirements.
- Oversee the implementation of approved changes.
- Ensure appropriate technical documentation is maintained on equipment changes/modifications/repairs.

5.7.2 Software Configuration

CCP applies configuration management controls to computer software and hardware/software configurations in accordance with the requirements of CCP-QP-022, as described in Section 5.14 of the Plan.

5.8 Procurement

(Applicable Criteria: 10 CFR 830.122 Criterion 7
ASME NQA-1-1989 Criteria 4 & 7
DOE O 414.1 Criterion 7
CBFO QAPD Section 2.3
NWP QAPD, Section 2.3)

Applicable design bases and other requirements necessary to ensure adequate quality are included or referenced in documents for procurement of items and services. Procurement documents require suppliers to have a QA program consistent with the graded application of quality requirements. Procurements are controlled to ensure conformance with specified requirements. Procurement controls provide for source evaluation and selection, evaluation of objective evidence of quality furnished by the supplier, source inspection, audit, and examination of items or services upon delivery or completion.

CCP implements procedures to ensure that procurement of items and services important to safety and quality meet requirements and perform as intended. Procurement controls are applicable to equipment and services,

including commercial grade items that directly affect testing, and data quality. Other NWP organizations provide support to the CCP for procurement process elements such as procurement planning, supplier selection and evaluation, bid evaluation, supplier performance evaluation, requisition review and processing, and procurement records. Personnel adhere to procurement and record keeping practices established in written procedures. The procurement criteria are implemented according to CCP-QP-015, NWP procedure WP 15-PC3609, *Preparation of Purchase Requisitions and Purchase Requisition Change Notices*, and the procedures specified in the following subsections.

When deemed appropriate, CCP may permit some or all supplier work to be performed under the NWP QA program, provided that the requirements are adequately implemented. In these cases, procurement documents shall specify the NWP QA implementing procedures, including CCP specific procedures that are applicable to the supplier and that CCP will provide these applicable documents to the supplier.

5.8.1 Procurement Document Review and Approval

(Applicable Criteria: CBFO QAPD Section 2.3.5
NWP QAPD, Section 2.3.2)

The CCP Certification Manager ensures that personnel control procurement documents in accordance with CCP-QP-015. Procurements are planned and controlled to ensure that suppliers have QA programs consistent with the intended use of the item being procured. Procurement activities shall be planned as early as possible. At a minimum, the activities shall be planned no later than the start of those procurement activities that are required to be controlled. Procurement documents supporting waste management and packaging and transportation activities must include required specifications and acceptance criteria. Procurement documents are reviewed by appropriate organizations and engineering disciplines to ensure that they contain adequate scope of work, technical requirements, supplier QA program requirements, and provisions for acceptance. Qualified personnel verify suppliers' conformance to procurement document requirements.

5.8.2 Acceptance of Items or Services
(Applicable Criteria: CBFO QAPD Section 2.3.7
NWP QAPD, Section 2.3.4)

The SPM ensures that personnel control items and services purchased (including supplier evaluations and inspections) in accordance with CCP-QP-015, NWP Procedure

WP 15-PC3609, and CCP-QP-001. Methods shall be established for the acceptance of an item or service being furnished by a supplier. Prior to offering an item or service for acceptance, the supplier shall verify that the item or service complies with the procurement requirements. Documentary evidence of conformance to the procurement specifications is provided before installation or use of systems, components, items, and services, and is retained in accordance with CCP-QP-015. Acceptance of quality related systems, components, items and services will be through source verification, receipt inspection, post-installation testing, or supplier certificate of conformance as appropriate to the quality level. Supplier nonconformances will be documented, tracked, and dispositioned in accordance with CCP-QP-015. An example of conditions requiring a report of nonconformance include: The item does not conform to the original requirement even though the item can be restored to a condition such that its capability to function is unimpaired (i.e., a waiver is requested).

5.8.3 Control of Supplier Nonconformances

(Applicable Criteria: CBFO QAPD Section 2.3.8
NWP QAPD, Section 2.3.5)

Subcontractors perform work that directly affects the quality of characterization and certification data. CCP-QP-015, describes how personnel control subcontractor services. Subcontractors may support activities under a “staff augmentation” role or for procurement of products and services. Staff augmentation subcontractors operate under the umbrella of the QA program and are subject to applicable requirements for functions that they perform. Subcontractors who support the CCP will be informed of the need to perform operations in compliance with requirements.

If subcontractors are authorized to perform procurements of quality-affecting items and services, they are required to establish procurement controls and a QA program to ensure that purchased materials, equipment, and services conform to the procurement and QA program documents. NWP adds and maintains such subcontractors on the NWP QSL, to support the scope of work and ensure that the appropriate subcontractor QA controls are applied. The controls must include provisions, as appropriate, for source evaluation and selection, objective evidence of quality furnished by the contractor or subcontractor, inspection at the contractor or subcontractor source, and examination of products on delivery. Subcontractors are subject to periodic assessments and audits at intervals consistent with the importance, complexity, and quantity of the product or services provided to ensure compliance with

procurement requirements. Subcontractors shall submit copies of CCP-related, quality affecting documents to the CCP Certification Manager.

Items and services procured are subject to control of nonconformances. Quality Levels are determined for items and services procured for use, and quality-affecting items are evaluated for adequacy prior to use through receipt inspection, source inspection, functional testing, or other appropriate means. Items that are found deficient are documented, controlled to prevent use, evaluated, and corrective actions performed.

A combination of CCP specific and NWP general use procedures are used to exercise controls over supplier nonconformances. They include:

- CCP-QP-015, *CCP Procurement*
- CCP-QP-029, *CCP Corrective Action Management*
- CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control*
- WP 15-PC3609, *Preparation of Purchase Requisitions and Purchase Requisition Change Notices*

5.8.4 Commercial Grade Items

(Applicable Criteria: CBFO QAPD Section 2.3.9
NWP QAPD, Section 2.3.6 and 2.3.7)

Commercial grade items may be used when specified by design. Commercial grade items are identified in procurement documents using manufacturer or distributor catalog numbers or descriptions. Data collection and test instruments procured as commercial grade items that are intended for use in quality related applications are calibrated by qualified suppliers of calibration services prior to use. Commercial grade items are procured in accordance with CCP-QP-015, CCP-QP-026, WP 13-QA1003, *Quality Assurance Receipt/Source Inspections*, WP 15-PC3609, WP 13-QA3012, *Supplier Evaluation and Qualification,* and NWP Procurement Services Commercial Instruction C1015 *Supplier Selection*.

5.9 Inspection and Testing

(Applicable Criteria: 10 CFR 830.122 Criterion 8
ASME NQA-1-1989, Criteria 10 & 14
DOE O 414.1 Criterion 8
CBFO QAPD Section 2.4
NWP QAPD, Section 2.4)

Inspections required to, verify conformance of an item or activity to specified requirements are planned and executed. Characteristics to be inspected and inspection methods to be employed are specified. Inspection results are documented. Inspection for acceptance is performed by persons other than those who performed or directly supervised the work being inspected.

The status of inspection and test activities is identified either on the items or in documents traceable to the items where it is necessary to assure that required inspections and tests are performed and to assure that items which have not passed the required inspections and tests are not inadvertently installed, used, or operated. Status is maintained through indicators appropriate to the activity or item, such as physical location and tags, markings, travelers, stamps, inspection records, or other suitable means. The authority for application and removal of tags, markings, labels, and stamps is specified.

Equipment is tested, inspected, and maintained in accordance CCP-QP-016*, CCP Control of Measuring, Testing, and Data Collection Equipment*; CCP-QP-026, and CCP-QP-027, *CCP Test Control*. CCP personnel identify and control items (e.g., items with limited shelf or operating lives, materials, equipment, and samples) and ensure that only correct and accepted items are used according to CCP-QP-026. These procedures and documents address planning, parameters for evaluation, techniques to be used qualifications of inspection and test personnel, hold points, documentation, acceptance criteria, and organizational responsibilities.

Personnel routinely test and inspect items and processes and control, calibrate, and maintain equipment to ensure proper operation and data quality. Procedures identified above implement an inspection program that establishes criteria for inspection of activities affecting quality by, or for, the organization performing the activity, and to verify conformance with the requirements for accomplishing the activity. The verification is performed in accordance with written procedures, instructions, or drawings. Personnel performing the inspections are independent from the individuals performing the activity being inspected. Equipment modifications, repairs, and replacement are inspected in accordance with the original design and inspection requirements unless an approved

alternative exists. The inspection program also provides for identification and documentation of deficiencies discovered during the inspection. Measures are established to indicate, by the use of markings, tags, stamps, labels, routing cards, or other suitable means, the status of inspections and tests performed. These measures provide for the identification of items that have satisfactorily passed required inspections and tests, where necessary, to preclude inadvertent bypassing of the inspections and tests.

Quality related procured items are inspected by qualified personnel at receipt or at the source prior to shipment. These inspections may include dimensional verification, functional testing, verification of documentation or other appropriate methods.

5.9.1 Qualification of Inspection and Test Personnel

(Applicable Criteria: CBFO QAPD Section 2.4.1
NWP QAPD, Section 2.4.1)

Inspection and test personnel are trained and qualified in accordance with CCP-QP-002, CCP-QP-030, *CCP Written Practice for the Qualification of CCP Helium Leak Detection Personnel*, and CCP-QP-032, *CCP Written Practice for the Qualification of CCP Pressure Change Leak Testing Personnel*. Candidates for inspection and test positions are evaluated for previous education, experience, training, and testing as appropriate. Minimum qualifications are established, and personnel selected for these activities are documented to have experience or training commensurate with the scope, complexity, or special nature of the inspections or tests performed. Inspection and test personnel are indoctrinated in the technical and QA objectives, requirements, and controls, and formal or OJT is performed as appropriate. Qualifications are documented, and records maintained in the Records System.

Job performance of inspection and test personnel is evaluated at periodic intervals, and is performed through review of evidence of continued satisfactory performance or redetermination of capability. If personnel are found to not perform adequately, they are removed from that function until the required capability is demonstrated. Personnel that have not performed inspection or testing activities in their qualified area for more than a year are re-evaluated for the required capability.

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5.9.2 Qualification of Nondestructive Examination Personnel

(Applicable Criteria: CBFO QAPD Section 2.4.2.A
NWP QAPD, Section 2.4.1.2)

Personnel performing NDE are trained and certified in accordance with CCP-QP-002. This procedure implements the requirements of the American Society of Nondestructive Testing (ASNT) Recommended Practice No. SNT-TC-1A, June 1980 edition. Training and certification of NDE personnel are documented and records maintained in the Records System.

5.9.3 Inspection Planning

(Applicable Criteria: CBFO QAPD Section 2.4.3.1
NWP QAPD, Section 2.4.2.1)

Inspections are planned, performed and documented in accordance with CCP-QP-026. Inspection planning includes identification of work operations to be inspected, inspection hold points, identification of characteristics to be inspected, inspection methods, acceptance criteria, sampling requirements, method of documentation of inspection results, Measuring and Testing Equipment (M&TE) to be used, and identification of statistical methods for sampling.

The types of inspections that may be performed include:

- in-process inspections and monitoring
- final inspection
- in-service inspections

Each of these types of inspections may include review of documentation, examination or verification of physical characteristics, performance of tests, or other means of verifying quality and conformance to the applicable requirements. Inspections are documented and records maintained as part of the Records System.

5.9.4 Test Requirements

(Applicable Criteria: ASME NQA-1-1989, Criterion 11
CBFO QAPD Section 2.4.4
NWP QAPD, Section 2.4.3)

Tests required to verify conformance of an item or computer program to specified requirements and to demonstrate satisfactory

performance for service shall be planned and executed. Characteristics to be tested and test methods to be employed are specified. Test results are documented and their conformance with acceptance criteria are evaluated.

Tests required to collect data are planned, executed, documented and evaluated. Test planning includes identification of test procedures, test requirements and acceptance limits, including required levels of precision and accuracy, identification of M&TE, test prerequisites, hold points, and test and data documentation requirements. Test results are documented and their conformance with acceptance criteria are evaluated by qualified personnel.

Testing is performed in accordance with CCP-QP-027.

5.9.5 Monitoring, Measuring, Testing, and Data Collection Equipment

(Applicable Criteria: 10 CFR 830.122, Criterion 5
ASME NQA-1-1989, Criterion 12
CBFO QAPD Section 2.4.5
NWP QAPD, Section 2.5)

Tools, gages, instruments, and other measuring and test equipment used for activities affecting quality are controlled and at specified periods calibrated and adjusted to maintain accuracy within necessary limits. This equipment is controlled in accordance with CCP-QP-016.

[A] Use and Control of M&TE

(Applicable Criteria: CBFO QAPD Section 2.4.6
NWP QAPD, Section 2.5.1)

Measuring and test equipment with the necessary range and accuracy is provided to qualified personnel for the inspection, test, and acceptance of material, parts, components, and systems. The specific controls imposed on measuring and test equipment are described in procedure CCP-QP-016, and CCP-QP-026. M&TE are labeled, and any that are found to be out of calibration are reviewed to determine the impact. Records are maintained in the Records System.

[B] Calibration

(*Applicable Criteria: CBFO QAPD Section 2.4.7*
NWP QAPD, Section 2.5.1)

Equipment accuracy is ensured by periodic calibration that is traceable to national standards or a documented equivalent basis for calibration. M&TE shall be calibrated to provide traceability of the calibration against certified equipment having known valid relationships to nationally recognized standards. If nationally recognized standards do not exist, the basis for calibration shall be documented. The specific controls imposed on measuring and test equipment are described in procedure CCP-QP-016, and CCP-QP-026.

5.10 Management Assessments

(Applicable Criteria: 10 CFR 820.122 Criterion 9
ASME NQA-1-1989 Criterion 2
DOE O 414.1 Criterion 9
CBFO QAPD Section 3.1
NWP QAPD, Section 3.1)

Management regularly assess the adequacy of that part of the QA program for which they are responsible to assure its effective implementation, and ensure compliance with applicable requirements. Management assessments are conducted according to CCP-QP-018, *CCP Management Assessment*. CBFO and external regulatory agencies also conduct assessments. QA tracks deficiencies identified during assessments; identifies corrective actions to resolve deficiencies according to CCP-QP-029 and CCP-QP-005, and ensures the resolutions are reported to the CCP Certification Manager and CBFO. Documentation of deficiencies identified in activities conducted at waste generating sites are also reported to the appropriate organizations at those sites, in accordance with interface documents.

Management periodically assesses the performance of its organization to determine the effectiveness of QA Program provisions that enable the organization to comply with requirements of the WIPP WAP, QAPD, WAC, and applicable procedures and documents. Managers evaluate QA Program effectiveness by focusing on the identification and resolution of both systemic and management issues and problems, and identifying strengths and weaknesses to facilitate actions to improve quality efficiency and cost-effectiveness. Management assessments may include an introspective evaluation to determine whether the entire integrated management system effectively focuses on meeting strategic goals. Management assessments are conducted as described in CCP-QP-018.

Management is responsible for the conduct of these assessments and reports at least annually on relevant findings.

5.11 Independent Assessments

(Applicable Criteria: 10 CFR 830.122, Criterion 10
ASME NQA-1-1989, Criterion 18
DOE O 414.1, Criterion 10
CBFO QAPD Section 3.2
NWP QAPD, Section 3.2)

Planned and scheduled audits are performed to verify compliance with all aspects of the QA program and to determine its effectiveness. These audits and surveillances are performed in accordance with written procedures or checklists by personnel who do not have direct responsibility for performing the activities being audited. Audit and surveillance results are documented and reported to and reviewed by responsible management. Follow-up actions are taken where indicated.

Documented independent assessments (audits and surveillances) are used to measure item service and quality, process adequacy and effectiveness, and to promote improvement.

5.11.1 Surveillances

(Applicable Criteria: CBFO QAPD Section 3.2.1
NWP QAPD, Section 3.2)

Surveillances are conducted primarily to monitor work in progress and to follow up on corrective actions. Surveillance results are reported and monitored similar to other assessment activities. At each host location, surveillances are scheduled as early in the project as practical. Surveillances are performed in accordance with CCP-QP-021, *CCP Surveillance Program*.

5.11.2 Audits

(Applicable Criteria: CBFO QAPD Section 3.2.2
NWP QAPD, Section 3.2)

Internal and external audits are planned and scheduled throughout the life of the CCP and are conducted by qualified personnel.

The CCP is subject to CBFO certification audits. A CBFO audit of is conducted before any waste characterized by the CCP is shipped to the WIPP and annually thereafter. In addition, the CBFO may conduct audits on a random basis. These audits are scheduled

through the CBFO QA Manager who coordinates the plans and schedule through the CCP Certification Manager.

5.12 Sample Control Requirements

(Applicable Criteria: CBFO QAPD Section 4.1
NWP QAPD, Section 4.1)

This section identifies the requirements for controlling samples of waste and environmental media. Control measures stated in site specific container management procedures (see Appendix 4, Table B-1) and analysis procedures include provisions for the identification, handling, storage and shipping, archiving, and identification of nonconforming drums.

Samples/drums are controlled and identified in a manner consistent with their intended use in accordance with container management procedures specific to each site (See Appendix 4, Table B-1).

5.12.1 Sample Identification

(Applicable Criteria: CBFO QAPD Section 4.2
NWP QAPD, Section 2)

[A] Waste containers used as samples are labeled and tracked in accordance with site specific container management procedures. Each waste container used as a sample is checked for physical marking that:

[A.1] Are applied using materials and methods that provide a clear and legible identification.

[A.2] Are not obliterated or hidden on the surface.

[B] If samples/waste containers used as samples are stored, they are controlled in accordance with container management procedures and the method requirements for characterization.

5.12.2 Handling, Storing, and Shipping Samples

(Applicable Criteria: CBFO QAPD Section 4.3
NWP QAPD, Section 4.3)

[A] Handling, storing, cleaning, packaging, and shipping waste containers used as samples is conducted in accordance with

established work and inspection implementing procedures, CCP-QP-023.

5.12.3 Disposition of Nonconforming Samples

(Applicable Criteria: CBFO QAPD Section 4.4
NWP QAPD, Section 4.4)

[A] Waste containers used as samples that do not conform to requirements are reported on an NCR in accordance with CCP-QP-005.

[B] The disposition of waste containers used as samples is identified and documented in accordance with CCP-QP-005.

5.13 Data Documentation, Control, and Validation

(Applicable Criteria: CBFO QAPD Section 5.3
NWP QAPD, Section 4.6 and 4.7)

5.13.1 Data are controlled to prevent loss and ensure integrity, security and freedom from error. Erroneous, rejected or superseded data are controlled to prevent use. Data uncertainty levels are determined prior to use. Data reduction methods are prescribed in technical procedures to allow validation of the reduction process. Data verification and validation is performed to assure accuracy, completeness and traceability in accordance with QA and technical procedures. These procedures include CCP-TP-001 and CCP-TP-002.

5.13.2 Data validation is a systematic process used to review data to ensure that the required data quality characteristics have been obtained. Results of the review may require that qualifiers be placed on the use of the data.

5.13.3 Validation methods shall be planned and documented. The documentation shall include the acceptance criteria used to determine if the data are valid.

5.13.4 All applicable data collected shall be validated. Validation shall include the following:

[A] The relevant documentation is reviewed to evaluate the technical adequacy, the suitability for the intended use, and the adequacy of the QA record.

[B] The results of the data review shall be documented.

[C] The reviewer shall be independent of the collection activities.

5.13.5 Data validation shall be controlled to permit independent reproducibility by another qualified individual.

5.13.6 Data considered as established fact by the scientific and engineering community, such as engineering handbook data, critical tables, etc., do not require validation.

5.14 Software

(Applicable Criteria: ASME NQA-2a-1990 Part 2.7
CBFO QAPD Section 6
NWP QAPD, Section 6)

Computer software and hardware/software configurations used in activities are developed, documented, verified, validated, and tested prior to use in compliance with requirements contained in the QAPD, QAPjP, and NQA-1, Subpart 2.7, *Quality Assurance Requirements of Computer Software for Nuclear Facility Applications* (ASME 1989). CCP-QP-022 describes the processes for computer software development, validation, and verification.

Software used are identified and controlled through inventory and categorization, and configuration management is maintained. CCP-QP-022 provides the controls for configuration management; software procurement and development; software life-cycle management including installation, testing, verification and validation, operation, and retirement; access controls; and required documentation. Software problems are identified and reported, and changes to software are controlled.

5.15 Performance Demonstration Program (PDP)

The CCP participates in the PDP. PDP samples are processed according to procedures applicable to the specific testing and CCP-TP-058, *CCP NDA Performance Demonstration Plan*.

6.0 REFERENCES

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Appendix 1 – Radioassay Requirements for Contact-Handled Transuranic Waste

A.1 Introduction

Radioassay techniques are used to determine the radionuclide content of waste. Radioassay methods include both nondestructive and destructive techniques. The term "radioassay" includes all types of assay techniques. NDA refers only to nonintrusive assay techniques, whereas radiochemistry (RC) is used to refer to destructive assay techniques. This appendix is intended to apply to NDA activities conducted within the WIPP CCP.

Common NDA techniques rely on detection of gamma rays, neutrons, or heat generated by the waste. NDA is performed on a waste container basis.

RC will not be performed by CCP. If plans change, then RC will be performed in compliance with the requirements of the current WAC, and this Plan will be revised.

The DOE is required to collect radiological characterization data to:

- Track the WIPP radionuclide inventory, by isotopic activity and mass, for those radionuclides listed in Section 3.3.1,
- Demonstrate that each payload container disposed of at the WIPP contains TRU waste as specified in Section 3.3.3, and
- Verify that applicable transportation and facility limits on individual payload containers and assemblies for FGE, PE-Ci, and decay heat are not exceeded, as specified in Section 3.3.2, 3.3.4 and 3.3.6.

The radioassay process quantifies at least one of the more prevalent radionuclides known to be present in the waste. The remaining listed radionuclides present in the waste in significant quantities will be identified by direct measurement of isotopic ratios as discussed in Section A.2. The isotopic ratios are then used to quantify radionuclides based on the assay value.

The requisite data on isotopic ratios and quantities will be derived from AK (see Section A.2), radioassay or both using CBFO approved NDA or RC techniques, instruments and procedures. Each site must technically justify that the AK and/or radioassay techniques, instruments and procedures used:

- Are appropriate for the specific waste stream and waste content code descriptions being assayed, and
- Will result in unbiased values for the cumulative activity and mass of the WIPP radionuclide inventory.

Appendix 1 – Radioassay Requirements for Contact-Handled Transuranic Waste (Continued)

Existing radioassay data collected prior to the implementation of a QA program pursuant to 40 CFR §194.22(a)(1) may only be qualified in accordance with an alternate methodology that is approved by CBFO and employs one or more of the following methods:

- Peer review in accordance with NUREG-1297 (Reference A1),
- Corroborating data,
- Confirmatory testing (i.e., testing made on a representative sub-population of payload containers within a waste stream), or
- Demonstrating the equivalence of an alternative QA program (as described in Reference A2, Section 5.4).

Proposals for alternative approaches to identification and quantification of radioisotopes (e.g., quantification of isotopic ratio AK on a waste stream basis) must be submitted to CBFO for review and approval. CBFO will report such proposals to the EPA for consideration prior to issuing approval.

Controlled changes to radioassay (NDA or RC) related plans or procedures are managed through the document control process described in CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*. The CCP Certification Manager and QA shall review all such changes and report to the CBFO those changes that could impact compliance with the criteria in this document. The CCP Certification Manager shall ensure that site approved changes to radioassay related plans or procedures affecting either the performance criteria or data quality of certified systems/processes are not used in the collection of waste certification data prior to CBFO's review and approval. Related testing, calibration, and training performed in accordance with these site-approved changes, however, are not precluded from being conducted prior to CBFO's review and approval. (Memorandum from CBFO to Distribution, CBFO:NTP:RMK:VW:02-2734: UFC:5822, July 29, 2002.)

The CCP program will establish or confirm isotopic ratios by direct measurements and these ratios will be used in conjunction with measured or AK data to calculate WIPP-reportable values.

Appendix 1 – Radioassay Requirements for Contact-Handled Transuranic Waste (Continued)

A.2 Radionuclide Isotopic Ratios

Establishing isotopic ratios for use in quantifying radionuclides is performed by direct measurement of the containers using WIPP-certified systems. Sites may opt to qualify AK as permitted by 40 CFR §194.22(b) by performing confirmatory testing using WIPP-certified radioassay systems. When a site performs direct measurements of isotopic ratios, it is expected that all containers in the waste stream will be measured, with the understanding that, in some cases, valid data may not be obtainable for given containers for technical reasons (e.g., lack of sufficient signal or poor counting statistics). All such instances will be documented and appropriately dispositioned by the measurement facility. For those few waste containers for which direct measurement does not yield useable isotopic ratio information, AK may be used. The assay programs will establish or confirm isotopic ratios by direct measurement and these ratios will be used in conjunction with the reported data to calculate WIPP-reportable values.

A.2.1 Methods for Confirmation of Isotopic Ratio AK

As a minimum, to confirm existing AK data, it is necessary to compare ratios of the two most prevalent radionuclides in the isotopic mix. For weapons and reactor grade plutonium, these are typically ^{239}Pu and ^{240}Pu. For heat source waste, the predominant radionuclides are typically ^{238}Pu and ^{239}Pu. Measured isotopic ratios for ^{241}Am may confirm existing AK by waste stream.

However, due to the fluctuation of ^{241}Am in certain waste streams, it may become necessary to measure ^{239}Pu to ^{241}Am isotopic ratios on all containers in that waste stream.

^{241}Am is the daughter of ^{241}Pu, which decays with a half-life of about 14 years. If the time since the chemical separation of the plutonium is known, the quantity of measured ^{241}Am can be used to calculate the quantity of ^{241}Pu. This assumes there was no ^{241}Am in the waste just after the chemical separation and that no ^{241}Am was added to or removed from the waste during the time since the separation. Since ^{241}Am is an indirect measurement of ^{241}Pu, it could be compared (by ratio) to any plutonium isotope (^{239}Pu or ^{240}Pu) associated with weapons and reactor grade plutonium.

For weapons grade and reactor grade waste, isotopic ratio values for ^{238}Pu can be assumed to be valid in AK data if the values for ^{239}Pu and ^{240}Pu have been confirmed. Because ^{242}Pu cannot be measured using NDA methods, the contribution of ^{242}Pu isotopic ratio is calculated by correlation techniques.

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Appendix 1 – Radioassay Requirements for Contact-Handled Transuranic Waste (Continued)

For some of the generator sites that were involved primarily in weapons production, the fissile isotopes ^{235}U and ^{233}U and the fissionable isotope ^{238}U may not have been measured when the transuranic waste was originally assayed (i.e., using non-WIPP-certified systems), primarily because the plutonium isotopes were the radionuclides of interest to the generator site. However, other forms of AK may be available. If so, then the AK can be confirmed by data generated on a WIPP-certified system. If valid AK does not exist, then the data generated on a WIPP-certified system can only be used to detect or calculate ^{238}U, ^{235}U, and ^{233}U or to confirm their absence. Because ^{234}U cannot be measured using NDA methods, the isotopic ratios for ^{234}U may be calculated from the ^{235}U enrichment. Values or lack thereof, for ^{137}Cs can be confirmed by the data generated on a WIPP-certified system. This is typically done by measuring ^{137}Cs directly, or by comparing the NDA measured ^{241}Am 662 kiloelectron volt (keV) peak to the other ^{241}Am peaks (e.g., the 125 keV or 721 keV peaks) to determine if the 662 keV peak's intensity is consistent with the expected ^{241}Am intensity. A disproportionate response for the 662 keV peak relative to the other ^{241}Am peaks may indicate the presence of ^{137}Cs. ^{90}Sr may be calculated from the value for ^{137}Cs and AK. If detected, a waste container's concentration of ^{137}Cs can be used to derive a value of ^{90}Sr through the application of the appropriate scaling factor(s). All scaling factors used will be technically sound and based on known, documented relationships or correlations. The data report for the waste containers for which the ^{90}Sr, value is derived in this manner shall reflect the use of a scaling factor(s) and provide sufficient documentation to enable its independent calculation. Finally, the gamma spectra must be carefully examined for significant presence of other radionuclides to ensure compliance with transportation requirements. Data obtained for radionuclides other than the WIPP-tracked radionuclides presented above are required to address confounding isotope issues (i.e., masking) with regard to NDA. When RC is used for confirmation radioassay instead of NDA, less reliance on calculated isotopics is required.

CCP will technically justify that the techniques used to confirm the absence or the ratio of non-measurable radionuclides are valid for the particular radioassay method used to confirm AK.

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Appendix 1 – Radioassay Requirements for Contact-Handled Transuranic Waste (Continued)

A.2.2 Acceptable Knowledge (AK) Documentation

The use of AK information concerning the radiological composition of a waste stream will be documented either in the AK Summary Report for the waste characterization of the waste stream or in another controlled document approved by the SPM. Should this information be contained in AK package(s) prepared to meet other general waste characterization requirements, it need not be duplicated in other controlled documents that address the radiological properties of the waste stream; however, all relevant information must be included in the AK record. CCP uses procedure CCP-TP-005, *CCP Acceptable Knowledge Documentation*, to compile, review, evaluate, confirm, and report AK documentation.

The following discussion is included for the sake of completeness.

A.2.2.1 Required Elements

This section identifies the required radiological information that each TRU waste site or measurement facility must maintain for a waste stream. A TRU waste generator site or waste characterization facility may use AK to delineate the distribution of the 10 WIPP-tracked radioisotopes within a TRU waste stream and the presence or absence of isotopes. The type and quantity of supporting documentation may vary by waste stream and shall be compiled in a written record that shall include a summary identifying all sources of information used to delineate the waste stream's isotopic distribution. The basis and rationale for the delineation shall be clearly summarized in an AK report and traceable to referenced documents. Assumptions made in this delineation shall be identified. The following information shall be included as part of the AK written record:

- Map of the site with the areas and facilities involved in TRU mixed waste generation, treatment, and storage identified

- Facility mission description as related to radionuclide-bearing materials and their management, e.g., routine weapons production, fuel research and development, and experimental processes

- Description of the specific site locations (such as the area or building) and operations relative to the isotopic composition of the TRU wastes they generated, e.g., plutonium recovery, weapons fabrication, pyrochemical operations and waste incineration

Appendix 1 – Radioassay Requirements for Contact-Handled Transuranic Waste (Continued)

- Waste identification or categorization schemes used at the facility relevant to the waste material's isotopic distribution, e.g., the use of codes that correlate to a specific isotopic distribution, and a description of the isotopic composition of each waste stream

- Information regarding the waste's physical and chemical composition that could affect the isotopic distribution, e.g., processes used to remove ingrown ^{241}Am or alter its expected contribution based solely on radioactive decay kinetics

- Statement of all numerical adjustments applied to derive the material's isotopic distribution, e.g., scaling factors, decay/ingrowth corrections and secular equilibrium considerations

- Specification of the isotopic ratios for the ten WIPP-tracked radionuclides (^{241}Am, ^{238}Pu, ^{239}Pu, ^{240}Pu, ^{242}Pu, ^{233}U, ^{234}U, ^{238}U, ^{90}Sr, and ^{137}Cs) and, if applicable, the radionuclides that comprise 95 percent of the radiological hazard on a waste stream, waste stream subpopulation, or container basis

A.2.2.2 Supplemental AK Information

Each generator site or measurement facility shall obtain supplemental AK information, dependent on availability. The amount and type of this information cannot be mandated, but sites shall collect information as appropriate to support their contention regarding the waste's isotopic distribution. This information will be used to compile the waste's AK written record. Supplemental AK documentation that may be used includes, but is not limited to, information from the following sources:

- Safeguards & Security, Materials Control & Accountability, and other nuclear materials control systems or programs and the data they generated

- Reports of nuclear safety or criticality, or accidents/excursions involving the use of special nuclear material (SNM) or nuclear material

- Waste packaging, waste disposal, building or nuclear material management area (NMMA) logs or inventory records, and site databases that provide information on SNM or nuclear materials

- Test plans, research project reports, or laboratory notebooks that describe the radionuclide content of materials used in experiments

- Information from site personnel (e.g., documented interviews)

- Historical analytical data relevant to the isotopic distribution of the waste stream

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Appendix 1 – Radioassay Requirements for Contact-Handled Transuranic Waste (Continued)

A.2.2.3 Discrepancy Resolution

If there is a discrepancy between AK information related to isotopic ratios or composition, the site will evaluate the sources of the discrepancy to determine if the discrepant information is credible. Information that is not credible or information that is limited in its applicability to WIPP characterization will be identified as such and the reasons for dismissing it will be justified in writing. Limitations concerning the information will be documented in the AK record and summarized in the AK Summary Report. In the event that the discrepancy cannot be resolved, the site will perform direct measurements for the impacted population of containers.

If discrepancies result in a change to the original determinations, the AK summary will be updated in accordance with procedure CCP-TP-005.

A.3 Data Quality Objectives (DQOs)

The DQOs for WIPP certifiable radiological characterization data are established in Section 3.3 of this Plan. They are summarized below in Table A-1, Data Quality Objectives (DQOs) for Radioassay, as they apply to individual payload containers.

Table A-1. Data Quality Objectives (DQOs) for Radioassay

Requirement	DQO	Confidence[a]
TRU α-activity concentration > 100 nCi/g[b]	A > LLD	N/A
Fissile mass ≤ FGE limit	$FGE + 2\sigma_{TMU}(FGE) \leq$ FGE limit	97.5%
Decay heat (DH) ≤ CH-TRAMPAC limit	$DH + 1\sigma_{TMU}(DH) \leq L_{CH\text{-}TRAMPAC}$[c]	84%

[a]Confidence means the statistical level of confidence that the limit is exceeded or not exceeded depending on the requirements of the individual data quality objectives (DQOs). The confidence is derived from the specified DQOs which assume contributions to TMU are normally distributed.
[b]TRU waste determinations shall be in accordance with the Policy for the Management of TRU Alpha Activity Concentration when overpacking waste containers (see Appendix 8).
[c]TRAMPAC includes both the CH-TRAMPAC and the TRUPACT-III TRAMPAC.

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Appendix 1 – Radioassay Requirements for Contact-Handled Transuranic Waste (Continued)

There are no stipulated DQOs for PE-Ci or individual isotope activities (except as they impact the requirements listed above). However, at a minimum, radioassay programs must be capable of identifying, measuring, and reporting the presence or absence of:

- the ten radionuclides identified in Section 3.3.1 for tracking of the WIPP radionuclide inventory (see Section A.2.1),
- ^{235}U, in order to calculate FGE, as required in Section 3.3.2 for compliance with transportation requirements, and
- other radionuclides whose presence contribute to 95 percent of the radioactive hazard, as specified in Section 3.3.1, for compliance with transportation requirements.

In support of the above requirements, each site must evaluate, document and technically justify the following determinations:

Lower Limit of Detection (LLD): The LLD for each radioassay system must be determined. Instruments performing TRU/low-level waste discrimination measurements must have an LLD of 100 nCi/g or less. Site specific environmental background and container specific interferences must be factored into LLD determinations. The LLD is that level of radioactivity which, if present, yields a measured value greater than the critical level with a 95 percent probability, where the critical level is defined as that value which measurements of the background will exceed with 5 percent probability. Because the LLD is a measurement-based parameter, it is not feasible to calculate LLDs for radionuclides that are not determined primarily by measurement, e.g., ^{90}Sr. In such cases, the site shall derive the equivalent of an LLD, i.e., a reporting threshold for a radionuclide(s), when it is technically justified. This value may be based on decay kinetics, scaling factors or other scientifically based relationships and must be adequately documented in site records. For purposes of reporting radionuclide data in the WWIS/WDS, this value will be the equivalent of an LLD. References A3 and A4 provide information in developing the LLD.

Total Measurement Uncertainty (TMU): The method used to calculate the TMU for the quantities in Table A-1 must be documented and technically justified for each CBFO certified radioassay system. Compliance with this requirement will be evaluated in reviews of the TMU documentation package for each assay system by CBFO. General guidance for determining the TMU is provided in References A5 and A6.

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Appendix 1 – Radioassay Requirements for Contact-Handled Transuranic Waste (Continued)

Calibration Procedures and Frequencies: Each radioassay measurement system shall be calibrated before initial use. During calibration or re-calibration, system correction factors shall be established and algorithms adjusted such that the value of percent recovery (%R) is set equal to 100 percent; i.e., the system is calibrated to 100%R. The range of applicability of system calibrations must be specified in site procedures. The matrix/source surrogate waste combination(s) used for calibration shall be representative of the:

- activity range(s) or gram loading(s), and
- relevant waste matrix characteristics (e.g., densities, moderator content, container size) planned for measurement by the system.

Calibration(s) shall be performed in accordance with consensus standards, when such standards exist. If consensus standards are not used, full documentation of the calibration technique must be provided to and approved by CBFO prior to performing WIPP-related assays. Primary calibration standards shall be obtained from suppliers maintaining a nationally accredited measurement program. When primary standards are not available, the standards used shall be correlated with primary standards obtained from a nationally accredited measurement program. For calorimetry, calibration shall be performed in accordance with Reference A9.

Calibration Verification: Notwithstanding the need to calibrate individual components for replacement, changes or adjustments (e.g., energy calibration of a detector), verification of the radioassay measurement system's calibration shall be performed after any one of the following occurs:

- major system repairs and/or modifications
- replacement of the measurement system's components, e.g., detector, neutron generator or supporting electronic components that have the capacity to affect data
- significant changes to the system's software
- relocation of the system

Appendix 1 – Radioassay Requirements for Contact-Handled Transuranic Waste (Continued)

Calibration verification shall consist of demonstrating that the system is within the range of acceptable operation. Secondary standards can be used for the calibration verification if their performance has been correlated with the calibration standard. If a verification of the measurement system's calibration or other test demonstrates that the system's response has significantly changed, a re-calibration of the system shall be performed.

Calibration Confirmation: In order to confirm that the calibration of the NDA system was correctly established, the accuracy and precision of the system are determined after each calibration or re-calibration by performing replicate measurements of a non-interfering matrix. Calibration confirmation replicate measurements shall be performed on containers of the same nominal size as those in which actual waste is assayed and according to approved waste assay procedures. The number of replicate measurements to be performed shall be documented and technically justified. The replicate measurements shall be performed using nationally recognized standards, or certified standards derived from nationally recognized standards that span the range of use. The standards used to calculate accuracy shall not be the same as those used for the system calibration. Accuracy is reported as percent recovery (%R). The applicable range for accuracy shall not exceed ± 30 percent on a non-interfering matrix. Precision is reported as percent relative standard deviation (%RSD). The %RSD shall not exceed the values listed in Table A-2, Upper Limits for %RSD vs. Number of Replicates, for the corresponding number of replicate measurements in a non-interfering matrix.

Table A-2. Upper Limits for %RSD vs. Number of Replicates

Number of Replicates	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Max %RSD	1.8	6.6	10.0	12.3	14.0	15.2	16.2	17.1	17.7	18.3	18.8	19.3	19.7	20.0

[a] The values listed are derived from the measured standard deviation of the replicate measurements using $\frac{s}{\mu} \bullet 100\% < \sqrt{\frac{(0.292) \bullet \chi^2_{0.05,n-1}}{n-1}} \bullet 100\%$ where s is the measured standard deviation, n is the number of replicates, Φ is the true value, $\chi^2_{0.05,n-1}$ is the critical value for the upper 5 percent tail of a one-sided chi-squared distribution with n-1 degrees of freedom, and 0.292 corresponds to a 95 percent upper confidence bound on the true system precision limit of 29.2 percent.

Measurement facilities may develop alternate limits for accuracy and precision subject to approval by CBFO prior to certification of waste.

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Appendix 1 – Radioassay Requirements for Contact-Handled Transuranic Waste (Continued)

The CCP NDA standard operating procedures (Table A-2.1) demonstrate and justify that the radioassay techniques used are appropriate for specific waste streams.

Table A-2.1. NDA Procedures

Procedure Title	Procedure Number
CCP Waste Assay Gamma Spectrometer (WAGS) and SWEPP Gamma-Ray Spectrometer (SGRS) Calibration Procedure	CCP-TP-010
CCP Waste Assay Gamma Spectrometer (WAGS) Operating Procedure	CCP-TP-019
CCP Mobile IQ3 System Calibration Procedure	CCP-TP-046
CCP Mobile IQ3 Gamma Scanner Operation	CCP-TP-047
CCP Mobile IQ3 System Data Reviewing, Validating and Reporting Procedure	CCP-TP-048
CCP Operating the High Efficiency Neutron Counter Using NDA 2000	CCP-TP-063
CCP Calibrating the High Efficiency Neutron Counter Using NDA 2000	CCP-TP-064
CCP Gamma Energy Assay (GEA) Calibration, Confirmation, and Verification Procedure	CCP-TP-070
CCP Gamma Energy Assay (GEA) Operating Procedure	CCP-TP-071
CCP Gamma Energy Assay (GEA) Data Review, Validation, and Reporting Procedure	CCP-TP-072
CCP Off-Site Source Recovery Project Sealed Source Radiological Characterization	CCP-TP-101
CCP Data Reviewing, Validating and Reporting Procedure for the High Efficiency Neutron Counter Using NDA 2000	CCP-TP-103
Operating the CCP High Efficiency Neutron Counter Using NDA 2000	CCP-TP-107
Calibrating the CCP High Efficiency Neutron Counter Using NDA 2000	CCP-TP-108
CCP Data Reviewing, Validating and Reporting Procedure	CCP-TP-109
CCP SWEPP Gamma-Ray Spectrometer (SGRS) Operating Procedure	CCP-TP-115
CCP SuperHENC Operating Procedure	CCP-TP-146
CCP SuperHENC Data Reviewing, Validating and Reporting Procedure	CCP-TP-148
CCP Drum Waste Assay System Imaging Passive/Active Neutron Operations	CCP-TP-166
CCP Drum Waste Assay Imaging Passive/Active Neutron Calibration	CCP-TP-167
CCP Drum Waste Assay System Imaging Passive/Active Neutron/Segmented Gamma Scanner Data Generation Level Validation	CCP-TP-168
CCP Operating the Mobile Segmented Gamma Scanner	CCP-TP-169

Appendix 1 – Radioassay Requirements for Contact-Handled Transuranic Waste (Continued)

Table A-2.1. NDA Procedures (Continued)

CCP SuperHENC Calibration Procedure	CCP-TP-170
CCP Calibrating the Mobile Segmented Gamma Scanner	CCP-TP-172
CCP Box Segmented Gamma System (BSGS) Operating Procedure	CCP-TP-189
CCP Box Segmented Gamma System (BSGS) Calibration Procedure	CCP-TP-190
CCP Box Neutron Assay System (BNAS) Operating Procedure	CCP-TP-191
CCP Box Neutron Assay System (BNAS) Calibration Procedure	CCP-TP-192
CCP Data Reviewing, Validating, and Reporting Procedure for the Nondestructive Assay Box Counters	CCP-TP-193
Peer Review – Sealed Sources Peer Review Report	Record TWCP-18562

A.4 Quality Control (QC)

To ensure that data of known and documented quality are generated, each participating measurement facility shall implement a documented facility QA program. Any radioassay technique used for TRU waste must be performed in accordance with calibration and operating procedures that have been written, approved, and controlled by the site or testing facility. Laboratory procedures must contain applicable QCs. Facility QA programs shall specify qualitative and quantitative acceptance criteria for the QC checks of this program and corrective action measures to be taken when these criteria are not satisfied. NDA standard operating procedures address QC elements and are listed in Table A-2.1.

A.4.1 General Requirements

Radioassay Training: Only appropriately trained and qualified personnel shall be allowed to perform radioassay and data validation/review. Standardized Training requirements for radioassay personnel shall be based upon existing industry standardized training requirements (e.g., American Society for Testing and Materials [ASTM] C1490, *Standard Guide for Selection, Training and Qualification of Nondestructive Assay [NDA] Personnel* [Reference A8]; American National Standards Institute [ANSI] N15.54, *Radiometric Calorimeters - Measurement Control Program* [Reference A9]) and shall meet the specifications in the QAPD.

Requalification of radioassay personnel shall be based upon evidence of continued satisfactory performance and must be performed at least every two years. The training program is conducted in accordance with procedure CCP-QP-002, *CCP Training and Qualification Plan*.

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Appendix 1 – Radioassay Requirements for Contact-Handled Transuranic Waste (Continued)

Software QC Requirements: All computer programs and revisions thereof used for radioassay shall meet the applicable requirements in Section 6.0 of the QAPD (Reference A2) and in accordance with procedure CCP-QP-022, *CCP Software Quality Assurance Plan*.

*Comparison Program*s: Sites using radioassay systems shall participate in any relevant measurement comparison program(s) sponsored or approved by the CBFO. Such programs may be conducted as part of the NDA PDP (References A7 and A10) or through other third parties (Reference: WIPP Compliance Recertification Application including Annual Reports to the EPA).

A.4.2 NDA QC Requirements

The assay procedures cited in various ASTM and ANSI standards (References A9, A11-A15) and NRC standard practices and guidelines (Reference A16) as referenced in this appendix are recommended for use at all testing facilities.

Background Measurements: Background measurements must be performed and recorded daily, unless otherwise approved by CBFO. Contributions to background due to radiation from nearby radiation producing equipment, standards or wastes must be carefully controlled or more frequent background checks must be performed. For calorimeters, basepower or baseline measurements shall be conducted at a frequency determined by each site and approved by CBFO.

Instrument Performance Measurements: Performance checks on calibrated and operable gamma and neutron NDA instruments must be performed and recorded once per operational day. Performance checks shall include efficiency checks (when applicable), matrix correction checks and, for spectrometric instruments, peak position and resolution checks.

Both radioactive sources and surrogate waste matrix containers (both non-interfering and interfering) are used. At least once per operational week an interfering matrix must be used to assess the long-term stability of the NDA instrument's matrix correction. Surrogate waste containers must reflect the type of waste, (e.g., debris, sludge) currently being assayed. To verify calibration, radioactivity standards must be selected such that, over a six-month period, the operating range of the assay system is tested in each applicable surrogate waste matrix. The use of interfering and non-interfering matrices provides a realistic assessment of the assay system's performance over time, and will assist measurement personnel in detecting potential problems relative to the matrices currently assayed by the measurement system.

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Appendix 1 – Radioassay Requirements for Contact-Handled Transuranic Waste (Continued)

Interfering surrogate matrix containers must be constructed in such a way that the waste characteristics do not change over time.

Radioactive sources should be long-lived, easy to position relative to the detector(s), and of sufficient radioactivity to obtain good results with relatively short count times.

Performance checks for calorimetry shall be performed with electrical and/or heat standards traceable to a nationally accredited measurement program at a frequency determined by each site, consistent with Reference A17. This information is specified in site operating procedures and approved by CBFO.

Data Checks: Background (for calorimetry: baseline or base power) and performance measurements shall be reviewed and evaluated at least weekly to determine continued acceptability of the assay system and to monitor performance trends. If daily performance checks result in data that are outside the acceptable range, the required responses in Table A-3 shall be followed.

Table A-3. Range of Applicability

Category	Acceptability Range[a]	Required Response
Acceptable Range	∗Data∗[c] # 2σ[b]	No action required.
Warning Range	2σ[b] < ∗Data∗ # 3σ[b]	The performance check standard shall be rerun no more than two times. If the rerun performance check(s) result in data within ± 2σ, then the additional performance checks shall be documented and work may continue. If the system does not fall within ± 2σ after two rerun performance checks, then the required response for the Action Range shall be followed.
Action Range	∗Data∗> 3σ[b]	Work shall stop and the occurrence shall be documented and appropriately dispositioned (e.g., initiating a non-conformance report). The radioassay system shall be removed from service pending successful resolution of all necessary actions, and all assays performed since the last acceptable performance check are suspect, pending satisfactory resolution. Recalibration or calibration verification is required prior to returning the system back to service.

[a]Reference A15
[b]"σ" - the standard deviation is only based on the reproducibility of the data check measurements themselves. This is not TMU.
[c]Absolute Value

Appendix 1 – Radioassay Requirements for Contact-Handled Transuranic Waste (Continued)

A.5 Data Management

A.5.1 Data Review and Validation

All radioassay data must be reviewed and approved by qualified personnel prior to being reported. At a minimum, the data must be reviewed by a technical reviewer and approved by the SPM. The validation process includes verification that the applicable QCs specified in Section A.4 have been met. Radioassay data is reviewed at the data generation level in accordance with NDA operating procedures listed in Table A-2.1, while data validation and verification at the Project Office is performed in accordance with procedure CCP-TP-001, *CCP Project Level Data Validation and Verification*.

A.5.2 Data Reporting

Radioassay data must be reported to the Site Project Office on a testing batch basis. Batches are defined, for the purpose of the program, as a suite of waste containers undergoing radioassay using the same testing equipment. For NDA, the sites shall specify the size of the testing batch as needed, without regard to waste matrix.

Each radioassay testing facility is required to submit testing BDRs for each testing batch to the site project office on standard forms (either hard copy or electronic equivalent), as provided in approved site-specific documentation. Radioassay testing BDRs shall consist of the following:

- testing facility name, testing batch number, container numbers included in that testing batch, and signature release by the SPM
- table of contents
- background and performance data or control charts for the relevant time period
- data validation per the QAPD (Reference A2, Section 5.3.2) and as described in site procedures (Reference Table A-2.1)
- separate testing report sheet(s) for each container in the testing batch that includes:
  - title “Radioassay Data Sheet”
  - method used for radioassay (i.e., procedure identification)
  - date of radioassay

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Appendix 1 – Radioassay Requirements for Contact-Handled Transuranic Waste (Continued)

- activities and/or masses of individual radioisotopes present and their associated TMUs (curies and/or grams)
- operator signature/date
- reviewer signature/date

Other radiological properties to be documented for each container include:

- decay heat expressed in Watts (W) and its associated TMU
- total ^{239}Pu FGE expressed in grams (g) and its associated TMU
- TRU alpha activity concentration expressed in curies/gram (Ci/g) and its associated TMU, and
- total ^{239}Pu equivalent activity expressed in Ci

These calculated quantities shall be included in the radioassay BDR or other QA record or database.

When TMU is reported differently on the testing report sheet than in WWIS/WDS, the method of expressing TMU shall be specified on the testing report sheet or associated procedures/QAPjP.

Radioassay data reporting at the data generation level is performed in accordance with NDA operating procedures listed in Table A-2.1, while data validation and verification at the Project Office is performed in accordance with procedure CCP-TP-001. Data reporting in WWIS/WDS is performed in accordance with procedure CCP-TP-030.

A.5.3 Data and Records Retention

QA records are indexed, classified, controlled, and maintained by records management personnel as described in procedure CCP-QP-008, *CCP Records Management*, and the site Records System. Records management is addressed in Section 5.5 of this Plan.

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Appendix 1 – Radioassay Requirements for Contact-Handled Transuranic Waste (Continued)

The following nonpermanent records shall be maintained at the radioassay-testing facilities or shall be forwarded to the Site Project Office for maintenance, and shall be documented and retrievable by testing batch number, in accordance with the QAPD:

- testing batch reports
- all raw data, including instrument readouts, calculation records, and radioassay QC results
- all instrument calibration reports, as applicable

A.6 Quality Characteristics Assessment

Per 40 CFR §194.22(c), there are five "quality characteristics" that must be assessed. These quality characteristics and the method by which they are assessed are described in the following sections.

A.6.1 Data Accuracy

Per 40 CFR §194.22(c)(1), *Data Accuracy* is defined as "the degree to which data agree with an acceptable reference or true value." For NDA methods, this quality characteristic is met and maintained as described in Section A.3.

A.6.2 Data Precision

Per 40 CFR §194.22(c)(2), *Data Precision* is defined as "a measure of the mutual agreement between comparable data gathered or developed under similar conditions expressed in terms of standard deviation." For NDA methods, this quality characteristic is met and maintained as described in Section A.3.

A.6.3 Data Representativeness

Per 40 CFR §194.22(c)(3), *Data Representativeness* is defined as "the degree to which data can accurately and precisely represent a characteristic of a population, a parameter, variations at a sampling point, or environmental conditions." For NDA methods, this quality characteristic for the waste stream is met and maintained through 100 percent measurement confirmation on a payload container basis. For NDA, since the entire waste container is subjected to measurement, representativeness pertaining to the actual measurement is not applicable.

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Appendix 1 – Radioassay Requirements for Contact-Handled Transuranic Waste (Continued)

A.6.4 Data Completeness

Per 40 CFR §194.22(c)(4), *Data Completeness* is defined as "a measure of the amount of valid data obtained compared to the amount that was expected." For NDA methods, this quality characteristic is met and maintained by requiring 100 percent valid results. Any results indicating the NDA measurement was invalid require re-measurement.

A.6.5 Data Comparability

Per 40 CFR §194.22(c)(5), *Data Comparability* is defined as "a measure of confidence with which one data set can be compared to another." For NDA and RC methods, this quality characteristic is addressed by ensuring that all data are produced under the same system of controls. These controls apply to all aspects of the data generation process, including: procurement of analytical instruments; calibration and operation of assay equipment according to industry standards; preparation and use of standardized instrument and data review procedures; and, training of equipment operators and technical/data review personnel to the QAPD, as specified in Section A.4.1. All NDA systems and methods are approved by CBFO prior to use in generating waste characterization data. Additionally, comparison of measured data with AK derived or based values, as applicable, provides a means to assess comparability on a waste stream basis. Although no specific confidence level is specified, these controls provide comparability among all data generated under this program. Sites using radioassay systems shall participate in measurement comparison programs as specified in Section A.4.1.

Appendix 2 – Appendix 1 References

A1 U.S. Nuclear Regulatory Commission. *Peer Review for High-Level Nuclear Waste Repositories,* NUREG-1297, Washington D.C., Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission

A2 U.S. Department of Energy. *Quality Assurance Program Document*. DOE/CBFO-94-1012. Carlsbad, New Mexico, Carlsbad Field Office, U.S. Department of Energy. (http://www.wipp.energy.gov/library/qapd/qapd.pdf)

A3 Currie, Lloyd A., 1968. *Limits for Qualitative Detection and Quantitative Determination*. *Anal.Chem.* 40: 586-93

A4 EPA, 1980. *Upgrading Environmental Radiation Data.* EPA 520/1-80-012, Washington D.C., Office of Radiation Programs, U. S. Environmental Protection Agency

A5 K. C. Smith, R. A. Stroud, K. L. Coop, and J. F. Bresson. 1998. *Total Measurement Uncertainty Assessment for Transuranic Waste Shipments to the Waste Isolation Pilot Plant*. Proceedings of the 6th Nondestructive Assay Waste Characterization Conference, Salt Lake City, Utah, Nov. 17-19, 1998, pp. 21-37

A6 K. L. Coop, J. F. Bresson, M. E. Doherty, B. M. Gillespie, and D. R. Davidson. *Standardized Total Measurement Uncertainty Reporting for WIPP*. Nondestructive Assay Interface Working Group, Salt Lake City, Utah, May 22, 2000

A7 U.S. Department of Energy. *Performance Demonstration Program Plan for Nondestructive Assay of Boxed Wastes for the TRU Waste Characterization Program*. DOE/CBFO-01-1006, Current Revision. Carlsbad, New Mexico, Carlsbad Field Office, U.S. Department of Energy. (http://www.wipp.energy.gov/Documents NTP.htm)

A8 American Society for Testing and Materials. *Standard Guide for Selection, Training and Qualification of Nondestructive Assay (NDA) Personne*l, ASTM C1490, Annual Book of ASTM Standards, Philadelphia, Pennsylvania, American Society for Testing and Materials

A9 American National Standards Institute. *Radiometric Calorimeters - Measurement Control Program*, ANSI N15.54, American National Standards Institute, Inc., 1430 Broadway, New York, NY 10018

Appendix 2 – Appendix 1 References (Continued)

A10 U.S. Department of Energy. *Performance Demonstration Program Plan for Nondestructive Assay of Drummed Wastes for the TRU Waste Characterization Program*. DOE/CBFO-01-1005, Current Revision. Carlsbad, New Mexico, Carlsbad Field Office, U.S. Department of Energy. (http://www.wipp.energy.gov/Documents_NTP.htm)

A11 American Society for Testing and Materials. *Standard Test Method for Determination of Plutonium Isotopic Composition by Gamma-Ray Spectrometry*. ASTM C1030, Annual Book of ASTM Standards, Philadelphia, Pennsylvania, American Society for Testing and Materials

A12 American Society for Testing and Materials. *Standard Test Method for Nondestructive Assay of Nuclear Material in Scrap and Waste by Passive-Active Neutron Counting Using a 252Cf Shuffler*. ASTM C1316, Philadelphia, Pennsylvania, American Society for Testing and Materials

A13 American Society for Testing and Materials. *Standard Test Method for Nondestructive Assay of Special Nuclear Material in Low Density Scrap and Waste by Segmented Passive Gamma-Ray Scanning*. ASTM C1133, Annual Book of ASTM Standards, Philadelphia, Pennsylvania, American Society for Testing and Materials

A14 American Society for Testing and Materials. *Standard Test Method for Nondestructive Assay of Plutonium, Tritium and 241 Am by Calorimetric Assay*. ASTM C1458, Annual Book of ASTM Standards, Philadelphia, Pennsylvania, American Society for Testing and Materials

A15 American National Standards Institute. *Nondestructive Assay Measurement Control and Assurance*, ANSI N15.36. American National Standards Institute, Inc., 1430 Broadway, New York, NY 10018

A16 U.S. Nuclear Regulatory Commission. 1984. *Nondestructive Assay of Special* Nuclear *Material Contained in Scrap and Waste.* Regulatory Guide 5.11, Washington, DC, Office of Nuclear Regulatory Research, U.S. Nuclear Regulatory Commission

A17 American National Standards Institute. *Plutonium-Bearing Solids Calibration Techniques for Calorimetric Assay.* ANSI N15.22, American National Standards Institute, Inc., 1430 Broadway, New York, NY 10018

Appendix 3 – Acronyms and Abbreviations

AK	Acceptable Knowledge
ALARA	as low as reasonably achievable
AMAD	activity mean aerodynamic diameter
ANSI	American National Standards Institute
ASME	American Society of Mechanical Engineers
ASTM	American Society for Testing and Materials
BDR	Batch Data Report
CBFO	Carlsbad Field Office
CAR	Corrective Action Report
CCP	Central Characterization Program
CFR	Code of Federal Regulations
CH	Contact-Handled
CH-TRAMPAC	Contact-Handled Transuranic Waste Authorized Methods for Payload Control
CH-TRU	Contact-Handled Transuranic
Ci	curies
Ci/g	curies/gram
CIN	Container Identification Number
cm^2	Square centimeters
cm^3	Cubic centimeters
CPR	cellulose, plastic, and rubber
DA	Destructive assay
DSA	Documented Safety Analysis
DOE	U.S. Department of Energy
DOT	U.S. Department of Transportation
DPM	disintegrations per minute
DQO	Data Quality Objective
DSA	Documented Safety Analysis
EPA	U.S. Environmental Protection Agency
FEIS	Final Environmental Impact Statement
FEM	fissile equivalent mass
FGE	fissile gram equivalent
g	gram
GGT	gas generation testing
hr	hour
HSG	Headspace Gas
HWFP	Hazardous Waste Facility Permit
ID	identification number
in.	inch
keV	Kiloelectron Volt
kg	kilogram(s)
L	Liter
LLD	lower limit of detection

Appendix 3 – Acronyms and Abbreviations (Continued)

LDR	Land Disposal Restriction
LWA	Land Withdrawal Act
M^3	cubic meter(s)
ml	milliliter(s)
mrem	milliroentogen equivalent man
M&TE	Measuring and Testing Equipment
nCi/g	nanocurie(s) per gram
NDA	nondestructive assay
NCR	Nonconformance Report
NDE	Nondestructive Examination
NEPA	National Environmental Policy Act
NMAC	New Mexico Administrative Code
NMED	New Mexico Environment Department
NMMA	nuclear material management area
NRC	U.S. Nuclear Regulatory Commission
NTP	National TRU Program
NWP	Nuclear Waste Partnership
OJT	on-the-job training
OPCTCD	Overpack Payload Container Transportation Certification Document
PATCD	Payload Assembly Transportation Certification Document
PCB	polychlorinated biphenyl
PCTCD	Payload Container Transportation Certification Document
PDP	Performance Demonstration Program
PE-Ci	^{239}Pu equivalent curie(s)
POC	point-of-contact
ppm	parts per million
QA	Quality Assurance
QAO	Quality Assurance Objective
QAPD	Quality Assurance Program Document
QAPjP	Quality Assurance Project Plan
QC	Quality Control
QSL	Qualified Suppliers List
%R	Percent Recovery
%RSD	percent relative standard deviation
RC	radiochemistry
RCRA	Resource Conservation and Recovery Act
RCT	Radiological Control Technician
rem	roentgen equivalent man
RH	Remote-Handled
RH-TRAMPAC	Remote-Handled Transuranic Waste Authorized Methods for Payload Control
RIDS	Records Inventory and Disposition Schedule

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Appendix 3 – Acronyms and Abbreviations (Continued)

RPD	relative percent difference
RSD	relative standard deviation
RTR	Real-Time Radiography
SAR	Safety Analysis Report
SEIS	Supplemental Environmental Impact Statement
SLB2	standard large box 2
SME	subject matter expert(s)
SNM	Special Nuclear Material
SOW	Statement of Work
SPM	Site Project Manager
SWB	Standard Waste Box
TCO	Transportation Certification Official
TDOP	ten-drum overpack
TMU	total measurement uncertainty
TRAMPAC	Transuranic Authorized Methods for Payload Control
TRU	Transuranic
TRUPACT-II	Transuranic Package Transporter-II
TRUPACT-III	Transuranic Package Transporter-III
TSDF	Treatment, Storage, and Disposal Facility
VE	visual examination
VOC	volatile organic compound
UHWM	Uniform Hazardous Waste Manifest
VEE	Visual Examination Expert(s)
WAC	Waste Acceptance Criteria
WCO	Waste Certification Official
WDS	Waste Data System
WCPIP	*Remote-Handled TRU Waste Characterization Program Implementation Plan*
WIPP	Waste Isolation Pilot Plant
WIPP WAP	Waste Isolation Pilot Plant Waste Analysis Plan
WSPF	Waste Stream Profile Form
WWIS	WIPP Waste Information System

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Appendix 4 – Procedure Tables

Table B-1. Container Management Procedures

Procedure Title	Procedure Number
CCP Container Management	CCP-TP-035
CCP Standardized Container Management	CCP-TP-068
CCP Container Management	CCP-TP-120

Table B-2. Radiography Procedures

Procedure Title	Procedure Number
CCP Standard Real-Time Radiography (RTR) Inspection Procedure	CCP-TP-053

Table B-3. VE Procedures

Procedure Title	Procedure Number
CCP Visual Examination Technique for Idaho National Laboratory (INL) Newly Generated TRU Waste	CCP-TP-006
CCP Sealed Source Visual Examination and Packaging	CCP-TP-069
CCP Standard Contact-Handled Waste Visual Examination	CCP-TP-113

Table B-4. GGT Procedures

Procedure Title	Procedure Number
CCP Gas Generation Testing	CCP-TP-083
CCP Execution of Long-Term Objective for the Unified Flammable Gas Test Procedure	CCP-TP-138

Table B-5. Certification Procedures

Procedure Title	Procedure Number
CCP Transuranic Authorized Methods For Payload Control (CCP-CH-TRAMPAC)	CCP-PO-003
CCP Remote-Handled Transuranic Waste Authorized Methods for Payload Control (CCP RH-TRAMPAC)	CCP-PO-505
CCP CH-TRU Waste Certification and WWIS/WDS Data Entry	CCP-TP-030
CCP RH-TRU Waste Certification and WWIS/WDS Data Entry	CCP-TP-530

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Appendix 4 – Procedure Tables (Continued)

Table B-6. Remote-Handled Procedures

Procedure Title	Procedure Number
CCP Remote-Handled Waste Visual Examination	CCP-TP-500
CCP Dose-to-Curie Survey Procedure for Remote-Handled Transuranic Waste	CCP-TP-504
CCP Removable Lid Canister Loading	CCP-TP-505
CCP Shipping of Remote-Handled Transuranic Waste	CCP-TP-507
CCP RH Standard Real-Time Radiography Inspection Procedure	CCP-TP-508
CCP Remote-Handled Waste Sampling	CCP-TP-512

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Appendix 5 – PE-Ci Activity

The concept of PE-Ci is intended to eliminate the dependency of radiological analyses on specific knowledge of the radionuclide composition of a TRU waste stream. A unique radionuclide composition and/or distribution are associated with most TRU waste streams at each site. By normalizing all radionuclides to a common radiotoxic hazard index, radiological analyses that are essentially independent of these variations can be conducted for the WIPP facility. ^{239}Pu, as a common component of most defense TRU wastes, was selected as the radionuclide to which the radiotoxic hazard of other TRU radionuclides could be indexed.

Modeled operational releases from the WIPP facility, including both routine and accident-related, are airborne. There are no known significant liquid release pathways during the operational phase of the facility. This, and the fact that TRU radionuclides primarily represent inhalation hazards, allows a valid relationship to be established, which normalizes the inhalation hazard of a TRU radionuclide to that of ^{239}Pu for the purpose of the WIPP radiological analyses. In effect, the radiological dose consequences of an airborne release of a quantity of TRU radioactivity with a known radionuclide distribution will be essentially identical to that of a release of that material expressed in terms of a quantity of ^{239}Pu. To obtain this correlation, the 50-year effective whole-body dose commitment or dose conversion factor for a unit intake of each radionuclide will be used.

For a known radioactivity quantity and radionuclide distribution, the ^{239}Pu equivalent activity is determined using radionuclide-specific weighting factors. The ^{239}Pu equivalent activity (AM) can be characterized by:

$$\mathrm{AM} = \sum_{i=1}^{K} A_i / WF_i$$

where K is the number of TRU[1] radionuclides, A_i is the activity of radionuclide i, and WF_i is the PE-Ci weighting factor for radionuclide i.

WF_i is further defined as the ratio

$$WF_i = E_o / E_i$$

where E_o (roentgen equivalent man [rem]/µCi) is the 50-year effective whole-body dose commitment due to the inhalation of ^{239}Pu particulates with a 1.0 µm activity median aerodynamic diameter (AMAD) and a weekly pulmonary clearance class, and E_i

[1]TRU as designated in this equation refers to any radionuclide with an atomic number greater than 92 and including ^{233}U.

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Appendix 5 – PE-Ci Activity (Continued)

(rem/µCi) is the 50-year effective whole-body dose commitment due to the inhalation of radionuclide (*i*) particulates with a 1.0 µm activity median aerodynamic diameter and the pulmonary clearance class resulting in the highest 50-year effective whole-body dose commitment.

Weighting factors calculated in this manner are presented in Table C-1 for radionuclides typically present in CH-TRU waste. If other TRU radionuclides are determined to be present in the payload container, their weighting factors can be obtained from the values of E_o and E_i contained in DOE/EH-0071 (Reference B1).

Table C-1. PE-Ci Weighting Factors for Selected Radionuclides

Radionuclide	Pulmonary Clearance Class[a]	Weighting Factor
^{233}U	Y	3.9
^{237}Np	W	1.0
^{236}Pu	W	3.2
^{238}Pu	W	1.1
^{239}Pu	W	1.0
^{240}Pu	W	1.0
^{241}Pu	W	51.0
^{242}Pu	W	1.1
^{241}Am	W	1.0
^{243}Am	W	1.0
^{242}Cm	W	30.0
^{244}Cm	W	1.9
^{252}Cf	Y	3.9

[a](W) Weekly, (Y) Yearly

Reference for Appendix 5

B1. U.S. Department of Energy. *Internal Dose Conversion Factors for Calculation of Dose to the Public.* DOE/EH-0071, July 1988.

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Appendix 6 – Glossary

10-160B Packaging – An NRC-certified Type B transportation packaging used for transportation of TRU wastes.

Acceptable knowledge (AK) – Any information about the process used to generate waste, material inputs to the process, and the time period during which the waste was generated, as well as data resulting from the analysis of waste, conducted prior to or separate from the waste certification process authorized by EPA's Certification Decision, to show compliance with Condition 3 of the certification decision (Appendix A of this part) (40 CFR §194.2 and 194.67).

Activity – A measure of the rate at which a material emits nuclear radiation, usually given in terms of the number of nuclear disintegrations occurring in a given length of time. The common unit of activity is the curie, which amounts to 37 billion (3.7×10^{10}) disintegrations per second. The International Standard unit of activity is the becquerel and is equal to one disintegration per second.

Administrative controls – Provisions relating to organization and management, procedures, record keeping, assessment, and reporting necessary to ensure the safe operation of the facility.

Atomic energy defense activities – Activities of the Secretary of Energy (and predecessor agencies) performed in whole or in part in carrying out any of the following functions: naval reactors development; weapons activities, including defense inertial confinement fusion; verification and control technology; defense nuclear material production; defense nuclear waste and materials by-product management; defense nuclear materials security investigations; and defense research and development.

Authorization basis – Those aspects of the facility design and operational requirements relied upon by DOE to authorize the operation of nuclear facilities and processes.

Characterization – Sampling, monitoring, and analysis - whether by review of AK, nondestructive examination, NDA, or RC - to identify and quantify the constituents of a waste material.

Chemical compatibility – Assessing the properties of chemicals in a payload container (>1 weight percent); there must be no adverse safety or health hazards produced as a result of any mixtures that occur.

Appendix 6 – Glossary (Continued)

Completeness – The percentage of measurements made that are judged to be valid measurements. The completeness goal is to generate a sufficient amount of valid data based on program needs. Valid results for radioassay, and radiography data are those that were obtained when the laboratory or testing facility demonstrated that the instrumentation and method were in control; that is, that all calibration, verification, interference, and zero matrix checks met acceptance criteria.

Compressed gas – Compressed gases are those materials defined as such by 49 CFR Part 173, Subpart G.

Contact-Handled transuranic waste – Transuranic waste with a surface radiation dose equivalent rate not greater than 200 mrem/h.

Contact-Handled Transuranic Waste Authorized Methods for Payload Control (CH-TRAMPAC) – The governing document for shipments in the TRUPACT-II and the HalfPACT packagings.

Content code – A uniform system applied to waste forms to group those with similar characteristics for purposes of shipment in the TRUPACT-II, TRUPACT-III, HalfPACT, and RH-TRU 72-B packagings.

Corrosive/Corrosivity – A solid waste exhibits corrosivity if a sample of the waste is either aqueous and has a pH ≤ 2 or ≥ 12.5, or it is a liquid and corrodes steel at a rate >6.35 millimeter (0.250 in.) per year at a test temperature of 55°Celsius (130°Fahrenheit) (40 CFR §261.22).

Curie – A unit of activity equal to 37 billion (3.7×10^{10}) disintegrations per second.

Disposal – Permanent isolation of TRU waste from the accessible environment with no intent of recovery, whether or not such isolation permits the recovery of such waste (Reference 2, Section 2[5]).

Dose conversion factor – A numerical factor used in converting radionuclide uptake (curies) in the body to the resultant radiation dose (rem).

Dose equivalent rate – The radiation dose equivalent delivered per unit time (e.g., rem per hour).

Drum – Includes 55-gallon, 85-gallon, and 100-gallon drums as described in the CH-TRAMPAC and HWFP.

Fissile gram equivalent – An isotopic mass of radionuclide normalized to ^{239}Pu.

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Appendix 6 – Glossary (Continued)

Fissile material – Any material consisting of or containing one or more radionuclides that can undergo neutron-induced fission with neutrons of essentially zero kinetic energy (e.g., thermal neutrons) such as ^{233}U, ^{235}U, and ^{239}Pu.

HalfPACT – An NRC-certified Type B transportation packaging used for transportation of CH-TRU wastes.

Hazardous waste – Those wastes which are designated hazardous by EPA (or state) regulations. For a detailed description, see 40 CFR § 261.3. Hazardous wastes are listed in 20.4.1 New Mexico Administrative Code (NMAC), subpart II (40 CFR Part 261) and/or exhibit one of the four characteristics in 20.4.1 NMAC, subpart II (40 CFR Part 261) (i.e., ignitability, corrosivity, reactivity, and toxicity).

Headspace – The total contained volume of a container minus the volume occupied by the waste material.

Headspace gas – The gas within the headspace of a container.

Internal container – A container inside the outermost container examined during radiography or VE. Drum liners, liner bags, plastic bags used for contamination control, capillary-type lab ware, and debris not designed to hold liquid at the time of original waste packaging are not internal containers (Reference 9, Part 1, Section 1.5.17).

Lower Limit of Detection – The level of radioactivity which, if present, will yield a measured value greater than the critical limit with a 95 percent probability. The critical limit is defined as that value which measurements of the background will exceed with a 5 percent probability.

Machine-Compacted Waste – Waste whose volume has been reduced using a mechanical process.

Observable liquid – Liquid that is observable using radiography or VE (Reference 9, Part 1, Section 1.5.18)

Overpack - A container put around another container.

Package – (1) A packaging plus its contents. (2) The reusable Type B shipping container (i.e., TRUPACT-II, TRUPACT-III, HalfPACT, RH-TRU 72-B, and 10-160B) loaded with TRU waste payload containers, which has been prepared for shipment in accordance with the package QA program. (3) In the regulations governing the transportation of radioactive materials, the packaging, together with its radioactive contents, as presented for transport.

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Appendix 6 – Glossary (Continued)

Packaging – The reusable Type B shipping container for transport of TRU waste payload containers (i.e., TRUPACT-II, TRUPACT-III, HalfPACT, RH-TRU 72-B, and 10-160B).

Packaging Quality Assurance Program – A site-specific document that defines the quality assurance and quality control activities applicable to usage of the NRC-approved packaging. This program shall meet the requirements of 10 CFR Part 71, Subpart H.

Payload container – The outermost container (i.e., a drum, shielded container, SLB2, SWB, TDOP, or canister) for TRU waste material that is placed in a reusable Type B shipping container (i.e., a TRUPACT-II, TRUPACT-III, HalfPACT, RH-TRU 72-B, and 10-160B) for transport.

Payload assembly – An assembly of payload containers qualified for transport in a TRUPACT-II, HalfPACT, or 10-160B.

Pipe overpack – A packaging configuration consisting of a vented cylindrical pipe component surrounded by dunnage within a vented 55-gallon drum with a rigid polyethylene liner and vented lid.

Plutonium-239 equivalent activity – An equivalent radiotoxic hazard of a radionuclide normalized to ^{239}Pu.

Precision – A measure of mutual agreement among individual measurements of the same property made under prescribed similar conditions; often expressed as a standard deviation or relative percent difference (RPD).

Pyrophoric – Materials that may ignite spontaneously in air or that emit sparks when scratched or struck, especially with materials such as steel. A flammable solid that, under transport conditions, might cause fires through friction or retained heat or that can be ignited readily and, when ignited, burns vigorously and persistently so as to create a serious transportation hazard. Included in the pyrophoric definition are spontaneously combustible materials, water reactive materials, and oxidizers. Examples of nonradioactive pyrophorics are organic peroxides, sodium metal, and chlorates.

Radioassay – Methods used to identify and quantify radionuclides in TRU waste. Radioassay includes NDA and RC.

Radiography – A nondestructive testing method that uses x-rays to inspect and determine the physical form of waste.

Radionuclide – A nuclide that emits radiation by spontaneous transformation.

Remote-Handled transuranic waste – Transuranic waste with a surface dose rate of 200 millirem per hour or greater (Reference 2, Section 2[12]).

Appendix 6 – Glossary (Continued)

Remote-Handled Transuranic Waste Authorized Methods for Payload Control (RH-TRAMPAC) – The governing document for shipments in the RH-TRU 72-B packaging (Reference 41).

RH-TRU Waste Canister – Container that is transported in the RH-TRU 72B Cask.

RH-TRU 72-B Packaging – An NRC-certified Type B transportation packaging used for transportation of RH TRU wastes.

Shielded container – A metal payload container authorized for use within the HalfPACT packaging, that has been tested by DOE to meet DOT Specification 7A Type A requirements. It is approximately the same size as a standard 55-gallon drum, contains one 30-gallon steel drum, and incorporates a nominal 1-inch layer of lead lining to shield waste forms with high gamma energies. Although the shielded container is managed during handling, shipment, storage, and disposal as a CH payload container, the waste contained in a shielded container is characterized and inventoried in the WWIS as RH waste.

Shipper – A TRU waste site that releases an NRC-approved packaging to a carrier for shipment.

Shipping category – A shipping category is defined by the following parameters: chemical composition of the waste (waste type), gas generation potential of the waste material type (quantified by the g-value for hydrogen), and gas release resistance (type of payload container and type and maximum number of confinement layers used).

Sites – Department of Energy TRU waste generator/storage sites.

Standard large box 2 – A specialized metal payload container with a top-loading and a bottom-loading option for use within the TRUPACT-III packaging, that has been tested by DOE to meet DOT Specification 7A Type A requirements.

Standard waste box – A metal payload container authorized for use within the TRUPACT-II or HalfPACT packaging, that has been tested by DOE to meet DOT Specification 7A Type A requirements.

Summary Category Group – Used to segregate TRU mixed wastes into broad groups having similar physical forms. The summary category groups include homogeneous solids (S3000) that are at least 50 percent by volume solid process residues, soil/gravel (S4000) that is at least 50 percent by volume soil/gravel, and debris (S5000) that is at least 50 percent by volume materials that meet the criteria specified in 20.4.1.800 New Mexico Administrative Code (incorporating 40 CFR §268.2[g]). Categorization is based on the Summary Category Group constituting the greatest volume of waste for a waste stream (Reference 9, Attachment C).

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Appendix 6 – Glossary (Continued)

Ten-drum overpack – A metal payload container authorized for use within the TRUPACT-II packaging, that has been tested by DOE to meet DOT Specification 7A Type A requirements.

Test Category – Payload containers that do not meet the analytical category decay heat limits or whose concentration of flammable volatile organic compounds (VOCs) in the headspace exceeds 500 ppm are classified as test category (References 23a and 23b, Section 5.2.2).

Trace chemicals/materials – Chemicals/materials that occur individually in the waste in quantities less than 1 weight percent. The total quantity of trace chemicals/materials not listed as allowed materials for a given waste material type in any payload container is restricted to less than 5 weight percent (References 23a and 23b, Section 4.3.1, Reference 41, Section 4.3.1).

TRU isotope – An isotope of any element having an atomic number greater than uranium (i.e., 92).

TRU waste – Waste containing more than 100 nCi of alpha-emitting TRU isotopes per gram of waste, with half-lives greater than 20 years, except for (1) high-level radioactive waste, (2) waste that the Secretary has determined, with the concurrence of the Administrator, does not need the degree of isolation required by the disposal regulations, or (3) waste that the NRC has approved for disposal on a case-by-case basis in accordance with 10 CFR Part 61 (Reference 2, Section 2[18]).

TRU mixed waste – TRU waste that is also a hazardous waste as defined by the Hazardous Waste Act and 20.4.1.200 NMAC (incorporating 40 CFR § 261.3) (Reference 9, Part 1, Section 1.5.7).

TRUPACT-II – An NRC-certified Type B transportation packaging used for transportation of CH-TRU wastes.

TRUPACT-III – An NRC-certified Type B transportation packaging used for transportation of CH-TRU wastes in the SLB2 container.

TRUPACT-III Transuranic Waste Authorized Methods for Payload Control (TRUPACT-III TRAMPAC) – The governing document for shipments in the TRUPACT-III packaging (Reference 23b, Section 1).

Verification – The act of authenticating or formally asserting the truth that a process, item, data set, or service is, in fact, that which is claimed. Data verification is the process used to confirm that all review and validation procedures have been completed.

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Appendix 6 – Glossary (Continued)

Volatile organic compounds – For the purposes of the TRU waste program, those RCRA-regulated VOCs listed in the WIPP WAP and any additional compounds tentatively identified by VOC analytical procedures used to satisfy program requirements (i.e., any compound containing carbon and hydrogen with any other element that has a vapor pressure of 77.6 milliliters (ml) of mercury (1.5 psia) or greater under actual storage conditions).

Waste Acceptance Criteria – Constraints (limits) on the physical, chemical, and radiological properties of TRU waste and its packaging as determined by WIPP's authorization basis requirements. TRU waste will not be approved for shipment to and disposal at the WIPP until it has been certified as meeting these criteria. Waste Acceptance Criteria ensure that TRU waste is managed and disposed of in a manner that protects human health and safety and the environment.

Waste Analysis Plan – The waste analysis plan includes test methods, details of planned waste analysis for complying with the general waste analysis requirements of 20.4.1.500 NMAC (incorporating 40 CFR 264.13), a description of the waste shipment screening and verification process, and a description of the QA/QC program. Sites are required to implement the applicable requirements of the WIPP WAP.

Waste characterization – The process of determining that TRU waste meets the requirements of the WAC by the acceptable performance of the activities defined by CBFO-approved site-specific plans.

Waste certification – Formal and documented declaration by sites that waste has been characterized and meets the requirements of the WAC.

Waste matrix code – A DOE-developed coding system for grouping waste streams that have similar matrix constituents, especially for treatment objectives. This coding system allows waste streams within the DOE TRU waste system that have similar physical and chemical waste form properties to be categorized together (Transuranic Waste Baseline Inventory Report - 2004, DOE/TRU-2006-3344).

Waste stream – A waste stream is waste materials that have common physical form, that contain similar hazardous constituents and that are generated from a single process or activity (Reference 9, Appendix C).

WIPP Waste Information System – A computerized data management system used by WIPP to gather, store, and process information pertaining to CH and RH-TRU waste destined for or disposed of at WIPP. The WWIS database is a subsystem of the WDS.

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Appendix 7 – Payload Container Integrity Checklist

The Operator is to visually examine 100 percent of the payload container exterior to determine if the payload container meets the criteria of Section 3.2.1. At a minimum, sites shall incorporate the questions and criteria contained in the following checklist into applicable site procedures (see CCP-TP-033, *CCP Shipping of CH-TRU Waste*). This payload container inspection shall be performed and documented as a part of the TRUPACT-II, TRUPACT-III, or HalfPACT loading process. Any YES answer on the inspection checklist will result in the operator discontinuing the inspection, marking the payload container as unacceptable for shipment, and removal of the payload container from the shippable inventory. Before the rejected container can be shipped, it must undergo appropriate corrective actions (e.g., evaluation, repackaging, overpacking), as applicable. All containers must have an acceptable and complete inspection checklist documenting that it meets the DOT 7A criteria. Personnel complete the following payload container integrity checklist in accordance with procedure CCP-TP-033.

CONTAINER EXAMINATION		DISCUSSION OF CRITERIA	COMPLIANCE	
1.	Is the payload container obviously degraded?	Obviously degraded means clearly visible and potentially significant defects in the payload container or payload container surface.	YES	NO
2.	Is there evidence that the payload container is, or has been, pressurized?	Pressurization can be indicated by a fairly uniform expansion of the sidewalls, bottom or top. Past pressurization can be indicated by a notable outward deflection of the bottom or top. Verify that the payload container is not warped.	YES	NO

Appendix 7 – Payload Container Integrity Checklist (Continued)

CONTAINER EXAMINATION		DISCUSSION OF CRITERIA	COMPLIANCE	
3.	Is there any potentially significant rust or corrosion such that wall thinning, pin holes, or breaches are likely or the load bearing capacity is suspect?	Rust shall be assessed in terms of its type, extent, and location. Pitting, pocking, flaking, or dark coloration characterizes potentially significant rust or corrosion. This includes the extent of the payload container surface area covered, thickness, and, if it occurs in large flakes or built-up (caked) areas. Rusted payload containers may not be accepted if: A.1 Rust is present in caked layers or deposits A.2 Rust is present in the form of deep metal flaking, or built-up areas of corrosion products In addition, the location of rust should be noted; for example on a drum: top lid; filter region; locking chine; top one-third, above the second rolling hoop; middle one-third, between the first and second rolling hoops; bottom one-third, below the second rolling hoop; and on the bottom. Payload containers may still be considered acceptable if the signs of rust show up as: A.1 Some discoloration on the payload container A.2 If rubbed would produce fine grit or dust or minor flaking (such that wall thinning does not occur).	YES	NO
4.	Are any of the following apparent? A.1 wall thinning A.2 pin holes A.3 breaches	Wall thinning, pin holes, and breaches can be a result of rust/corrosion (see discussion for #3).	YES	NO
5.	Are there any split seams, tears, obvious holes, punctures (of any size), creases, broken welds, or cracks?	Payload containers with obvious leaks, holes or openings, cracks, deep crevices, creases, tears, broken welds, sharp edges or pits, are either breached or on the verge of being breached. Verify that there is no warpage that could cause the container to be unstable or prevent it from fitting properly in the applicable package.	YES	NO
6.	Is the load-bearing capacity suspect?	The load-bearing capacity could be reduced for excessive rust (see discussion for #3), wall thinning (see discussion for #4), breaches, cracks, creases, broken welds, etc. (see discussion for #5).	YES	NO

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Appendix 7 – Payload Container Integrity Checklist (Continued)

CONTAINER EXAMINATION		DISCUSSION OF CRITERIA	COMPLIANCE	
7.	Is the payload container improperly closed?	Inspect the fastener and fastener ring (chine) if applicable for damage or excessive corrosion. Check the alignment of the fastener to ensure that it is in firm contact around the entire lid and the payload container will not open during transportation.	YES	NO
8.	Are there any dents, scrapes, or scratches that make the payload container's structural integrity questionable or prevent the top and bottom surfaces from being parallel?	Deep gouges, scratches, or abrasions over wide areas are not acceptable. If top and bottom surfaces are not parallel, this would indicate that the container is warped. Dents should be less than 1/4 in. deep by 3-inches long and between ½ in. to 6-inches wide. All other dents must be examined to determine impact of structural integrity.	YES	NO
9.	Is there discoloration which would indicate leakage or other evidence of leakage of material from the payload container?	Examine the payload container regions near vents, top lid fittings, bottom fittings, welds, seams and intersections of one or more metal sheets or plates. Payload containers must be rejected if evidence of leakage is present.	YES	NO
10.	Is the payload container bulged?	For the purposes of this examination, bulging is indicated by: A.1 A fairly uniform expansion of the sidewalls, bottom, or top (e.g., in the case of a drum, either the top or bottom surface protrudes beyond the planar surface of the top or bottom ring. A.2 A protrusion of the side wall (e.g., in the case of a drum, beyond a line connecting the peaks of the surrounding rolling hoops or a line between a surrounding rolling hoop and the bottom or top ring), or A.3 Expansion of the sidewall (e.g., in the case of a drum, such that it deforms any portion of a rolling hoop).	YES	NO

Appendix 7 – Payload Container Integrity Checklist (Continued)

References to Appendix 7

1. INEEL Engineering Design File "*Waste Container Integrity Evaluation for Storage"*, EDF-RWMC-705, September 25, 1996. Idaho National Engineering and Environmental Laboratory, Idaho Falls, ID

2. Title 49 CFR Part 173, Subpart 475. *"Quality Control Requirements Prior to Each Shipment of Class 7 (Radioactive) Materials." Code of Federal Regulations,* Washington, D.C., Office of the Federal Register, National Archives and Records Administration. (http://www.ecfr.gov)

3. DOE/RL-96-57, Section 2.5.5. *"Test & Evaluation Document for the U. S. Department of Transportation Specification 7A type to Packaging"* (Formerly WHC-EP-0558) (http://rampac.energy.gov/certinfo/special/noncertified/dot7a/pdot7a.aspx)

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Appendix 8 – Payload Management of TRU Alpha Activity Concentration

1.0 Scope

The policies and methods for the management of TRU alpha activity concentration within each TRU waste payload container disposed of at the WIPP are set out in this appendix. They are based on the definition of TRU waste in the *WIPP LWA*, Public Law 102-579. The LWA defines TRU waste as:

"…waste containing more than 100 nanocuries of alpha emitting transuranic isotopes per gram of waste, with half lives greater than 20 years…" (Sec. 2[18]).

This appendix pertains specifically to the payload management of TRU alpha activity concentration of waste containers selected for overpacking.

2.0 Policies

The Office of National TRU Program has established the following policies for managing TRU alpha activity concentration in compliance with the LWA: (References 1, 2, and 3)

- The TRU alpha activity concentration limit for TRU waste (> 100 nCi/g) applies to the TRU waste stream as a whole.

- Waste containers belonging to a TRU waste stream may vary in their TRU alpha activity concentration, some containing > 100 nCi/g and some containing < 100 nCi/g. Using process knowledge in combination with radioassay measurements to determine the presence of TRU isotopes within the waste stream, generator sites define a TRU waste stream based on its potential to include waste containers with a TRU alpha activity concentration in excess of 100 nCi/g.

- Waste containers belonging to the same TRU waste stream may be overpacked into a payload container (e.g., SWB or TDOP) provided the TRU alpha activity concentration of the payload container exceeds 100 nCi/g.

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Appendix 8 – Payload Management of Transuranic (TRU) Alpha Activity Concentration (Continued)

3.0 Prerequisites for Implementation

- Each waste container selected for payload management must be part of the TRU waste stream identified in the AK Summary Report for that waste stream (References 2 and 3).

- Sites shall submit to the CBFO, for its review and approval, applicable plans and procedures for making TRU waste determinations based on payload management practices that involve the overpacking of waste containers (Reference 2).

- CBFO will notify the EPA of sites seeking such authorization prior to CBFO's approval of a site to manage TRU alpha activity concentration using payload management. The WIPP will not accept payload managed waste for disposal until EPA has received notice (Reference 3).

4.0 Implementation and Practice

- Each TRU waste stream selected for payload management must include in its AK Summary Report an estimate of the total waste volume and the percentage of the waste volume that is above and below 100 nCi/g (It should be noted that this information, although based on the best available AK information, is preliminary and subject to the performance of WIPP certified NDA measurements and cannot and will not be used as a measure of AK accuracy) (Reference 3).

- Each waste container selected for payload management must contain at least one TRU isotope (e.g., Pu-238, Pu-239, Pu-240, Pu-242) whose activity exceeds the LLD of the radioassay system used to characterize the waste (References 2 and 3). The applicability of LLD will vary from system to system and may be on a container basis. Sections 3.3.1 and A.3 of this document provide the applicable requirements for determining and reporting LLDs.

- Each waste container selected for payload management may only be overpacked into a payload container (e.g., SWB or TDOP) with other waste containers from the same TRU waste stream.

- The TRU alpha activity concentration of the payload container is determined according to Sections 3.3.3 and 4.3.3 of this document.

Appendix 8 – Payload Management of Transuranic (TRU) Alpha Activity Concentration (Continued)

5.0 References

1. Public Law 102-579, 106 Stat.4777, 1992 (as amended by Public Law 104-201, 1996). *Waste Isolation Pilot Plant Land Withdrawal Act* (http://www.wipp.energy.gov/library/cra/baselinetool/documents/regulatory%20tools/10%20WIPPLWA1996.pdf)

2. Letter to Mr. Frank Marcinowski (Director, Office of Radiation and Indoor Air, U.S. Environmental Protection Agency) from Dr. Ines R. Triay (Manager, Carlsbad Field Office, U.S. Department of Energy), August 4, 2003

3. Letter to Dr. Ines R. Triay (Manager, Carlsbad Field Office, U.S. Department of Energy) from Mr. Frank Marcinowski (Director, Office of Radiation and Indoor Air, U.S. Environmental Protection Agency), August 8, 2003

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Appendix 9 – Radiography Requirements for Contact-Handled Transuranic Waste

9.1 Radiography Requirements for Contact-Handled Waste

Radiography aids in the examination and identification of containerized waste. All activities required to achieve radiography objectives shall be described in site Program documents as identified in Appendix 4, Table B-2. These documents shall include instructions specific to the radiography systems used at the site. This appendix applies to radiography of CH waste; requirements for radiography of RH waste are found in the WCPIP.

A radiography system (e.g., real-time radiography or digital radiography/computed tomography), normally consists of an x-ray producing device, an imaging system, an enclosure for radiation protection, a waste container handling system, an audio/video recording system, and an operator control and data acquisition station. Although these six components are required, it is expected there will be some variation within a given component between sites. The radiography system shall have controls or an equivalent process which allow the operator to control image quality. On some radiography systems, it should be possible to vary the voltage between 150 and 400 kilovolts to provide an optimum degree of penetration through the waste.

To perform radiography, the waste container is scanned while the operator views the video monitor. An audio/video recording shall be made of the waste container scan and is maintained as a non-permanent record. A radiography data form shall also be used to document the Waste Matrix Code; verify there are no ignitable, reactive, or corrosive wastes present by verification that there is no observable liquid in excess of the waste acceptance criteria and there are no compressed gases; and estimated waste material parameter weights of the waste.

The estimated waste material parameter and weights for CH waste should be determined by compiling an inventory of waste items and packaging materials. The items on this inventory should be sorted by waste material parameter and combined with a standard weight look-up table to provide an estimate of waste material parameter weights.

Containers whose contents prevent full examination of the remaining contents shall be subject to visual examination unless the site certifies that visual examination would provide no additional relevant information for that container using acceptable knowledge for the waste stream.

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

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Appendix 9 – Radiography Requirements for Contact-Handled Waste (Continued)

9.2 Radiography Training

The radiography system involves qualitative and semi-quantitative evaluations of visual displays. Operator training and experience are the most important considerations for assuring quality controls in regard to the operation of the radiography system and for interpretation and disposition position of radiography results. Only trained and qualified radiography operators shall be allowed to operate radiography equipment.

Standardized training and qualification requirements for radiography operators shall be based upon existing industry standard training requirements and shall comply with the training and qualification requirements of this document and the QAPD.

The site shall develop a training program that provides radiography operators with both formal and OJT. Radiography operators shall be instructed in the specific waste generating practices, typical packaging configurations, and associated waste material parameters expected to be found in each Waste Matrix Code at the site.
The OJT and apprenticeship shall be conducted by an experienced, qualified radiography operator prior to qualification of the training candidate. The training programs shall be site-specific due to differences in equipment, waste configurations, and the level of waste characterization efforts. For example, certain sites use digital radiography equipment, which is more sensitive than real-time radiography equipment. In addition, the particular physical forms and packaging configurations at each site will vary; therefore, radiography operators shall be trained on the types of waste that are generated, stored, or characterized at that particular site.

The training program shall contain the following elements:

- Project Requirements
- State and Federal Regulations
- Basic Principles of Radiography
- Radiographic Image Quality
- Radiographic Scanning Techniques
- Application Techniques
- Radiography of Waste Forms
- Standards, Codes, and Procedures for Radiography
- Site-Specific Instruction

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Appendix 9 – Radiography Requirements for Contact-Handled Waste (Continued)

The training program shall also contain OJT which addresses:

- System Operation
- Identification of Packaging Configurations
- Identification of Waste Material Parameters
- Weight and Volume Estimation
- Identification of Prohibited Items

Radiography test drums shall contain items common to the waste streams to be generated and stored at the site. The test drums shall be divided into layers with varying packing densities or different drums may be used to represent different situations that may occur during radiography examination at the site. Test drums shall be representative of the waste matrix codes for which WSPF approval is sought. Test drums shall be examined and successfully identified prior to waste stream shipment. The following is a list of required elements of a radiography test drum:

- A punctured aerosol can
- Pigtails on polyliners (horsetail bag)
- Pair of coveralls
- Empty bottle
- Irregular shaped pieces of wood
- Empty one-gallon paint can
- Full container
- Aerosol can with fluid
- One-gallon bottle with three tablespoons of fluid
- One-gallon bottle with one cup of fluid (upside down)
- Leaded glove or leaded apron
- Wrench

These items shall be successfully identified by the operator as part of the qualification process. Qualifications of radiography operators shall, at a minimum, encompass the following requirements:

- Successfully pass a comprehensive exam based upon training enabling objectives. The comprehensive exam will address all of the radiography operations, documentation, characterization and procedural elements stipulated in this WAC.

- Perform a practical capability demonstration in the presence of appointed site radiography SME. The person will be an experienced radiography operator who is also qualified as an OJT trainer.

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Appendix 9 – Radiography Requirements for Contact-Handled Waste (Continued)

Re-qualifications of operators are based on evidence of continued satisfactory performance (primarily audio/video recording reviews), and shall be done at least every two years. Unsatisfactory performance will result in disqualification. Unsatisfactory performance is defined as the misidentification of a prohibited item in a training drum or a score of less than 80 percent on the comprehensive exam. Retraining and demonstration of satisfactory performance are required before a disqualified operator is again allowed to operate the radiography system.

A training drum with internal containers of various sizes shall be scanned semiannually by each operator. The audio/video recording shall then be reviewed by a supervisor to ensure that operator's interpretations remain consistent and accurate. Imaging system characteristic shall be verified on a routine basis.

9.3 Quality Control

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

Oversight functions include periodic audio/video recording reviews of accepted waste containers by a qualified radiography operator other than the operator who dispositioned the waste container. The results of this independent verification shall be made available to the radiography operator.

9.4 Data Review and Validation

A testing BDR for data validation and QA purposes is required when radiography is used to characterize waste. A testing BDR (or equivalent), includes data pertaining to radiography for up to 20 waste containers or samples.

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Appendix 9 – Radiography Requirements for Contact-Handled Waste (Continued)

All measurement data is reviewed and approved by qualified personnel prior to being reported. Reviews shall meet the requirements of the QAPD. At a minimum, the data is reviewed by an independent technical reviewer and approved by the SPM. This review is performed by an individual other than the data generator who is qualified to have performed the initial work. The independent technical reviewer shall verify, at a minimum, the following information:

- Data generation and reduction is conducted in a technically correct manner in accordance with the methods used (verification of procedure and revision).
- Data is reported in the proper units and correct number of significant figures.
- Calculations are verified by a valid calculation program, a spot check of verified calculation programs, and/or 100 percent check of all hand calculations.
- Values that are not verifiable to within rounding or significant difference discrepancies shall be rectified prior to completion of independent technical review.
- The data is reviewed for transcription errors.
- The testing QA documentation for BDRs is complete and includes, as applicable, raw data, calculation records, calibration records (or references to an available calibration package), list of containers in the batch, and QC sample results. Corrective action is taken to ensure that all BDRs are complete and include all necessary raw data prior to completion of the independent technical review.
- QC sample results are within established control limits and, if not, the data have been appropriately dispositioned using the nonconformance process. This includes complete summarized qualitative and quantitative data for all waste containers with data flags or qualifiers.
- Radiography tapes are reviewed (independent observation) on a waste container basis at a minimum of once per testing batch or once per day of operation, whichever is less frequent.
- The container contains no indication that there is liquid in excess of this waste acceptance criteria, no indication of compressed gas, no indication of incompatible wastes, and the physical form matches the Waste Matrix Code.
- The appropriate QAOs have been met.

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Appendix 9 – Radiography Requirements for Contact-Handled Waste (Continued)

All data must be approved by the SPM. The SPM shall verify, at a minimum, the following information:

- Data generation-level independent technical review, validation, and verification have been performed as evidenced by the completed review checklists and appropriate signature release. Batch data review checklists are complete.

- BDRs are complete and data are properly reported (e.g., data are reported in the correct units and with the correct number of significant figures).

- Data meet all applicable Quality Assurance Objectives.

The SPM shall provide a SPM Summary and a Data Validation Summary for each BDR. These reports may be combined and shall consist of a detailed checklist documenting that the batch has been adequately reviewed and that the data meet program objectives.

To ensure that data of known and documented quality are generated, each participating measurement facility shall implement a documented facility QA program. Facility QA programs shall specify qualitative and quantitative acceptance criteria for the QC checks of this program, and corrective actions to be taken when these criteria are not satisfied. Only appropriately trained and qualified personnel shall be allowed to perform data validation/review.

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Appendix 10 – Visual Examination Requirements for Contact-Handled Transuranic Waste

10.1 Visual Examination Requirements for Contact-Handled Waste

This appendix applies to visual examination requirements for CH waste; requirements for visual examination of RH waste are found in the WCPIP.

Contact handled waste container contents may be verified directly by performing VE on the waste container contents. Visual examination may also be performed during packaging or repackaging of waste. The CCP performs VE in accordance with the procedures found in Appendix 4, Table B-3.

VE does not require audio/video recordings of the examination; the examination is documented on a data form and certified with signatures from two qualified VE operators. If the second operator cannot verify the descriptions of the first operator, corrective actions will be taken in accordance with the established QA Program.

VE shall be conducted to describe all contents of a waste container and includes estimated or measured weights of the contents. The description shall clearly identify all discernible waste items, packaging materials, and waste material parameters in the waste container. VE activities are documented on VE data forms.

VE video/audio recordings of containers that contain classified shapes shall be considered classified information. Visual examination data forms will not contain classified information.

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Appendix 10 – Visual Examination Requirements for Contact-Handled Transuranic Waste (Continued)

10.2 Visual Examination Training

VE shall consist of a semi-quantitative and qualitative evaluation of the waste container contents and may be recorded on audio/video recording media. Standardized training for VE includes both formal classroom training and OJT. Personnel performing VE shall be instructed in the specific waste generating processes, typical packaging configurations, and the waste material parameters expected to be found in each Waste Matrix Code at the site. The OJT and apprenticeship shall be conducted by an operator experienced and qualified in VE prior to qualification of the candidate. The training shall be site-specific to include the various waste configurations at the site. For example, the particular physical forms and packaging configurations at each site will vary so operators shall be trained on types of waste that are generated, stored, or characterized at that particular site. VE operators need only be trained to the physical forms and packaging configurations used on the waste stream that they are examining and packaging. VE personnel shall be requalified once every two years.

Training shall address the following required elements:

- Project Requirements
- State and Federal Regulations
- Application Techniques
- Site-Specific Instruction

Training shall also include OJT that addresses:

- Identification of Packaging Configurations
- Identification of Waste Material Parameters
- Weight and Volume Estimation
- Identification of Prohibited Items

The SPM appoints each Visual Examination Expert (VEE) and ensures the appointment is facility-specific. The VEE shall be familiar with the waste generating processes that have taken place at the site and will also be familiar with all types of waste being characterized at that site. The VEE shall be responsible for the overall direction and implementation of the visual examination at that facility. The VEE shall receive training in the same elements as the visual examination personnel, including both formal training and OJT. Qualification of a VEE shall be based on familiarity with waste generating processes, familiarity with the types of waste being characterized, and meeting the training requirements discussed above. Consistent with other VE personnel, the VEE shall be requalified once every two years. CCP-QP-002 specifies the selection, qualification and training requirements for the VEE.

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Appendix 10 – Visual Examination Requirements for Contact-Handled Transuranic Waste (Continued)

10.3 Method

Visual examination recorded on video/audio media meet the following minimum requirements:

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

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

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

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

VE performed using two operators shall meet the following minimum requirements:

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

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

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

A description of the waste container contents is recorded on a VE data form. The description clearly identifies all waste material parameters and provides enough information to estimate weights of waste material parameters. In cases where bags are not opened, a brief written description of the contents of the bags shall contain an estimate of the amount of each waste type in the bags. The written records of VE are supplemented with the audio/videotape recording, if applicable.

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Appendix 10 – Visual Examination Requirements for Contact-Handled Transuranic Waste (Continued)

10.4 Data Review and Validation

A testing BDR for data validation and QA purposes is required when VE is used to characterize waste. A BDR (or equivalent), includes data pertaining to VE for up to 20 waste containers or samples.

All measurement data is reviewed and approved by qualified personnel prior to being reported. Reviews meet the requirements of the QAPD. At a minimum, the data is reviewed by an independent technical reviewer and approved by the SPM. This review is performed by an individual other than the data generator who is qualified to have performed the initial work. The independent technical reviewer shall verify, at a minimum, the following information:

- Data generation and reduction were conducted in a technically correct manner in accordance with the methods used (verification of procedure and revision).
- Data were reported in the proper units and correct number of significant figures.
- Calculations have been verified by a valid calculation program, a spot check of verified calculation programs, and/or 100 percent check of all hand calculations.
- Values that are not verifiable to within rounding or significant difference discrepancies must be rectified prior to completion of independent technical review.
- The data have been reviewed for transcription errors.
- The testing QA documentation for BDRs is complete and includes, as applicable, raw data, calculation records and list of containers in the batch. Corrective action will be taken to ensure that all BDRs are complete and include all necessary raw data prior to completion of the independent technical review.
- The container contains no indication that there is liquid in excess of this waste acceptance criteria, no indication of compressed gas, no indication of incompatible wastes, and the physical form matches the Waste Matrix Code.
- The appropriate QAOs have been met.

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Appendix 10 – Visual Examination Requirements for Contact-Handled Transuranic Waste (Continued)

All data must be approved by the SPM. The SPM shall verify, at a minimum, the following information:

- Data generation-level independent technical review, validation, and verification were performed as evidenced by the completed review checklists and appropriate signature release. Batch data review checklists are complete.

- BDRs are complete and data are properly reported (e.g., data are reported in the correct units and with the correct number of significant figures).

- Data meet all applicable Quality Assurance Objectives.

The SPM shall provide a SPM Summary and a Data Validation Summary for each BDR. These reports may be combined and shall consist of a detailed checklist documenting that the batch has been adequately reviewed and that the data meet program objectives.

To ensure that data of known and documented quality are generated, each participating measurement facility shall implement a documented facility QA program. Facility QA programs shall specify qualitative and quantitative acceptance criteria for the QC checks of this program, and corrective actions to be taken when these criteria are not satisfied. Only appropriately trained and qualified personnel shall be allowed to perform data validation/review.

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CCP-PO-005

Revision 23

CCP
Conduct of Operations

EFFECTIVE DATE: 02/18/2013

Mike Ramirez

PRINTED NAME

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RECORD OF REVISION

Revision Number	Date Approved	Description of Revision
3	02/14/2002	Revised Section 15, updated referencing procedures.
4	07/12/2002	Minor changes to Sections 4.7.1, 4.7.2, and 17.7; a complete rewrite of Section 15; a minor revision to Attachment 1; Added Attachment 2, 3, 4, 5, 6, and 7.
5	08/29/2002	Modified last sentence of step 4.1. Added step 6.2, Rewriting of Section 12.0; Clarification to step 15.2.4 and 17.7, Rewriting of step 15.2.5 and 15.3.4. Addition of Operational Logbooks to Section 20.0. Corrections to Attachment 3, 4, 6 and 7. Replaced Attachment 1.
6	09/12/2002	Revised the definition of a logbook in Section 12.1 based on comments from the ANLE Certification Audit.
7	09/30/2002	Addition to Attachment 2, 3, 4, 5, 6, & 7.
8	12/09/2002	Revised Attachment 3 and 7
9	03/26/2003	Added to Section 12.0, Changes to Attachment 5, 6 and 7
10	07/17/2003	Added Hanford, LANL and LLNL to required reading. Separated electronically fillable form and updated references in procedure.
11	12/08/2003	Updated Sections 2.0, 6.0, 12.0, 15.0, 16.0 and 18.0 for clarification. Deleted references to E-QA, Updated Attachment 8 and added additional records to 20.0.
12	02/25/2005	Change to Section 4.1 and 4.4. Changes to all Attachments. Incorporated changes per OSR Project.
13	03/07/2005	Minor revision to add signature line to Attachment 1. Signature line was inadvertently left out during last revision.
14	02/28/2006	Revised to include a new Section 6.3, Communication of Employee Concerns.
15	07/19/2006	Revised to incorporate the automation of the required reading program and to include the Remote-Handled Program.

RECORD OF REVISION (Continued)

Revision Number	Date Approved	Description of Revision
16	11/16/2006	Revised to implement the Waste Isolation Pilot Plant Hazardous Waste Facility Permit requirements resulting from the Section 311/Remote-Handled (RH) Permit Modification Request (PMR).
17	03/04/2008	Revised to updated title of Section 14 to match DOE Order 5480.19 and to address the Corrective Action Report, ORNL-CCP-CH-RTR-001CR resulting from the CCP Oak Ridge National Laboratories Project Environmental Protection Agency Inspection (EPA-ORNL-CCP-CH-11.07-8).
18	10/30/2008	Revised in response to Department of Energy (DOE) Carlsbad Field Office (CBFO) Corrective Action Report (CAR)-08-023. Also, revised Section 16.2 to separate the Required Reading matrices in Appendix A from CCP-PO-005. They will be maintained by CCP Training in conjunction with responsible management, and the current versions will be posted on the CCP ftp site.
19	10/30/2008	Minor revision to Section 13.0 to clarify that the CCP Transportation personnel perform the independent verification of loading instead of the CCP Transportation Certification Official.
20	07/08/2009	Revised in response to recommendation from the Expert Review Team assessment of Central Characterization Project (CCP) Idaho National Laboratory (INL) Operations.
21	05/26/2010	Revised in response to Corrective Action Report (CAR)-CCP-0012-09. Also moved the controls for Lessons Learned to Section 6.2, and changed the scope of Section 13.0 to address operational logbooks exclusively.
22	06/14/2011	Revised to add detail to Section 6.0 and Section 7.0, and make minor editorial corrections throughout

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RECORD OF REVISION (Continued)

Revision Number	Date Approved	Description of Revision
23	02/18/2013	Updated to reflect DOE Order 422.1 throughout. Added language in Sections 17.2 and 17.5 regarding pagination of printed Standing Orders and revised text regarding incorporating Standing Orders into procedures. Revised Section 17.5, and Attachments 5, 6, and 7 in response to CBFO CAR 13-006.

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1.0 PURPOSE

The purpose of this document is to provide specific guidance for implementation of the Conduct of Operations into Central Characterization Program (CCP) activities. This document allows the user to reference implementing documents and procedures applicable to the CCP.

1.1 Scope

The scope of this document is to assemble the good operating practices by which personnel in CCP organizations, including subcontractors, are expected to perform. The practices in this document supplement other instructions provided in CCP documents.

2.0 REQUIREMENTS

2.1 References

Referenced Documents

- U.S. Department of Energy (DOE) Order 422.1, *Conduct of Operations*
- CCP-PO-002, *CCP Transuranic Waste Certification Plan*
- CCP-QP-008, *CCP Records Management*
- CCP-QP-010, *CCP Document Preparation, Approval, and Control*
- CCP-QP-022, *CCP Software Quality Assurance Plan*
- CCP-TP-140, *CCP Equipment Maintenance*

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3.0 RESPONSIBILITIES

Overall responsibilities and organizational interfaces are described in CCP-PO-002, *CCP Transuranic Waste Certification Plan*.

Memorandum of Understanding (MOU)/Agreement, Statements of Work (SOW), and/or Site Interface Documents specify Host site responsibilities, plans, and procedures.

The SOW outlines Host site's responsibilities as they apply to the CCP activities conducted at the Host site.

4.0 SHIFT ROUTINES AND OPERATING PRACTICES

4.1 Status Practices

CCP operations will be in accordance with approved procedures and will be performed by qualified personnel. The Vendor Project Manager (VPM) will verify daily that personnel are qualified to perform their assigned duties by reviewing the current List of Qualified Individuals (LOQI). The Transportation Certification Official (TCO) will verify that mobile loading unit personnel are trained and qualified to perform TRU waste packaging and loading operations, by checking the current LOQI prior to commencement of work activities. The TCO will also verify that Host site personnel are trained and qualified for transportation-related activities by checking the current LOQI. When the TCO is not available, the LOQI will be checked by the VPM or a designated individual assigned by the operations manager.

The VPM shall conduct a pre-shift meeting, as required in the Site Interface Documents, if the generator site is not working multiple shifts. (Section 14.5 of this document shall be followed if working multiple shifts). This meeting may be held separately or in conjunction with Host site pre-shift meetings. Pre-shift meetings may be tailored to fit the operation, as required by the VPM, but should address the following as a minimum:

- Adherence to established safety requirements
- Plans and priorities for the shift
- Changes in facility conditions or site access requirements
- Status of equipment
- Maintenance activities and special evolutions
- Visitors (i.e., anyone requiring an escort) expected during the shift
- Waste stream(s) expected to be introduced for characterization
- New or revised procedures approved since the last day of operations
- New or revised Acceptable Knowledge (AK) Summary Reports approved since the last day of operations

The term Lead Operator (LO) is used to identify the person responsible to assist the VPM in completion of his duties associated with a specific piece

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or set of equipment. This individual will possess technical expertise for the specific equipment involved and will assist the VPM with duties such as ensuring assigned personnel are fit for duty, maintenance and review of equipment logbooks, preparation and review of standing orders, and preparation of operator aids. This position is assigned at the discretion of the VPM. The VPM shall notify affected personnel of any such assignments. This notification may be provided verbally during the daily Plan-of-the-Day (POD) meeting.

The VPM will be notified promptly of all changes in facility status, abnormalities, and difficulties or unexpected situations encountered when performing assigned tasks. The VPM shall promptly notify the CCP Project Manager of events impacting waste characterization activities.

When an unexpected event or series of events occurs or when the cause and consequences cannot be readily determined, the situation will be investigated and appropriate action taken before resuming operation.

An initial entry will be made in applicable logs stating the initiating event. Log entries will be clear, complete, and concise.

An on-shift assessment meeting will be held as soon as possible after an event to determine pertinent information relating to the event. If necessary, the shift will be held over to obtain this information.

Evidence regarding the cause of a problem will be safeguarded as sensitive information.

The LO and operators are responsible and accountable for the operations conducted during their shift. They will be cognizant of the status of all equipment and records of respective work areas.

All CCP personnel have the right and responsibility to STOP WORK. STOP WORK may be invoked any time anyone feels the safety, quality, or compliance of any CCP operation or maintenance activity has been or might be compromised. This is an individual right and responsibility and does not require the approval of supervision to invoke. STOP WORK is invoked without fear of reprisal in any form in the CCP program. The VPM will be immediately notified when STOP WORK authority has been invoked. The VPM will obtain the help of any resources necessary to respond to and correct the condition requiring the implementation of a STOP WORK order. Work may resume when the issue is resolved, the worker invoking STOP WORK is notified of the resolution, and authorization is given by the VPM to lift the STOP WORK.

STOP WORK shall **NOT** be ignored when invoked.

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4.2 Safety Practices

Personnel assigned to CCP operations shall present and maintain themselves in a condition fit for duty.

The VPM or LO shall ensure that no employee is permitted to assume their duties and responsibilities, in support of CCP operations, if it is obvious that the person is not alert, coherent, or capable of performing the requirements of the position.

Pre-job briefings will be conducted by the VPM or Designee before evolutions that are new or complex in nature, or where proficiency at the task is questioned. This will ensure the evolutions will be conducted properly and safely.

In all situations, employees will place personnel safety, facility safety, and environmental safety above CCP production. Work that violates prescribed safe work practices must be stopped and the situation immediately reported to the Host site manager and the VPM.

Planning for safety is the responsibility of all employees. Strict compliance with applicable safety standards and/or precautions will be maintained at all times. Safety precautions may be posted or be described, or referenced in job-specific procedures or work instructions.

Personnel will not climb or walk on components because this could result in personnel injury or damage to equipment. Applicable site procedures shall discuss the proper use of man-lifts, temporary scaffolding, and ladders.

Personnel will exercise appropriate precautions when entering or working in or around energized panels or equipment. Applicable site procedures shall discuss specific requirements for working around energized equipment.

Doors that serve as fire protection, security, and ventilation barriers will not be propped open for the passage of energized electrical leads or pressurized hoses, or for any other reason without the Host site manager's approval.

4.3 Inspection Tours

Operators will conduct a thorough tour of all areas within their responsibility at least once per shift or more often if directed by CCP management. The initial tour will normally be made early in the shift before the operator attends to other duties. Equipment will be inspected during area tours to ensure that the equipment is operating properly and, for standby equipment, to verify that it is fully operable (i.e., able to perform its intended function). Operators will operate the facility in a safe and deliberate manner, to ensure the following items have been evaluated during their tours:

Housekeeping

Areas around the equipment, At-the-Controls, and egress routes are clear/free of:

- Slip, trip, fall hazards (i.e., electrical cords, ice, or water).
- Combustible materials or trash.
- Tools or materials lying adrift.
- Excessive dirt, dust, or debris.

General Safety

- Communication equipment is operational.
- Equipment guards, bumpers, external optical/limit switches, and signs are in place and not degraded/damaged.
- Operator Personal Protective Equipment (PPE) is available, worn, or in use (i.e., safety vests, safety shoes, leather gloves).
- Barriers are intact, in place, with applicable postings (i.e., at-the-controls).
- Dosimetry and security badges are properly worn and clearly visible.
- Operators have signed the current Radiological Work Permit (RWP) or work document and understand the applicable radiological postings in the area.
- Emergency equipment in the area is accessible and not damaged (i.e., eye wash stations, spill kits, portable extinguishers).

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- Chemicals and lubricants not in use are stored in the local chemical/flammable storage locker(s).

- Equipment safety interlocks are checked and documented appropriately.

CCP management will designate specific areas to be inspected more frequently due to such considerations as areas of high personnel activity, or where known problems exist (e.g., adverse weather conditions). They may also designate areas to be inspected less frequently due to existing personnel safety concerns. The CCP VPM will conduct a thorough tour of all areas within their responsibility to evaluate the attributes of the Operator's Inspection Tours and the following:

General Safety

- Status board(s) are current/up-to-date.

- Standing orders/operator aids are properly posted and clearly visible to the operator.

- Operators are alert and attentive at the equipment.

- Waste Handling Equipment/waste containers do not block or restrict egress routes.

- Radiological Warning Devices are operating.

Procedural Compliance

- Operating procedures are at the equipment, current, in good repair, and open to the step(s) being performed.

- Equipment logbooks are in use, entries are legible and adequate.

- Steps performed from the procedure were observed to have been performed in sequence, verbatim, and were documented appropriately, if required.

4.4 Personnel Protection

CCP personnel shall adhere to the requirements of the Host site Industrial Safety Program. Proper hearing, vision, head, foot, and respiratory protection shall be worn in designated areas to reduce the potential for injury. Clothing will not be so tight as to restrict movement or so loose as to get caught in moving machinery. This information is specified within CCP operations procedures and posted appropriately throughout the area(s) where CCP activities will occur.

Emphasis will be placed on determining the adverse factors that contribute to personnel exposures and minimizing those factors to keep exposures within as low as reasonably achievable (ALARA) specifications.

4.5 Response to Indications

A fundamental principle of safe facility operation is to believe your indications. CCP personnel will:

- Assume that the alarm condition, gauge reading, meter reading, analytical result, etc., is accurate, unless proven otherwise.
- Take appropriate response action.

The results of the action will be reported to the appropriate facility personnel.

4.6 Resetting Protective Devices

The VPM is the only person who can authorize resetting tripped devices associated with the CCP-provided equipment downstream of the Host site utility interfaces.

The Host site manager is the only person who can authorize resetting tripped devices supporting CCP upstream of the Host site utility interfaces.

When a protective device trips, a visual inspection of the device and associated equipment will be performed prior to resetting the device.

4.7 Authority to Operate Equipment

4.7.1 The following requirements apply to the Host site, its equipment, and the interface with CCP characterization activities:

- The Host site manager is in charge of plant operations 24-hours-a-day. This judgment may be overruled only by the Host site manager's chain-of-command.

- The Host site manager's operational judgment will be considered definitive. This judgment may be overruled only by the Host site manager's chain-of-command.

- The Host site manager is responsible for maintaining the plant in a safe configuration during normal and abnormal situations.

- The Host site manager approves of operations and/or maintenance of plant equipment and systems.

4.7.2 The following requirements apply to the operation of CCP characterization activities:

The VPM will obtain approval from the Host site manager before performance of operations and maintenance of CCP equipment and systems.

The VPM's operational judgment will be considered definitive for the safe operation of CCP characterization activities. This judgment can only be overruled by the following:

- The Host site manager in matters of overall safe operation of the Host site.

- The CCP Manager responsible for Operations.

- The CCP Manager.

- Nuclear Waste Partnership (NWP) Senior Management, or designees, directly responsible for CCP operations.

CCP operations will be performed only by properly trained and qualified personnel as verified from the LOQI by the VPM.

Upon discovery of an emergency or non-routine event, CCP personnel shall:

- Take immediate actions to ensure their own safety.

- If appropriate, warn other employees who may be affected.

- Report the event to the VPM and the Host site manager as soon as possible.

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Operators will establish plant safety conditions over facility production conditions for all off-normal and emergency facility situations.

4.8 Shift Operating Bases

Each operating base will be equipped with appropriate office equipment for the operator to maintain necessary procedures and references to conduct administrative duties.

Necessary communication equipment will be available at each operating base.

4.9 Potentially Distractive Written Material and Devices

Some devices, such as radios, are allowed in administrative work areas. Non-job-related written materials may be present in the administrative work areas, but personnel are not allowed to read these during work hours.

Written material that does not relate to operations and entertainment devices (e.g., radios, televisions, tape players, and computer games) are prohibited for use by on-duty operating personnel.

Non-work-related written materials and entertainment devices will not be brought to operator workstations.

Cell phones may be used by on-duty operating personnel to supplement other means of two-way communications as long as no Host site cell phone restrictions exist and no additional hazards are introduced by cell phone usage. On-duty operators shall not use text messaging for personal business or play games on cell phones. The VPM may authorize the use of text messaging as a means of communicating business related information within a project. Personal phone calls shall be minimized by on-duty operators.

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5.0 CONTROL AREA ACTIVITIES

5.1 Control Area Access

Control Areas, when required, shall be established by the VPM.

Access to Control Areas will be limited to persons who need to be in Control Areas on official business.

The Control Area Operator will grant access to Control Areas. The one exception to this requirement is the on-duty VPM. The on-duty VPM may enter a Control Area without permission. The VPM will clearly announce when entering and when leaving the Control Area.

The "at-the-controls" area of Control Areas will be clearly identified with a boundary understood by all persons who are granted access to the area.

Only those activities essential to supporting operations and activities authorized by management will be conducted in Control Areas.

5.2 Monitoring the Main Control Panels

The Control Area Operators will be alert and attentive to control panel indications and alarms.

The Control Area Operators will frequently and closely monitor control panel indications to detect problem situations early.

The Control Area Operators will take prompt action to determine the cause and to correct abnormalities.

5.3 Control Operator Ancillary Duties

Duties assigned to operators should not interfere with their ability to monitor parameters.

If an operator is involved in administrative tasks, other qualified operators will assume responsibility to monitor the process.

The administrative work load of operators responsible for monitoring and operating Control Areas will be minimized.

5.4 Operation of Control Area Equipment

Only persons specifically authorized by CCP qualification programs will operate Control Area equipment.

Trainees, when allowed to operate Control Area equipment, will be supervised and controlled properly by the operator who would normally perform the evolutions.

6.0 COMMUNICATIONS

6.1 Emergency Communications Systems

When personnel are working in areas where emergency notifications cannot be heard, alternate methods for alerting these persons will be used:

- The Host site manager and the VPM will provide the appropriate notification methods for their responsible areas.

- Operators will ask for clarification of any communication that is not understood. Repeat-backs are to be used when determined to be necessary by supervision.

6.2 Lessons Learned

Lessons Learned are developed based on CCP's operating experience, or operating experience information provided by the DOE or other external sources, to ensure ongoing improvement of safety and reliability. Cognizant CCP managers will review Lessons Learned materials or events and determine the necessity to issue a lessons learned. The cognizant manager or designee will develop CCP Lessons Learned.

Lessons Learned will be developed using Attachment 7, Lesson Learned Form. The number for the Lessons Learned will be obtained from the Lesson Learned Log maintained by CCP Training. Once Attachment 7 is complete, the preparer will sign and forward Attachment 7 to the cognizant manager for review and approval. The approved Attachment 7 may be routed to the target audience as supplemental required reading or be provided as a briefing to the target audience. The electronic read-and-sign process administered by CCP Training is the preferred method for distributing Lessons Learned as supplemental required reading.

The approved Attachment 7 will be posted to the Lessons Learned folder on the CCP file transfer protocol (sftp) site. The record copy will be submitted to the CCP Records program for retention. Lessons Learned obtained from other DOE facilities or the DOE National Lessons Learned Database may be issued by obtaining a Lessons Learned number from CCP Training and determining a target audience. A copy of all CCP Lessons Learned will be provided by the cognizant manager to the NWP Lessons Learned Coordinator.

TheNWP Lessons Learned Coordinator will ensure that NWP Lessons Learned are posted on the WIPP Lessons Learned Alerts Database on the

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WIPPNet, making them available for review by CCP personnel as applicable.

6.3 Communication of Employee Concerns

6.3.1 When personnel wish to report an employee concern, they should follow existing processes (i.e., Open Door Policy, discussion with management). Documented employee concerns will be tracked in accordance with existing processes.

NOTE

This process DOES **NOT** take the place of STOP WORK for immediate safety issues. This process DOES **NOT** replace any other employee concern process.

6.3.2 When personnel identify an abnormal condition at CCP Host sites, formal notification should be made to the VPM:

- Notification can be made via telephone but will be followed with formal notification.
- Formal notification can be an e-mail, fax, or memorandum.
- Notification is to include the name of the person identifying the concern or abnormal condition and whether the issue is safety related.
- A copy of the notification shall be sent to the secretary for the CCP Project Manager by the VPM to allow tracking of issues in the NWP Commitment Tracking System (CTS).

7.0 ON-SHIFT TRAINING

7.1 Adherence to Training Programs

Qualification training is based on training identified in CCP-QP-002, *CCP Training and Qualification Plan*, or CCP-QP-040, *Support Training,* depending on the position requiring qualification training.

7.2 Supervision and Control of Trainees

CCP personnel will receive indoctrination, training, and qualification necessary to achieve initial proficiency; maintain proficiency; and adapt to changes in technology, methods, job responsibilities, and quality implementing procedures, prior to performing operations.

CCP On-the-Job-Training (OJT) Instructors will be specifically designated in writing. Selection of OJT Instructors will take into account communication skills, technical knowledge, and ability to instruct trainees properly using hands-on experience.

Trainees will not be allowed to perform any tasks within their qualification areas unsupervised. The maximum number of trainees allowed during operations and the maximum number of trainees per SME/qualified operator will be established by the VPM. The following requirements shall be met prior to allowing a trainee into the characterization activity to begin qualification:

- The LO shall provide the VPM with at least one week of advance notice prior to a trainee arriving at a Host site.

- The VPM shall verify that the trainee has the PPE required by the Health and Safety Plan, AHA, JHA, or other requirements document prior to allowing the trainee to proceed to the characterization activity to begin qualifications. As a minimum, this will include steel-toed or composite-toed safety shoes/boots.

The trainee has the following responsibilities during the time it takes to complete the qualification program and is accountable for these responsibilities:

- The trainee shall ensure that the PPE required to work in and transit to/from the characterization activity is available and worn at all times when under instruction.

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- The trainee shall not leave the immediate supervised area of the OJT Instructor or other qualified operator while working on qualifications.

- The trainee shall not perform any task in the work area without the direct supervision of the OJT Instructor or a qualified operator until qualifications are complete and the trainee is listed on the LOQI.

The OJT Instructor or qualified operator has the following responsibilities any time a trainee is assigned to complete a qualification program and is accountable for these responsibilities.

- The OJT Instructor or qualified operator shall verify that the trainee has the required PPE to work in or around the characterization activity prior to transiting to the characterization activity.

- The OJT Instructor or qualified operator shall ensure that the trainee is supervised at all times. The OJT Instructor or qualified operator must be able to stop the trainee from performing tasks incorrectly or unsafely at all times.

Any ongoing training activities involving trainees will be suspended during unanticipated or abnormal events.

The LO and the VPM will monitor the trainee qualification to ensure that the above requirements are met.

7.3 Operator Qualification Program Approval

The CCP Cognizant Manager (CM) will ensure that the requirements of the training program are implemented in accordance with CCP-QP-002 and CCP-QP-040.

7.4 Training Documentation

CCP-QP-002 provides documentation guidance for qualification programs.

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8.0 INVESTIGATION OF ABNORMAL EVENTS, CONDITIONS, AND TRENDS

All requirements of this section are covered by applicable Host site procedures.

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9.0 NOTIFICATIONS

CCP personnel shall immediately notify CCP Management (PM/VPM for field operations) of any abnormal event (e.g., emergency event, injury/illness, damage to equipment).

All Host site notification requirements are covered by applicable Host site procedures.

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10.0 CONTROL OF EQUIPMENT AND SYSTEM STATUS

The Host site manager is tasked with maintaining a broad overview of operations.

10.1 Status Change Authorization and Reporting

Responsibility for maintaining proper configuration and authorizing changes of Host site equipment and systems rests with the Host site manager.

Responsibility for maintaining proper configuration, and authorizing changes of CCP equipment, rests with the VPM, as modified by specific site interface documents.

All maintenance activities conducted on CCP equipment shall be authorized under the Host site work control program. The VPM shall be aware of and approve any maintenance activities conducted by Host site maintenance personnel on CCP equipment. The VPM shall evaluate the impacts of maintenance conducted by Host site maintenance personnel and provide a briefing to affected CCP personnel prior to the start of the maintenance activity.

A specific pre-job briefing shall be conducted by the VPM for any maintenance on CCP equipment conducted by CCP personnel or technical representatives from CCP subcontractors. The Host site prescribed pre-job briefing format will be followed where it is required by the work control system. In any case, the briefing shall include technical, radiological safety, and industrial safety aspects of the work and address the following as a minimum:

- The scope of the approved work document.
- The hazards identified in the approved work document, AHA, JHA, and RWP (or equivalent documentation).
- The actions taken to mitigate the hazards.
- The control of subcontractor technical personnel and limitations on their performance of work within the approved scope.
- Responsibilities of support personnel (i.e., Industrial Safety Engineer, Radiological Controls Technician, etc).
- Response to alarm or unexpected conditions.

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All CCP and support personnel involved in the maintenance activity, including vendor technical representatives, shall attend the pre-job briefing. The briefing, including a list of all personnel attending the briefing, shall be documented in the applicable Operational Logbook (OLB).

CCP personnel will monitor the equipment and systems of their assigned area frequently, especially after starting components, to assure proper operation.

When changing the operational status of equipment/systems and anticipated results are not received, the operator will:

- STOP WORK and inform the LO and the VPM.
- Take necessary action to restore the equipment/system to a proper operating status or place it in a safe operating condition.
- Place the equipment or system in a safe condition and obtain direction from the LO and the VPM before proceeding if an unexpected result occurs while performing an operating procedure.

10.2 Equipment Locking and Tagging

All requirements of this section are covered by applicable Host site procedures.

10.3 Operational Limits Compliance

Operational limits will be addressed in CCP Technical Procedures, as required.

10.4 Equipment Deficiency Identification and Documentation

All requirements of this section are covered by applicable Host site procedures.

10.5 Equipment Post-Maintenance Testing and Return to Service

Requirements of this section are addressed in CCP-TP-140, *CCP Equipment Maintenance*, where implemented, or are covered by applicable Host site procedures.

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11.0 LOCKOUT AND TAGOUTS

All requirements of this section are covered by applicable Host site procedures.

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12.0 INDEPENDENT VERIFICATION

All requirements of this section are covered by applicable Host site procedures.

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13.0 LOG KEEPING

OLBs shall be used at each CCP operation which operates complex equipment with nuclear material (e.g., NDA, NDE, GGT). The OLB provides an accurate narrative log of the history and status of the facility operation. Log keeping will not take precedence over the safe operation of the facility. Completed OLBs will be managed in accordance with CCP-QP-008*, CCP Records Management.*

13.1 Logbook

The logbook shall be a hard bound book. The OLB is considered a Quality Assurance (QA) record. Control numbers are issued by the CCP Records Center. For record purposes, an OLB shall only be in service for one calendar year or until the logbook is full (if filled within calendar year timeframe). The primary users of the OLB will be the equipment operators. A new logbook shall be issued to characterization activities on the first working day following the first of January each year or the first working day after notified the current OLB is full. The full logbook or logbook from the previous year shall be closed out and turned in to the CCP Facility Records Custodian.

When not in use, the OLB shall be stored in a locked fire-rated cabinet.

13.2 Logbook Entries

Information will be recorded in a timely fashion to prevent incomplete or inaccurate entries. The first page shall identify the logbook as an OLB, control number, calendar year, description of the facility/equipment, including location (e.g., Idaho National Laboratory [INL], Savannah River Site [SRS]), and the printed name and initials of the personnel who will be making entries. Each page shall be dated (a new page for each date) and each entry shall include the person's initials and time of day.

Daily entries will be made in a manner that can be easily read and understood and contain as much significant information as possible to make event and history reconstruction possible. Log entries will be made in indelible, reproducible ink (black recommended). At the end of each calendar day, a single diagonal line will be drawn through the remaining blank lines on the page in use and the initials and date entered by the diagonal line to indicate no further entries for that day. At the end of the calendar year, a single diagonal line shall be drawn through the first blank page after the last page of OLB entries. No further entries this year, initial, and date shall be entered by the diagonal line.

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Minimum daily entries, when equipment is operational, shall include the following:

- Safety walk-down of facility
- Facility mode conditions (e.g., operational or shutdown), if applicable
- Safety or security issues, if any
- Verification that operating procedures are current
- Verification that software in use is approved and current
- Entries required by CCP technical procedures

Other daily entries could include information such as:

- Equipment startup and shut down times
- Equipment deficiencies
- Lockout/tagout information
- Visitors
- Production throughput
- Performed maintenance activities
- Reference to the approved procedure describing the work, including control number and revision
- When multiple procedures are associated with the work (e.g., documenting calibration data), a statement of the objectives and a description of the work to be performed may be added.

13.3 Logbook Corrections

NOTE

OLBs shall **NOT** be corrected with correction fluid or correction tape.

Corrections to logbook entries will be made by placing a single line through the incorrect entry without obliterating the prior entry and writing the correct entry in a nearby available space. Corrections will be initialed and dated.

13.4 Late Entries

Entries made in a logbook out of chronological sequence are designated as late entries. Late entries are made in the logbook by documenting the time the late entry is made, entering (late entry), documenting the time the entry should have been made, documenting the entry, and initialing the entry.

IF the day the entry should have been made has been closed out,
THEN document the time and the date the entry should have been made.

13.5 Logbook Reviews

The VPM will review, sign, and date the logbook each operational week at a minimum. The reviews validate the entries are accurate and adequate.

The Transportation Certification Official (TCO) will review, sign, and date the Mobile Loading Operational logbook each operational week at a minimum. Should the TCO not be available to review the Mobile Loading Operational Logbook, the VPM may perform and document the review.

For Small Quantity Sites, logbooks will be reviewed by the VPM or a person designated by the manager for operations within one week of the completion of the process or activity for which the logbook was used.

13.6 Annual Reconciliation of Operational Logbooks

CCP Records

13.6.1 At the end of each calendar year, reconcile assigned OLB numbers with the OLBs submitted to CCP Records, as follows:

[A] Verify that an OLB has been submitted for each OLB number assigned during the previous year.

[B] Resolve any discrepancies with the responsible VPM.

Following receipt of all required OLBs and resolution of discrepancies, file an Operational Logbook Annual Reconciliation Report documenting the reconciliation effort and listing the OLBs that were verified.

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14.0 TURNOVER AND ASSUMPTION OF RESPONSIBILITIES

NOTE

This section is not applicable to CCP operations working only a normal day shift schedule. Turnover checklists will not be utilized unless the CCP operations extend to multiple shifts. Turnover checklists are otherwise not applicable to CCP personnel.

14.1 Turnover Checklists

Supervisory positions routinely conducting shift turnovers will use a turnover checklist for the process. These checklists will provide vital information about the site operational status. The managerial checklists will also require documenting the review of the equipment logbook.

Equipment logbooks, or other formal documentation, will be used to provide on-coming operators with an understanding of the operating status of their equipment.

A review of logbooks will be performed by on-coming shift personnel. Initials by watch station personnel after review of logbooks will signify review completion.

14.2 Document Review

On-coming personnel and CCP management will review documents specified on their turnover checklists before assuming responsibility for their shift position.

This document review will be as intensive as necessary for the on-coming personnel to understand important history, present status of the facility, and planned events.

Logbook entries for the previous 24-hour period, or since the relieving operator's last shift, will be reviewed.

Logbooks will be reviewed so that personnel and their management are familiar with all active entries, which emphasize changes that have occurred since the last shift.

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14.3 Control Panel Walkdown

On-coming managers will walkdown main equipment areas during, or shortly after, shift turnover.

Control Area on-coming and off-going personnel will walkdown their main control panel(s) together.

14.4 Discussion and Exchange of Responsibility

The off-going manager or operator will explain all items noted on the turnover checklist at a time when facility conditions are stable.

When facility conditions are changing or unusually complicated conditions exist, watch relief will not occur until directed by the VPM.

Turnover communications will include the on-coming operator or management asking any pertinent questions.

Each unusual reading, significant log entry, or out-of-specification reading will be discussed, and reasons for any questionable entries resolved, before watch relief.

After reviewing the logs, the on-coming and off-going watch station personnel will discuss the current watch station status, using the turnover checklist (as applicable), noting the following (as appropriate):

- Work order/maintenance work in progress
- Work order/maintenance retest in progress or waiting retest
- Reason for equipment being out-of-commission
- Abnormal equipment conditions, system lineups, or alarm status
- Evolutions and tests in progress
- Potential problem areas.

On-coming operator or manager assumption of responsibility will be concluded with an entry into a logbook or operating log, as appropriate for the shift position.

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14.5 Shift Crew Briefing

A crew briefing will be conducted by the VPM.

The crew shift briefing will include a review of facility and equipment status, problems with equipment, and evolutions in progress or planned during the shift.

Shift operators and personnel from support groups will attend shift briefings when their activities can directly affect facility operations.

Shift briefings will result in operating and support personnel understanding shift priorities and objectives.

14.6 Relief Occurring During the Shift

Shift relief occurring during the shift will result in a turnover that ensures that the on-coming person is at least as knowledgeable of the conditions as would have occurred had a complete shift turnover process been conducted.

Shift positions will not leave their assigned work areas without a formal relief by another qualified person if equipment is in operation.

The LO in charge may secure shift positions manned on a part-time basis.

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15.0 CONTROL OF INTERRELATED PROCESSES

All requirements of this section are covered by applicable Host site procedures.

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16.0 REQUIRED READING

The Host site prescribed Conduct Operations required reading program will be followed where it is part of their Safety Basis (SB) or Safety Management Program (SMP), or when otherwise required by a work control system. Required reading includes need-to-know corporate information, safety bulletins, lessons learned, or information that will add value to the operations but are not a prerequisite for indoctrination or performing work.

Required reading for personnel will be assigned by the cognizant manager. The cognizant manager will provide the reading material to assigned personnel. The cognizant manager will issue Attachment 8, CCP Required Reading Documentation with the required reading.

The completed Attachment 8 will be returned to the cognizant manager. Once the cognizant manager verifies and validates completion of Attachment 8, it will be forwarded to CCP Training in accordance with CCP-QP-008.

As an alternative to the use of Attachment 8, the electronic read-and-sign process administered by CCP Training may be used to distribute and document required reading. Although either the Attachment 8 or the electronic process may be used, the electronic process is preferred.

17.0 TIMELY INSTRUCTIONS/ORDERS

17.1 Purpose of Timely Instructions/Orders

Timely orders (normally technical or general information or direction), hereafter called standing orders, when used, provide a means to communicate direction to operators. This direction may be short-term or long-term depending on the situation as evaluated by the cognizant VPM or CCP Managers in Carlsbad. Information, such as special operations, data collection, plotting process parameters, special reviews, or other similar matters, may be included in standing orders. Standing orders shall not be used to deviate from approved procedures. However, standing orders may supplement approved procedures with new or additional requirements.

Standing orders may be technical or non-technical. Technical standing orders pertain to direction or clarification given to the physical operation of a characterization unit or activity. Non-technical standing orders pertain to direction or clarification given to data review, certification activities, or other non-operational reasons.

17.2 Writing Standing Orders

Standing orders will be written and issued at the appropriate level in the CCP Organization. Standing orders specific to field activity direction at a site or amplification of technical procedures at a specific site (i.e., amplification or change to a Host site technical safety requirement) shall be known as site-specific standing orders. Standing orders affecting Project Office documents or activities, QA documents, or CCP-wide review of characterization data at the data generation level, or waste certification shall be known as Project Office standing orders. The Project Office may request or direct that a site-specific standing order be written. Any VPM may request that a Project Office standing order be written.

Standing orders shall be written by the person having final approval authority or by a person designated by that authority. Site-specific standing orders shall be written using Attachment 5, Site-Specific Standing Order Format. Project Office standing orders shall be written using Attachment 6, Project Office Standing Order Format. Standing orders that when printed are more than one page will contain page X of XY at the bottom of each page and capture the standing order number and revision number at the top of each page.

17.3 Review and Approval of Standing Orders

Site-specific standing orders will be approved by the lead VPM. Site-specific standing orders that provide additional technical requirements to a characterization activity or technical procedure or clarify the implementation of existing requirements will be reviewed by the affected LO(s). Site-specific standing orders that are written for the implementation of new technical safety requirements or industrial safety requirements, or change the implementation of existing requirements, will be reviewed by the Host site technical representative (STR) and Facility Safety Representative (FSR) as required in the site-specific Interface Document. Site-specific standing orders that provide direction or additional guidance concerning implementation of compliance requirements will be reviewed by a currently qualified SPM.

Project Office standing orders will be approved by the cognizant Project Office manager in Carlsbad. In specific cases, Project Office standing orders may be approved by a Field Project Manager if assigned the responsibility for a Project Office document. Project Office standing orders that augment or clarify existing procedures concerning the implementation of compliance requirements will be reviewed by a currently qualified SPM.

17.4 Controlling Standing Orders

Each approved standing order shall be assigned a unique number, including a designator for the issuing site (i.e., Oak Ridge National Laboratory [ORNL], Savannah River Site [SRS], Los Alamos National Laboratory [LANL], Idaho National Laboratory [INL], etc.). Project Office standing orders will not have a site designator in the unique number. Standing orders shall have a revision number. Standing orders may be revised as conditions warrant. Standing orders shall be entered in Attachment 1, Standing Order Index, when approved. Each authority approving standing orders shall maintain a folder/binder listing all approved, superseded, or cancelled standing orders. This folder/binder shall be kept in an approved records safe when not in use. Standing orders DO **NOT** need to be revised due to a revision of CCP-PO-005, *CCP Conduct of Operations*.

Affected CCP personnel will be briefed on new or revised standing orders. This may be performed during the daily pre-operations briefing, turnover meeting, or at a briefing session for the affected operators. CCP operators will also be notified when any standing order is cancelled. All standing orders issued by CCP, site-specific or Project Office, shall be provided to CCP Training to post in the Standing Orders Folder on the CCP sftp site.

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Site-specific standing orders containing technical direction or clarification shall be provided to the affected characterization activity LO for posting. The LO shall have the standing order posted in close proximity to the area in which the standing order will be used and securely fastened in a manner that will not obscure instruments, indicators, or alarms. LOs may choose to post other standing orders at their discretion.

Any data collected as instructed by a standing order will be dispositioned to records in accordance with CCP-QP-008.

17.5 Reviews of Standing Orders

Standing orders shall be reviewed on a quarterly basis to verify that the standing orders remain necessary and that the technical direction (the "Order" portion) in posted standing orders is still current. Standing orders that remain current and necessary shall not be revised. Standing orders that are not current but are necessary shall be revised and reissued. Standing orders that are no longer necessary shall be cancelled and removed from the field.

Standing orders that supplement existing procedures shall remain in effect for as long as they are needed, or until the language of the standing order has been incorporated into the existing procedure. The quarterly review shall be documented by the approving authority on Attachment 2, Quarterly Standing Order Review. Documentation of this review provides evidence that the remaining standing orders are necessary and that the posted standing orders are current. The completed Attachment 2 shall be filed in the controlled standing order folder/binder.

17.6 Submittal of Standing Order to Records

All site-specific standing orders, Standing Order Index forms, and Quarterly Standing Order Review forms will be submitted to CCP Records in accordance with CCP-QP-008 at the completion of characterization activities at the site.

Project Office standing orders and Quarterly Standing Order Review forms that have been superseded or cancelled will be submitted to CCP Records in accordance with CCP-QP-008. Project Office Standing Order Index forms will be maintained by the Project Office and submitted to CCP Records when all standing orders listed on a Standing Order Index form have been superseded or cancelled. They will be submitted in accordance with CCP-QP-008.

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18.0 TECHNICAL PROCEDURES

Technical (operating) procedures are developed, reviewed, and approved to provide appropriate direction to ensure that the facility is operated safely. Approved procedures should be effectively used to support safe operation of the facility.

18.1 Procedure Development

CCP procedures are required to meet the format guidance in CCP-QP-010, *CCP Document Preparation, Approval, and Control*.

18.2 Procedure Content

The uniformity of content is controlled in accordance with CCP-QP-010.

18.3 Procedure Changes and Revisions

Procedure revisions are controlled in accordance with CCP-QP-010.

18.4 Procedure Approval

New or revised procedures are approved in accordance with CCP-QP-010.

18.5 Procedure Review

New or revised procedures are reviewed in accordance with CCP-QP-010.

18.6 Procedure Availability

Procedures are made available to operators through compliance with CCP-QP-010.

18.7 Use of Procedures

Procedures will be adhered to at all times. As the sole exception to this requirement, operators may take whatever action is necessary during emergency conditions to place the facility in a safe condition and to protect equipment, personnel, and public safety without first initiating a procedure change.

Copies of operating procedures printed from the CCP sftp site, Controlled Documents folder, may be used to conduct operations.

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Procedures and fillable forms will be verified current at the beginning of each shift. Procedure revisions will be verified against the current revision of the procedure posted in the Controlled Documents folder on the CCP sftp site. When the CCP sftp site is not accessible, the document may be verified by calling CCP Document Control. An entry will be made in the logbook to document the document number, current revision, effective date, and person contacted when verifying documents with CCP Document Control. Documents verified at the beginning of the shift will be considered current through the remainder of that shift.

For continual shift work (i.e., more than one shift per day), if an evolution is stopped for more than one shift, the operator will re-verify the document is the current revision prior to restarting the evolution.

Numbered procedure steps will be performed in the order written unless specifically stated otherwise.

If, in the opinion of the operator, a procedure cannot be performed as written, the system or component will be placed in a safe condition and CCP management informed so the discrepancy can be corrected. Procedures have been prepared anticipating facility condition. In the event of a situation not covered by an approved procedure, personnel will:

- Minimize risk of personnel injury and personnel exposure to hazards.
- Minimize hazardous material release to the environment.
- Protect facility equipment.
- Protect experimental data.
- Notify the LO and the VPM.

All CCP operations will be conducted with the procedure open and followed step-by-step. The reader/performer method may be used as long as the reader has the procedure open and follows step-by-step, verifying that each action is performed as read. NO other methodology is acceptable for performing operations in CCP.

Only controlled or working (a copy of a controlled copy that has been verified correct) copies of procedures will be used by operators. This ensures that the procedures are up-to-date with all procedure change notices and revisions.

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The VPM will ensure operating staff are aware of revisions to technical procedures impacting applicable CCP equipment at their sites.

The CCP Transportation Manager will ensure that transportation personnel are aware of revisions to procedures impacting the operation of transportation equipment.

18.8 Fillable Forms

Fillable forms, when used properly, are a valuable tool for improving the quality of data. Fillable forms may be produced by CCP Document Services or the end user and must meet the following requirements.

A fillable form must contain a header with the procedure number, revision number, procedure title, effective date, and page number as displayed in the parent procedure.

The attachment number and title from the parent procedure attachment shall be documented immediately following the header.

All data fields from the parent procedure attachment shall be presented on the fillable form in the same order and identically worded.

The data fields should be made to expand to ensure that the data is appropriately captured, as necessary. Data fields should only be limited on expansion to prevent having additional pages created by the expansion of one or more of the fields. The LO or SPM should be contacted for direction when data will not fit onto a one page fillable form.

Signature blocks shall be included on the fillable form when included on the parent procedure attachment.

Fillable forms may include simple calculations (addition or subtraction). However, these calculations must be checked by hand during the review of the data. No complex calculations or operations may be imbedded within a fillable form without being approved in accordance with CCP-QP-022, *CCP Software Quality Assurance Plan*.

Fields in fillable forms must be blank each time the forms are opened. No pre-filled-in data, information, or checks may be present in any data field when these forms are opened.

Fillable forms must be verified current prior to use as discussed in Section 18.7.

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19.0 OPERATOR AIDS

Operator Aids, when used, provide information useful to operators in performing their duties. Operator Aids may be in many forms, such as the latest revision of pages out of procedures, handwritten notes, and information tags. Operator Aids shall be viewed as a convenience to the operator, not administrative/technical requirements and/or direction. Specifically, Operator Aids may supplement approved procedures, but shall not be used in lieu of approved procedures. Operator Aids may be proposed by any CCP personnel. The LO shall review all Operator Aids to verify they meet the criteria identified herein before they are approved by the VPM and posted. The LO will obtain concurrence for an Operator Aid that affects Host site equipment or personnel from the appropriate equipment and/or personnel manager/supervisor prior to VPM approval. The LO review, Host site concurrence, if required, and VPM approval shall be documented on the Operator Aid. The Operator Aids shall be posted in close proximity to the area in which they will be used and securely fastened in a manner that will not obscure instruments, indicators, or alarms. Operator Aids which detail characterization information shall be approved by the process Cognizant Engineer and the site SPM.

A Controlled Operator Aid folder/binder listing all currently approved, superseded, and canceled Operator Aids, including a copy of each, shall be maintained by the VPM. Each Operator Aid approved by the VPM shall be assigned a unique number and entered in Attachment 3, Operator Aid Index. The VPM shall review/verify, semi-annually, that the Operator Aids in use remain necessary and the posted Operator Aids are current. Operator Aids that are no longer applicable or outdated shall be promptly removed and canceled by the VPM. Those that are not current, but are still needed, will be revised and reissued. This review shall also be documented by the VPM on Attachment 4, VPM Semi-annual Operator Aid Review, and filed in the Controlled Operator Aid folder/binder. Operator Aids do not need to be revised due to a revision of CCP-PO-005.

All Operator Aids, Operator Aid Index forms, and VPM Semi-annual Operator Aid Review forms will be submitted to CCP Records, in accordance with CCP-QP-008, at the completion of characterization activities at the site.

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20.0 COMPONENT LABELING

Components are labeled per equipment vendor specification.

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21.0 RECORDS

Records generated during the performance of this document are maintained as QA records in accordance with CCP-QP-008. The records are the following:

21.1 QA/Nonpermanent

- Attachment 1, Standing Order Index
- Controlled standing orders

  - Site-specific

  - Project Office
- Attachment 2, Quarterly Standing Order Review
- Attachment 3, Operator Aid Index
- Controlled Operator Aids
- Attachment 4, VPM Semi-annual Operator Aid Review
- Formal Notification of Communication of Employee Reports of Abnormal Field Conditions (e-mail, fax, or memorandum)
- Turnover Checklists (when applicable)
- Attachment 5, Site-Specific Standing Order Format
- Attachment 6, Project Office Standing Order Format
- Briefing sheets (flows into CCP-QP-002)
- Attachment 7, Lessons Learned Form
- Lessons Learned Log
- Attachment 8, CCP Required Reading Documentation
- Training Module – Required Reading
- Operational Log Books
- Operational Logbook Annual Reconciliation Report

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Attachment 1 – Standing Order Index

Standing Order Number	Description	Date Approved	Date Cancelled	Superseded By	Date Superseded

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Attachment 2 – Quarterly Standing Order Review

1. Site:_____ 2. Date: _____

3. Standing orders in effect:

4. Standing orders cancelled as a result of this review:

5. Standing orders revised as a result of this review:

6. Comments:

Printed Name	**Signature**	**Date**

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Attachment 3 – Operator Aid Index

Operator Aid Number	Description	Date Approved	Date Cancelled	Superseded By	Date Superseded

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Attachment 4 – VPM Semi-annual Operator Aid Review

1. Site:_____ 2. Date:_____

3. Operator Aids in effect:

4. Operator Aids cancelled as a result of this review:

5. Operator Aids revised as a result of this review:

Comments:

VPM Printed Name	**Signature**	**Date**

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Attachment 5 – Site-Specific Standing Order Format

CCP Standing Order CCP-SO-____-___Rev. _____

Title:

Applicability

Order

This order will remain in effect until:

Background

Lead Operator **Printed Name/Signature/Date**

SPM (if applicable) **Printed Name/Signature/Date**

STR (if applicable) **Printed Name/Signature/Date**

FSR (if applicable) **Printed Name/Signature/Date**

VPM **Printed Name/Signature/Date**

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Attachment 6 – Project Office Standing Order Format

CCP Standing Order CCP-SO-___Rev. _____

Title:

Applicability

Order

This order will remain in effect until:

Background

VPM (if applicable) **Printed Name/Signature/Date**	**VPM** (if applicable) **Printed Name/Signature/Date**
VPM (if applicable) **Printed Name/Signature/Date**	**VPM** (if applicable) **Printed Name/Signature/Date**
VPM (if applicable) **Printed Name/Signature/Date**	**Safety** (if applicable) **Printed Name/Signature/Date**
SPM (if applicable) **Printed Name/Signature/Date**	**CCP Manager** **Printed Name/Signature/Date**

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Attachment 7 – Lessons Learned Form

CCP Lessons Learned Number:	**Date:**
Title:	**Target Audience:**
Lessons Learned Statement:	
Background:	
Lessons Learned Discussion:	
Recommended follow-up actions:	
Prepared by:	**Management Approval:**

Controlled Copy

Attachment 8 – CCP Required Reading Documentation

Document Title:	**Document Number:**	**Revision No.:**
Assigned Date:	**Due Date:**	

Instructions:

You are required to read this document as part of your CCP Required Reading. After you have read this document, sign, and date below.

Acknowledgement Statement:

My signature below indicates I have read the document listed above and understand the changes and impacts.

Employee Printed Name:	Employee Signature:	Date:

Cognizant Manager Validation:

Printed Name	Signature	Date

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Effective Date: 06/25/2013

CCP-P0-006
Revision 4

CCP
Conduct of Operations Matrix

Mike Ramirez

PRINTED NAME

APPROVED FOR USE

RECORD OF REVISION

Revision Number	Date Approved	Description of Revision
2	11/20/2002	Updated paragraph references and procedure titles.
3	10/14/2004	Updated Sections 15, 16, and 17.
4	06/25/2013	Complete revision to reformat the table and incorporate cross referenced implementation to U.S. Department of Energy (DOE) Order 422.1, *Conduct of Operations.*

Organization and Administration, DOE O 422.1 Attachment 2			
1 Requirements, Attachment 2 ¶ 2.a	**2 Detailed Attributes**	**Applicability A=Applicable N = Not Applicable P = Partially Applicably**	**3 Doc Citation /Justification**
2.a. Organization & Administration: The operator must establish policies, programs, and procedures that define an effective operations organization, including the following elements: **A**			• CCP-PO-001, *CCP-Transuranic (TRU) Waste Characterization Quality Assurance Project Plan (QAPjP)*, • CCP-PO-002, *CCP-TRU Waste Certification Plan*, • CCP-PO-005, *CCP Conduct of Operations* • CCP-QP-002, *CCP-Training and Qualification Plan* • CCP-QP-005, CCP TRU Nonconforming Item Reporting and Control • CCP-QP-008, *CCP Records Management* • CCP-QP-010, *CCP Document, Preparation, Approval, and Control* • CCP-QP-029, *CCP Correction Action Management* • CCP-QP-040, *CCP Support Training* • CCP-HSP-014, *Health and Safety Program Implementation for CCP* • Memorandum Of Understanding (MOU), Site Statements of Work (SOW), Site Procedures and/or Site Interface Documents
2.a.(1) Organizational roles, responsibilities, authority, and accountability	a. Written policies state goals for operations, safety, and security, the means to achieve them, and the controls instituted for the Conduct of Operations Program.		
	b. Policies and procedures implement DOE requirements for operations.		

Organization and Administration, DOE O 422.1 Attachment 2			
1 Requirements, Attachment 2 ¶ 2.a	**2 Detailed Attributes**	**Applicability A=Applicable N = Not Applicable P = Partially Applicably**	**3 Doc Citation /Justification**
	c. Policies and procedures implement DOE safety requirements.		
	d. Policies and procedures implement DOE Security requirements.		
	e. Personnel and organizations are assigned responsibilities for implementing policies.		
	f. Policies clearly define operations personnel authority, accountability, and relationships with other groups including Stop-Work authority.		
2.a.(2) Adequate material and personnel resources to accomplish operations	a. Sufficient qualified operators are available to complete assigned tasks without excessive overtime.		
	b. Adequate technical personnel are assigned to support operations.		
	c. Staff development, retention, and succession are managed under a long-range staffing plan.		
	d. Adequate material, tooling, equipment, safety gear, and facilities are available for safe operations.		
2.a.(3) Monitoring and self-assessment of operations	a. Operating problems are documented and evaluated, and corrective actions are taken.		

Organization and Administration, DOE O 422.1 Attachment 2			
1 Requirements, Attachment 2 ¶ 2.a	**2 Detailed Attributes**	**Applicability A=Applicable N = Not Applicable P = Partially Applicably**	**3 Doc Citation /Justification**
	b. Supervisors and managers directly observe operations frequently and provide feedback.		
	c. Appropriate outside organizations such as Quality Assurance (QA) or other oversight organizations observe operations and provide feedback.		
	d. Assessment and observation issues are tracked and corrected		
	e. Auditable, measureable, realistic, and challenging safety, environmental and operations goals are set. Examples are safety system operability; radiological or other exposure; facility operational availability; unscheduled shutdowns; overtime; staffing; qualification, and training; waste production; and plant instrumentation alarms and warnings.		
	f. Facilities develop an action plan to achieve safety, environment, and operations goals with input from operations personnel, and review and approval by management.		

Organization and Administration, DOE O 422.1 Attachment 2			
1 Requirements, Attachment 2 ¶ 2.a	**2 Detailed Attributes**	**Applicability A=Applicable N = Not Applicable P = Partially Applicably**	**3 Doc Citation /Justification**
	g. Facilities monitor and report to line and DOE management their progress on completing the action plan and achieving goals. Goals and plans are adjusted and modified as needed.		
2.a.(4) Management and worker accountability for the safe performance of work.	a. Management systems are designed to minimize the effects of human performance failures.		
	b. Personnel involved in repeated or willful violations of operating practices are counseled, retrained or disciplined as appropriate.		
	c. Personnel are recognized for notable safety improvement actions or ideas.		
	d. Supervisory performance appraisals and promotions take operational and safety performance into consideration.		
2.a.(5) Management training, qualification, succession, and when appropriate, certification.	a. Formal supervisory and management training is provided for first-line and shift supervisors.		
	b. Development, qualification, retention, and succession, for supervisors is managed under a long-range staffing plan.		

Organization and Administration, DOE O 422.1 Attachment 2			
1 Requirements, Attachment 2 ¶ 2.a	**2 Detailed Attributes**	**Applicability A=Applicable N = Not Applicable P = Partially Applicably**	**3 Doc Citation /Justification**
	c. Supervisors achieve certification when required for their duties.		
2.a.(6) Methods for the analysis of hazards and implementation of hazard controls in the work planning and execution process.	a. The DOE Integrated Safety Management System is used to plan work.		
	b. Operations personnel are trained in, and understand integrating safety into work planning.		
2.a.(7) Methods for approving, posting, maintaining, and controlling access to electronic operations documents (procedures, drawings, schedules, maintenance actions, etc.) if electronic documents are used.	a. Management approves electronic document accessibility on both internal and public computer systems, considering security and privacy concerns.		
	b. Procedures define the methods and positions responsible for approving, revising and posting electronic documents.		

Organization and Administration, DOE O 422.1 Attachment 2			
1 Requirements, Attachment 2 ¶ 2.b	**2 Detailed Attributes**	**Applicability A=Applicable N = Not Applicable P = Partially Applicably**	**3 Doc Citation /Justification**
2.b. The operator must establish and implement operations practices to ensure shift operators are alert, informed of conditions, and properly operate equipment, addressing the following elements: **A**			• CCP-PO-005, *CCP Conduct of Operations* • CCP-HSP-014, *Health and Safety Program Implementation for CCP* • Site MOU, SOW, Site Procedures and/or Site Interface Documents
2.b.1 Prompt notification to operating personnel and supervisors of changes in the facility status, abnormalities, or difficulties encountered in performing assigned tasks.	a. Supervisors and Operators keep each other informed of facility status changes, abnormalities, or difficulties.		
	b. Operators keep Supervisors informed of unexpected situations.		

Organization and Administration, DOE O 422.1 Attachment 2			
1 Requirements, Attachment 2 ¶ 2.b	**2 Detailed Attributes**	**Applicability A=Applicable N = Not Applicable P = Partially Applicably**	**3 Doc Citation /Justification**
2.b.(2) Adherence by operating personnel and other workers to established safety requirements.	a. Operators comply with safety programs, e.g. industrial, chemical, explosive, pressure, temperature, confined space, or others applicable to the facility.		
	b. Operators use proper personal protective equipment (PPE).		
	c. Operators use ladders or other approved means for overhead access in the absence of permanent ladders or catwalks.		
	d. Operators do not routinely climb or walk on components.		
	e. Operators use appropriate electrical safety procedures.		
2.b.(3) Awareness by operating personnel of the status of equipment through inspection, conducting checks, and tours of equipment and work areas.	a. Operators regularly tour their assigned areas on a frequency determined by management, normally early in each shift. Tours are thorough enough to provide detailed equipment status.		
	b. Routine security concerns do not override tour responsibilities.		

Organization and Administration, DOE O 422.1 Attachment 2			
1 Requirements, Attachment 2 ¶ 2.b	**2 Detailed Attributes**	**Applicability A=Applicable N = Not Applicable P = Partially Applicably**	**3 Doc Citation /Justification**
	c. Operators inspect equipment status and condition during tours for proper operation, for operability of standby equipment, and any work planned or in progress.		
	d. Operators recognize, document, and report abnormal conditions and take action to correct the conditions. Examples include leaks, fire or safety hazards, clogged drains, cleanliness issues, or building deficiencies.		
	e. Operators periodically check alarm and annunciator functionality.		
2.b.(3) Awareness by operating personnel of the status of equipment through inspection, conducting checks, and tours of equipment and work areas.	a. Operators regularly tour their assigned areas on a frequency determined by management, normally early in each shift. Tours are thorough enough to provide detailed equipment status.		
	b. Routine security concerns do not override tour responsibilities.		
	c. Operators inspect equipment status and condition during tours for proper operation, for operability of standby equipment, and any work planned or in progress.		

Organization and Administration, DOE O 422.1 Attachment 2			
1 Requirements, Attachment 2 ¶ 2.b	**2 Detailed Attributes**	**Applicability A=Applicable N = Not Applicable P = Partially Applicably**	**3 Doc Citation /Justification**
	d. Operators recognize, document, and report abnormal conditions and take action to correct the conditions. Examples include leaks, fire or safety hazards, clogged drains, cleanliness issues, or building deficiencies.		
	e. Operators periodically check alarm and annunciator functionality.		
2.b.(4) Procedures for completing round sheets or inspection logs, responding to abnormal conditions, and periodic supervisory reviews of round sheets or inspection logs.	a. Management approves round sheets, including frequency and time of instrument readings and allowable delay (normally one hour or less).		
	b. Round sheets cover the operator's area and equipment parameters; data entry blocks follow the tour route.		
	c. Round sheets provide normal and max/min expected equipment instrumentation readings where appropriate.		
	d. Round sheets provide safety limits where appropriate.		

Organization and Administration, DOE O 422.1 Attachment 2			
1 Requirements, Attachment 2 ¶ 2.b	**2 Detailed Attributes**	**Applicability A=Applicable N = Not Applicable P = Partially Applicably**	**3 Doc Citation /Justification**
	e. Data readings outside the normal or max/min range are circled or otherwise highlighted and reported to the supervisor. Operators, and supervisors when appropriate, take corrective action to restore proper functioning.		
	f. Operators make narrative records of important events, abnormal conditions and corrective actions, on round sheets or logbooks		
	g. Data entries on round sheets are made at the specified time. If readings are delayed beyond the allowable range, the actual time and explanation for the delay are recorded.		
	h. Supervisors review round sheets for trends, abnormalities, and proper data and narrative entries during each shift.		
	i. Supervisors periodically monitor operator rounds for proper execution and for any changes needed for changed facility conditions.		

Organization and Administration, DOE O 422.1 Attachment 2			
1 Requirements, Attachment 2 ¶ 2.b	**2 Detailed Attributes**	**Applicability A=Applicable N = Not Applicable P = Partially Applicably**	**3 Doc Citation /Justification**
2.b.(5) Procedures for protecting operators from personnel hazards, e.g. chemical, radiological, laser, noise, electromagnetic, toxic or nano-scale materials.	a. Operators are appropriately qualified for expected hazards and know protection practices to maintain personnel exposure as low as reasonably achievable and within facility controls for radiation, chemicals, electromagnetic fields, toxic materials, and other personnel hazards.		
	b. Operators comply with all posted personnel protection requirements and precautions.		
	c. Operators properly use appropriate monitoring instruments when required.		
	d. Operators remain aware of their radiological, toxic, or other exposures and take action to minimize them.		
	e. Operators properly use appropriate administrative controls such as work permits, radiological work permits, and confined space permits.		
	f. Operators promptly report and take corrective action for radiological or hazardous material protection deficiencies.		
	g. Operators and Supervisors notify protection personnel prior to activities that affect the protection status. (Industrial Hygiene, Radiological, etc.)		

Organization and Administration, DOE O 422.1 Attachment 2			
1 Requirements, Attachment 2 ¶ 2.b	**2 Detailed Attributes**	**Applicability A=Applicable N = Not Applicable P = Partially Applicably**	**3 Doc Citation /Justification**
	h. Supervisors periodically review exposure trends of operators to detect and correct adverse factors that contribute to personnel exposures.		
2.b.(6) Prompt response to instrument indications, including the use of multiple indications to obtain parameters.	a. Operators believe their indications unless proven otherwise.		
	b. Operators check other indicators when possible to confirm unexpected readings.		
	c. Operators take prompt action to investigate and correct abnormal conditions.		
	d. Operators identify inaccurate or malfunctioning instruments and inform appropriate supervisors and repair organizations.		
	e. In case of doubtful readings, operators place safety above production.		
2.b.(7) Procedures for resetting protective devices.	a. Operators attempt to determine the cause of protective device trips (Breakers, fuses, relief valves, safety systems, etc.)		
	b. Supervisors and management provide guidance on addressing protective device trips; normally, devices are reset only after assuring that no abnormal condition exists that would cause a trip.		

Organization and Administration, DOE O 422.1 Attachment 2			
1 Requirements, Attachment 2 ¶ 2.b	**2 Detailed Attributes**	**Applicability A=Applicable N = Not Applicable P = Partially Applicably**	**3 Doc Citation /Justification**
	c. Management investigates protective system trips and unplanned shutdowns.		
2.b.(8) Authorization to operate facility equipment.	a. Designated supervisors direct the overall operation of the facility, including load changes.		
	b. Personnel operating equipment have appropriate qualification and certification.		
	c. Operators and Supervisors are aware of all activities affecting equipment.		
	d. Management designates routine operations that do not require permission for performance.		
	e. Supervisors approve non-routine operation of facility or process controls.		
	f. During emergencies, Operators may take immediate actions for worker, public, and environmental protection without permission, and inform supervisors promptly.		
	g. Operators achieve plant safety over production for normal, emergency and abnormal operations.		

Organization and Administration, DOE O 422.1 Attachment 2			
1 Requirements, Attachment 2 ¶ 2.b	**2 Detailed Attributes**	**Applicability A=Applicable N = Not Applicable P = Partially Applicably**	**3 Doc Citation /Justification**
2.b.(9) Designating shift operating bases and providing equipment for them.	a. Shift operating bases, the normal location for operator(s) when not otherwise performing evolutions, are established for all feasible shift positions.		
	b. Shift operating bases are equipped with communications, references, and office materials and equipment needed for facility operations, and are conveniently located within the operating area.		
	c. Shift turnovers normally occur at the operating base and operators return there when not performing operations at equipment locations or touring.		
2.b.(10) Professional and disciplined operator performance of duties.	a. Potential distractions such as electronic devices (radio, TV, music players, games), personal telephone calls, game playing, and horseplay are prohibited.		
	b. Non-work-related written materials are prohibited. Operators may read training bulletins, technical manuals, or operating experience information or review other written, audible, or visual materials that relate to operator duties.		

Organization and Administration, DOE O 422.1 Attachment 2			
1 Requirements, Attachment 2 ¶ 2.b, ¶ 2.c	**2 Detailed Attributes**	**Applicability A=Applicable N = Not Applicable P = Partially Applicably**	**3 Doc Citation /Justification**
	c. Supervisors ensure operators' primary duties are not compromised and provide guidance on potentially distracting materials and devices.		
2.c. The operator must establish and implement operations practices that promote orderly, business-like control area operations and address the following elements: **A**			• CCP-PO-005, *CCP Conduct of Operations* • Site MOU, SOW, Site Procedures and/or Site Interface Documents
2.c.(1) Control-area access.	a. Control Areas and at - the - controls areas are clearly identified and boundaries are understood.		
	b. Control area access is limited to persons on official business only. Access to the at-the-controls area is further limited to persons who need to be in the area.		
	c. Entry to control and at-the-controls areas is granted by designated persons whose identity is known to persons desiring entry.		

Organization and Administration, DOE O 422.1 Attachment 2			
1 Requirements, Attachment 2 ¶ 2.c	**2 Detailed Attributes**	**Applicability A=Applicable N = Not Applicable P = Partially Applicably**	**3 Doc Citation /Justification**
2.c.(2) Formality and discipline in the control and at-the-controls area.	a. All persons in the area display professional and disciplined behavior. Only activities essential to operations and authorized by management are permitted in the area.		
	b. Potential distractions such as electronic devices (radio, TV, music players, games), personal telephone calls, game playing, and horseplay are prohibited.		
	c. Non-work-related discussions are minimized.		
2.c.(3) Surveillance of control panels and timely response to determine and correct the cause of abnormalities/out-of-specification conditions	a. Operators are alert and attentive to control panel indicators and alarms and monitor panels frequently.		
	b. Operators closely monitor indications and conditions and trend them to detect problems early.		
	c. Operators take timely alarm response actions to address and correct alarming conditions.		
	d. Concurrent operations that affect control panel indications are limited so that operators' ability to detect and respond to abnormal conditions is not compromised.		

Organization and Administration, DOE O 422.1 Attachment 2			
1 Requirements, Attachment 2 ¶ 2.c	**2 Detailed Attributes**	**Applicability A=Applicable N = Not Applicable P = Partially Applicably**	**3 Doc Citation /Justification**
	e. Operators are ready to take backup control of automated or computer systems.		
2.c.(4) Limitation of the number of concurrent evolutions and duties.	a. Operator ancillary duties are limited to prevent interference with monitoring control panel indicators and alarms.		
	b. Tasks such as tagouts, work authorizations, procedure review, maintenance, or required reading do not constitute a major portion of operators' shift responsibilities.		
	c. Control panel operator administrative workload is minimized. Other operators continue monitoring when one operator has necessary administrative work.		
2.c.(5) Authorization to operate control area equipment.	a. Operation of control area equipment is performed only by persons specifically authorized in writing.		
	b. Trainees operating control area equipment do so only under the direct supervision of the normally assigned operator.		

Organization and Administration, DOE O 422.1 Attachment 2			
1 Requirements, Attachment 2 ¶ 2.d	**2 Detailed Attributes**	**Applicability A=Applicable N = Not Applicable P = Partially Applicably**	**3 Doc Citation /Justification**
2. d. The operator must establish and implement operations practices that ensure accurate, unambiguous communications among operations personnel and address the following elements: **A**			• CCP-PO-005, *CCP Conduct of Operations* • Site MOU, SOW, Site Procedures and/or Site Interface Documents
2.d.(1) Provision of communications systems for emergency and normal operations.	a. All facility personnel are promptly alerted to facility emergencies.		
	b. Communications systems are in place to support normal operations.		
	c. Alternate methods are provided for areas where public address or emergency signals cannot be heard.		
	d. Communications systems are periodically tested.		
	e. Control areas can override other communications system users for emergencies.		

Organization and Administration, DOE O 422.1 Attachment 2			
1 Requirements, Attachment 2 ¶ 2.d	**2 Detailed Attributes**	**Applicability A=Applicable N = Not Applicable P = Partially Applicably**	**3 Doc Citation /Justification**
2.d.(2) Administrative control of communications equipment, including authorization to use the public address system and allowable locations and purposes for radio use.	a. Public address system use is controlled to maintain its effectiveness and prevent it becoming commonplace.		
	b. Point-to-point communications are the preferred method wherever practical.		
	c. Radio usage is controlled to prevent electronic interference with facility equipment. Radio-prohibited areas are defined and marked.		
	d. Radio frequency or channel assignments are controlled and readily available to users.		
	e. Where appropriate, dedicated radio or pager channels are assigned to specific functions such as emergency communications or security.		
2.d.(3) Methods for control areas to contact operators and supervisors.	a. Policies define how to notify operators or supervisors to contact the control area.		
	b. Emergency and normal notification methods are distinctive.		
2.d.(4) Use of abbreviations and acronyms.	a. Acronyms and abbreviations are developed and promulgated for oral and written communications.		
	b. Only approved abbreviations and acronyms are allowed to be used.		

Organization and Administration, DOE O 422.1 Attachment 2			
1 Requirements, Attachment 2 ¶ 2.d, ¶ 2.e	**2 Detailed Attributes**	**Applicability A=Applicable N = Not Applicable P = Partially Applicably**	**3 Doc Citation /Justification**
2.d.(5) Use of oral instructions and communications, including use of repeat-backs and sender/receiver identifications.	a. Policies require clear and concise oral communications.		
	b. Policies define when repeat-backs are appropriate and how they are implemented.		
	c. Policies define protocols for transmitting information and identifying senders and receivers.		
2.e. The operator must establish and implement operations practices that control on-shift training of facility operators, prevent inadvertent or incorrect trainee manipulation of equipment, and address the following elements: **A**			• CCP-PO-005, *CCP Conduct of Operations* • CCP-QP-002, *CCP Training and Qualification Plan* • CCP-HSP-014, *Health and Safety Program implementation for CCP* Site MOU, SOW, Site Procedures and/or Site Interface Documents
2.e.(1) On-shift training program.	a. The Operations Manager approves the operator qualification program and coordinates changes with the Training Department.		
	b. For positions requiring operator certification, candidates receive one-on-one instruction on station.		

Organization and Administration, DOE O 422.1 Attachment 2			
1 Requirements, Attachment 2 ¶ 2.e	**2 Detailed Attributes**	**Applicability A=Applicable N = Not Applicable P = Partially Applicably**	**3 Doc Citation /Justification**
	c. On-shift training is conducted by persons both qualified to operate equipment and authorized to train others. Authorization to train others may require special instructor qualifications.		
2.e.(2) Authorization and documentation of training activities.	a. Training activities during operations are specifically identified in the training program, including knowledge requirements and trainee actions such as perform, simulate, etc.		
	b. Qualification program completion is formally documented; on-shift and classroom training activities are documented as they occur.		
	c. Directives include provisions for maintenance of controlled copies of alarm and annunciator response procedures readily accessible to operators for alarm response.		
	d. Directives detail how operators obtain current copies of electronic or hard-copy procedures for performing evolutions, and how to determine procedure approval and revision status.		

Organization and Administration, DOE O 422.1 Attachment 2			
1 Requirements, Attachment 2 ¶ 2.e	**2 Detailed Attributes**	**Applicability A=Applicable N = Not Applicable P = Partially Applicably**	**3 Doc Citation /Justification**
2.e. (3) Supervision and control of personnel under instruction by qualified personnel.	a. Qualified operator-instructors supervise trainees to prevent misoperation of equipment.		
	b. Early-stage trainees discuss operations, procedures, and actions before performing actual operations. More proficient trainees point and describe actions before taking them. Operator-instructors always monitor trainees and remain capable of intervention.		
	c. Operator-instructors verify trainee entries on official round sheets and logs, and discuss any out of specification readings or unfavorable trends.		
2.e. (4) Facility conditions and controls for conducting training during operational activities, including suspension of training during unanticipated or abnormal events.	a. Training activities are conducted only when facility conditions permit, and as authorized by facility management.		
	b. Training activities and trainee operation of equipment is suspended immediately during emergency or unanticipated abnormal conditions, or when deemed appropriate for safety or operational conditions.		

Organization and Administration, DOE O 422.1 Attachment 2			
1 Requirements, Attachment 2 ¶ 2.e, ¶ 2.f	**2 Detailed Attributes**	**Applicability A=Applicable N = Not Applicable P = Partially Applicably**	**3 Doc Citation /Justification**
	c. Management establishes the maximum number of trainees allowed during operations and the maximum number of trainees per operator-instructor.		
2.f. The operator must establish and implement operations practices for investigating events to determine their impact and prevent recurrence, addressing the following elements: **A**			• CCP-PO-005, *CCP Conduct of Operations* • CCP-HSP-014, *Health and Safety Program implementation for CCP* • Site MOU, SOW, Site Procedures and/or Site Interface Documents
2.f.(1) Specific events requiring investigation, and criteria for identifying other events or conditions to be investigated.	a. Violation of a safety documentation design limit.		
	b. Abnormal or unexpected system performance that adversely affects operations or safety (e.g. improper instrument readings, automatic control failure, chemical analysis, etc.).		
	c. Abnormal or unexpected safety conditions (e.g. stray voltage, safety feature or interlock malfunction, etc.).		
	d. Discovery of mispositioned valves, switches, or components.		

Organization and Administration, DOE O 422.1 Attachment 2			
1 Requirements, Attachment 2 ¶ 2.f	**2 Detailed Attributes**	**Applicability A=Applicable N = Not Applicable P = Partially Applicably**	**3 Doc Citation /Justification**
	e. Events reportable to DOE or other agencies (e.g. EPA, DOT, State regulators, etc.).		
	f. Unplanned shutdown or significant loss of operation.		
	g. Procedural violation or personnel error with actual or potential personnel injury, facility damage, or facility safety degradation.		
	h. Equipment failure that could affect safety or mission.		
	i. Radiological or toxic material release limits are exceeded or material is lost.		
	j. Recorded data is out-of-specification or shows unexpected trends, with actual or potential adverse impact on operations or safety.		
	k. Actual or suspected sabotage.		
	l. Lost special nuclear material.		
	m. Repetitive problems.		
	n. Measuring and test equipment is found to be out of calibration, with actual or potential impact on operations or safety.		
	o. As directed by appropriate authority, particularly for near-miss situations.		

Organization and Administration, DOE O 422.1 Attachment 2			
1 Requirements, Attachment 2 ¶ 2.f	**2 Detailed Attributes**	**Applicability A=Applicable N = Not Applicable P = Partially Applicably**	**3 Doc Citation /Justification**
2.f.(2) Designation of investigators and their training and qualification.	a. A senior manager is responsible for investigations; they may delegate investigations or portions of investigations to others, but retain overall responsibility for rigor and consistency of investigations.		
	b. Investigators are experienced and technically qualified.		
	c. Investigators have no bias or vested interest in the results of the investigation.		
	d. Investigators are trained in facility systems, operations, and investigation techniques.		
2.f.(3) Investigation process and techniques.	a. Timely data collection by a designated person: initial conditions, operator statements, pertinent computer/instrument printouts or charts, pertinent documentation and records, and other appropriate information.		
	b. Records and data are annotated to prevent misinterpretation.		
	c. Investigation data is permanently recorded for future reference.		

Organization and Administration, DOE O 422.1 Attachment 2			
1 Requirements, Attachment 2 ¶ 2.f	**2 Detailed Attributes**	**Applicability A=Applicable N = Not Applicable P = Partially Applicably**	**3 Doc Citation /Justification**
	d. Data collection does not interfere with facility operation unless vital to understanding the event.		
	e. The facts of the event are reconstructed chronologically from the data.		
	f. The event is analyzed to determine equipment and personnel response, procedure and equipment adequacy, human performance factors, and safety impact.		
	g. Management determines the appropriate restart process (if applicable).		
2.f.(4)Casual analysis and corrective action determination.	a. The causes are determined.		
	b. Appropriate corrective actions to prevent recurrence of the event are determined.		
	c. Corrective actions are approved by the responsible manager and tracked to completion.		
2.f.(5) Event investigation reporting, training, and trending.	a. Investigation reports are timely.		
	b. Investigation Reports contain a description of the event, its impact, root cause, lessons, and corrective actions.		

Organization and Administration, DOE O 422.1 Attachment 2			
1 Requirements, Attachment 2 ¶ 2.f	**2 Detailed Attributes**	**Applicability A=Applicable N = Not Applicable P = Partially Applicably**	**3 Doc Citation /Justification**
	c. Investigation Reports note any positive aspects of the event.		
	d. Investigation Reports are approved by the responsible manager and reviewed by appropriate managers and safety personnel.		
	e. Investigation Report lessons are shared with appropriate operators, support staff, other facility organizations, and other facilities.		
	f. Events are evaluated for inclusion in training programs.		
	g. Processes include a method to train operators on serious events upon their return to work.		
	h. Procedure problems, operator errors, and other appropriate events are part of the facility trend analysis program. Periodic summaries of event analysis and trends are provided to managers. Training programs include appropriate material from event reports and trend analysis.		
2.f.(6) Response to known or suspected sabotage.	a. Actual or suspected sabotage is immediately investigated.		
	b. The condition of potentially affected systems is determined, and safety system operability is confirmed.		

Organization and Administration, DOE O 422.1 Attachment 2			
1 Requirements, Attachment 2 ¶ 2.f, ¶ 2.g	**2 Detailed Attributes**	**Applicability A=Applicable N = Not Applicable P = Partially Applicably**	**3 Doc Citation /Justification**
	c. Management determines whether continued operation is justified and if safe shutdown is viable or advisable.		
	d. Management takes action to minimize the impact of sabotage and deter future acts.		
2.g. The operator must establish and implement operations practices to ensure appropriate event notification for timely response, addressing the following elements: **A**			• CCP-PO-002, *CCP-TRU Waste Certification Plan* • CCP-PO-005, *CCP Conduct of Operations* • CCP-HSP-014, *Health and Safety Program implementation for CCP* • Site MOU, SOW, Site Procedures and/or Site Interface Documents
2.g.(1) Procedures for internal, DOE, and external notifications, including events, persons to be notified, persons responsible to make notifications, contact information, and recordkeeping.	a. Responsibilities for making notifications are specifically assigned to positions or persons.		
	b. Events requiring notification are identified and documented.		
	c. Notification timeliness standards are established.		
	d. Primary and alternate personnel to be notified for each event are identified and documented.		

Organization and Administration, DOE O 422.1 Attachment 2			
1 Requirements, Attachment 2 ¶ 2.g, ¶ 2.h	**2 Detailed Attributes**	**Applicability A=Applicable N = Not Applicable P = Partially Applicably**	**3 Doc Citation /Justification**
	e. Contact information for the personnel to be notified are kept current and available to notifying personnel.		
	f. All notifications are documented in formal records that include date, time, reason, person notified, and person making notification.		
2.g.(2) Communications equipment for notification	a. Adequate equipment for making notifications is available at the main control area and/or other appropriate location.		
2. h. The operator must establish and implement operations practices for initial equipment lineups and subsequent changes to ensure facilities operate with known, proper configuration as designed, addressing the following elements: **A**			• CCP-PO-005, *CCP Conduct of Operations* • CCP-HSP-014, *Health and Safety Program implementation for CCP* • Site MOU, SOW, Site Procedures and/or Site Interface Documents

Organization and Administration, DOE O 422.1 Attachment 2			
1 Requirements, Attachment 2 ¶ 2.h	**2 Detailed Attributes**	**Applicability A=Applicable N = Not Applicable P = Partially Applicably**	**3 Doc Citation /Justification**
2.h.(1) Authorization for, and awareness of, equipment and system status change.	a. Operations supervisor is responsible for maintaining proper configuration and authorizing status changes for major equipment.		
	b. Operations supervisor may delegate status change authorizations for support or less-important systems and equipment.		
	c. Status changes are communicated to affected operators and organizations.		
	d. Status changes resulting from operations or work are reported to cognizant supervisors.		
2.h.(2) Initial system alignment, maintaining control of equipment and system status through startup, operation, and shutdown, and documentation of status.	a. Components and systems are aligned prior to first operation.		
	b. Checklists are used to guide initial alignments and rechecks, and include equipment identification matching installed labels, required component position, data entry space for actual position and any deviations, and documentation of alignment or recheck.		
	c. Supervisors review and approve completed alignment checklists.		

Organization and Administration, DOE O 422.1 Attachment 2			
1 Requirements, Attachment 2 ¶ 2.h	**2 Detailed Attributes**	**Applicability A=Applicable N = Not Applicable P = Partially Applicably**	**3 Doc Citation /Justification**
	d. Management determines the need for alignments and rechecks. Examples of situations that may need alignments or rechecks are startup from complete shutdown, outage recovery, or mode changes.		
	e. Restoration of safety-related systems following maintenance includes functional testing of their capability.		
	f. Records of equipment and system alignments are retained for operators' reference.		
	g. Deviations from the reference alignment, including lockouts and tagouts, are tracked and controlled by a status board or other effective system.		
2.h.(3) Use and approval of lockouts and tagouts for administrative control of equipment.	a. Supervisors approve lockouts and tagouts in their facility and remain aware of status changes that result.		
	b. Personnel are trained in their responsibilities concerning changing system or equipment status and operation of locked or tagged components.		

Organization and Administration, DOE O 422.1 Attachment 2			
1 Requirements, Attachment 2 ¶ 2.h	**2 Detailed Attributes**	**Applicability A=Applicable N = Not Applicable P = Partially Applicably**	**3 Doc Citation /Justification**
2.h.(4) Operational Limits compliance and documentation.	a. Compliance with operational limits, including safety basis Limiting Conditions for Operations, is established through administrative controls. Compliance and actions taken to restore operation within limits are documented in facility records.		
	b. Supervisors are aware of, and direct completion of, actions to comply with operational limits.		
	c. Operational limit entry conditions and actions are documented in appropriate operating records.		
	d. Operating personnel are kept informed of any limiting conditions and their required actions.		
	e. Operating personnel periodically review Limiting Conditions for Operation and Action Statements in effect for proper implementation.		
2.h.(5) Management of equipment deficiencies, maintenance activities, post-maintenance testing, and return to service.	a. Operators note equipment deficiencies, document them in work control systems for correction, and identify them to other operators by tags, logs, status boards, or other effective method.		

Organization and Administration, DOE O 422.1 Attachment 2			
1 Requirements, Attachment 2 ¶ 2.h	**2 Detailed Attributes**	**Applicability A=Applicable N = Not Applicable P = Partially Applicably**	**3 Doc Citation /Justification**
	a. Operators note equipment deficiencies, document them in work control systems for correction, and identify them to other operators by tags, logs, status boards, or other effective method.		
	b. Designated managers authorize in writing the work control documents for all activities, including maintenance on equipment important to safety, on equipment that affects operations, or that changes control indications or alarms.		
	c. The status of work in progress is documented and available for review by operators.		
	d. Work control documents specify retest requirements to ensure, prior to restoration to service, proper functioning, effectiveness of the maintenance, and that no new problems were introduced.		
	e. Supervisors assure themselves of proper equipment operation before authorizing its return to service after maintenance, testing, or emergency/abnormal event.		

Organization and Administration, DOE O 422.1 Attachment 2			
1 Requirements, Attachment 2 ¶ 2.h	**2 Detailed Attributes**	**Applicability A=Applicable N = Not Applicable P = Partially Applicably**	**3 Doc Citation /Justification**
2.h.(6) Awareness and documentation of control panel and local alarm issues	a. Operators and supervisors are aware of inoperable alarms, alarms with temporary set points, multiple-input alarms that do not provide indication of a subsequent condition, or other limitations.		
	b. Deficient alarms are documented for information to all affected personnel and entered into work control systems for correction.		
	c. Operators take appropriate actions to monitor conditions when alarms are unreliable.		
	d. Operators and supervisors are aware of alarms expected during normal operations.		
2.h.(7) Control of temporary equipment modifications and temporary systems.	a. Administrative systems control temporary modifications; examples include electrical jumpers or lifted leads, pulled circuit cards, disabled alarms, piping jumpers or blocks, disabled relief valves, strainers or filters temporarily installed or removed, temporary shielding, blocked drains, and others.		
	b. Administrative systems control temporary systems.		

Organization and Administration, DOE O 422.1 Attachment 2			
1 Requirements, Attachment 2 ¶ 2.h	**2 Detailed Attributes**	**Applicability A=Applicable N = Not Applicable P = Partially Applicably**	**3 Doc Citation /Justification**
	c. Administrative controls include:		
	1. Appropriate engineering review andapproval of the design and safety of the modification before installation.		
	2. Written authorization for installation.		
	3. Independent verification of installation and removal.		
	4. Documentation of the modifications.		
	5. Completion of any training, procedure changes, or labeling required.		
	6. Periodic audits of installed temporary modifications.		
2.h.(8) Configuration control and distribution of engineering documents.	a. Administrative systems provide for configuration control of engineering documents per applicable DOE directives		
	b. Processes provide for designating safety structures, systems, and components and their quality assurance requirements to support system engineer and maintenance needs		

Organization and Administration, DOE O 422.1 Attachment 2			
1 Requirements, Attachment 2 ¶ 2.h, ¶ 2.i	**2 Detailed Attributes**	**Applicability A=Applicable N = Not Applicable P = Partially Applicably**	**3 Doc Citation /Justification**
	c. Processes control safety software per applicable DOE directives.		
	d. Operations personnel and all other affected organizations have access to current, approved engineering documents.		
2.i.(1) The operator must establish and implement operations practices that address the following elements for the installation and removal of lockout/tagouts for the protection of personnel: **A**			• CCP-PO-005, *CCP Conduct of Operations* • CCP-HSP-014, *Health and Safety Program implementation for CCP* • Site MOU, SOW, Site Procedures and/or Site Interface Documents
2.i.(1)(a) Procedures, roles and responsibilities associated with the development, documentation, review, installation, and removal of a lockout/tagout.	1. Procedures and/or Lockout/Tagout Program implements OSHA Rules and is designed to control hazardous energy and materials during servicing or maintenance or whenever unexpected operation or energization could cause injury.		
	2. Procedures include provisions that only authorized, qualified personnel perform lockout/tagouts.		

Organization and Administration, DOE O 422.1 Attachment 2			
1 Requirements, Attachment 2 ¶ 2.i	**2 Detailed Attributes**	**Applicability A=Applicable N = Not Applicable P = Partially Applicably**	**3 Doc Citation /Justification**
	3. Personnel are trained on their responsibilities regarding tags and locks.		
	4. Procedures include provisions for documenting lockout/tagouts, including: an indexing/numbering system, identification of the reason for the lockout/tagout, applicable work packages or other documents, equipment covered, all components and their position, authorization for installing the lockout/tagout, placement and verification of locks/tags, authorization for removing the entire lockout/tagout or individual locks/tags, documenting the removal of locks/tags, designating the component position after clearing locks/tags, and documenting the repositioning of components after clearing locks/tags.		
	5. Procedures designate the manager responsible for lockout/tagout records.		
	6. Procedures include provisions for periodic management reviews of lockout/tagout records.		
	7. Procedures include provisions for checking component positions of equipment outside the lockout/tagout necessary to support restoring locked/tagged equipment to service.		

Organization and Administration, DOE O 422.1 Attachment 2			
1 Requirements, Attachment 2 ¶ 2.i	**2 Detailed Attributes**	**Applicability A=Applicable N = Not Applicable P = Partially Applicably**	**3 Doc Citation /Justification**
	8. Procedures include periodic audits of active lockout/tagouts to ensure locks and tags are properly attached and components are in the correct position.		
	9. Procedures include techniques for verifying the position of locked components, with preference for the use of a hands-on check or position indicator.		
	10. Procedures include provisions for authorizing and documenting the repositioning of locked components for a lockout/tagout.		
	11. Procedures include provisions for returning removed tags to the authorizing manager and documenting the manager's final check that all locks and tags are removed.		
	12. Procedures include provisions that permit, but discourage, temporary clearance of locks/tags per OSHA Rules.		

Organization and Administration, DOE O 422.1 Attachment 2			
1 Requirements, Attachment 2 ¶ 2.i	**2 Detailed Attributes**	**Applicability A=Applicable N = Not Applicable P = Partially Applicably**	**3 Doc Citation /Justification**
2.i.(1)(b) Compliance with Occupational Safety and Health Administration Rules, 29 CFR Part 1910 and/or 29 CFR Part 1926, requirements for the protection of workers using lockout/tagout.			
2.i.(1)(c) Compliance with National Fire Protection Association Standard 70E electrical safety requirements using lockout/tagout.			
2.i.(1)(d) Description and control of the tags, locks, lockboxes, chains, and other components utilized for the lockout/tagout program.	1. Procedures contain provisions that when key operated locks are used, access to the keys is restricted to authorized personnel.		
	2. Procedures contain provisions that when key operated locks are used, keys are readily available to appropriate personnel.		

Organization and Administration, DOE O 422.1 Attachment 2			
1 Requirements, Attachment 2 ¶ 2.i	**2 Detailed Attributes**	**Applicability A=Applicable N = Not Applicable P = Partially Applicably**	**3 Doc Citation /Justification**
2.i.(1)(e) Training and qualification in lockout/tagout and special considerations for DOE facilities, e.g. operational limitations, or seismic issues from the mass of locks or chains.	1. Training programs comply with applicable OSHA Rules and support qualification of personnel to perform lockout/tagouts.		
	2. Training includes material on how lockouts can hinder facility operations, particularly when local component operations are necessary while remote controls are locked out.		
	3. Training includes material on how the mass of locks or chains may impair seismic design features of components.		
2.i.(2) The operator must establish and implement operations practices that address the following elements for the installation and removal of caution tags for equipment protection or operational control.			

Organization and Administration, DOE O 422.1 Attachment 2			
1 Requirements, Attachment 2 ¶ 2.i	**2 Detailed Attributes**	**Applicability A=Applicable N = Not Applicable P = Partially Applicably**	**3 Doc Citation /Justification**
2.i.(2)(a) Roles and responsibilities associated with the development, documentation, review, installation, and removal of caution tags to convey operational information or equipment alignments for protection of equipment.	1. Personnel are formally designated to prepare, approve, and install tags.		
	2. Personnel are trained on their responsibilities regarding tags.		
	3. Procedures include provisions for documenting caution tags, including: an indexing/numbering system, effective date and time, the precaution or information applicable to the situation or equipment, location of tags by component name, number or other identification, authorization for installing the tags, documentation of placement and verification of the tags, authorization for removing tags, and documentation of removal.		
	4. Procedures designate the manager responsible for caution tag approval and location of records for review by appropriate personnel.		
	5. Procedures contain provisions for management determination that instructions on caution tags comply with facility procedures, technical safety requirements, or other specifications.		
	6. Situations requiring caution tags are brought to the attention of responsible managers, who approve them if necessary.		

Organization and Administration, DOE O 422.1 Attachment 2			
1 Requirements, Attachment 2 ¶ 2.i	**2 Detailed Attributes**	**Applicability A=Applicable N = Not Applicable P = Partially Applicably**	**3 Doc Citation /Justification**
	7. Procedures contain provisions for a documented periodic review of all active caution tags to determine their continued need, that the records are correct, and that appropriate action is taken to remedy conditions requiring tags for long periods (over three months).		
2.i.(2)(b) Description and control of the tags.	1. Procedures contain provisions for caution tags to be uniquely identifiable and easily distinguished from other tags.		
	2. Procedures contain provisions for caution tag placement so as to not obscure indications or controls, while remaining readily apparent to operators.		
2.i.(2)(c) Measures to prevent relying on caution tags for personnel protection.	1. Procedures contain provisions restricting the use of caution tags to situations where a component or system is functional, but some precaution or item(s) of information is necessary prior to operation.		
	2. Procedures contain provisions for management determination that caution tags are appropriate and that they are not used instead of more appropriate administrative controls or a lockout/tagout.		

Organization and Administration, DOE O 422.1 Attachment 2			
1 Requirements, Attachment 2 ¶ 2.i	**2 Detailed Attributes**	**Applicability A=Applicable N = Not Applicable P = Partially Applicably**	**3 Doc Citation /Justification**
2. j. The operator must establish and implement operations practices to verify that critical equipment configuration is in accordance with controlling documents, addressing the following elements: **A**			• CCP-PO-005, *CCP Conduct of Operations* • Site MOU, SOW, Site Procedures and/or Site Interface Documents
2.j.(1) Structures, systems, components, operations, and programs requiring independent verification.	a. Procedures or other authoritative documents explicitly identify components whose positions must be independently verified.		
	b. Management uses accepted safety analysis methods (for example, fault tree or probability risk analysis) and/or expert opinion to develop the list of equipment/components requiring independent verification.		
	c. Facility management considers all safety-related system components for independent verification.		

Organization and Administration, DOE O 422.1 Attachment 2			
1 Requirements, Attachment 2 ¶ 2.i	**2 Detailed Attributes**	**Applicability A=Applicable N = Not Applicable P = Partially Applicably**	**3 Doc Citation /Justification**
	d. Procedures allow exemption from independent verification for components whose mispositioning does not affect system performance, whose mispositioning is immediately known to operators, or where significant radiation exposure would be required for verification. Alternate means of determining position are considered, and any such exemptions are approved by senior operations management.		
	e. Management considers independent verification for components whose mispositioning could challenge safety-related equipment, cause shutdowns or other undesirable results, or lead to unintended toxic or radioactive material release.		
	f. Management specifies safety management programs and other functions such as training and procedure development that will be independently appraised to verify their continued conformance with regulations and directives.		

Organization and Administration, DOE O 422.1 Attachment 2			
1 Requirements, Attachment 2 ¶ 2.j	**2 Detailed Attributes**	**Applicability A=Applicable N = Not Applicable P = Partially Applicably**	**3 Doc Citation /Justification**
2.j.(2) Situations requiring independent verification.	a. Procedures require independent verification when equipment must be available and it is reasonably possible that components were mispositioned.		
	b. Procedures require independent verification of lineups to take equipment out of service or return it to service, e.g. isolation boundaries, equipment under maintenance or repair, instrumentation lineups for testing and their restoration, work on backup components and their restoration, etc.		
	c. Procedures include appropriate independent verification for system lineups.		
	d. Procedures include appropriate routine periodic verification of critical components during operation, which would not normally need a second check.		

Organization and Administration, DOE O 422.1 Attachment 2			
1 Requirements, Attachment 2 ¶ 2.j	**2 Detailed Attributes**	**Applicability A=Applicable N = Not Applicable P = Partially Applicably**	**3 Doc Citation /Justification**
	e. Procedures include provisions for dealing with mispositioned components found during routine periodic checks or lineups, including appropriate management approval for repositioning and subsequent independent verification.		
2.j.(3) Methods for performing and documenting independent verification.	a. Management develops and approves verification techniques appropriate to facility-specific equipment, using manufacturer's recommendations and expert operators.		
	b. Operators are trained in techniques appropriate to the facility's equipment.		
	c. Procedures provide reference documentation explaining how to perform verification of the facility's components, e.g. manual, solenoid-, motor- and air-operated valves, circuit breakers, blank flanges, removable links and fuses, control power availability, and any other specific component position or condition required.		

Organization and Administration, DOE O 422.1 Attachment 2			
1 Requirements, Attachment 2 ¶ 2.j	**2 Detailed Attributes**	**Applicability A=Applicable N = Not Applicable P = Partially Applicably**	**3 Doc Citation /Justification**
	d. Procedures specify how to achieve independence, including having each check include identification of the component and determining both its required and actual position, and minimizing interactions between operators positioning components and those verifying position, except in special situations for throttled valves or to reduce radiation or toxic exposure (concurrent dual verification).		
	e. Procedures favor direct local position checks over remote indications, absent exposure considerations or other overriding factors.		
	f. Procedures favor direct local position checks over process indications such as flow, pressure, or voltage, absent exposure considerations or other overriding factors. Any such indirect methods are specifically authorized in procedures.		

Organization and Administration, DOE O 422.1 Attachment 2			
1 Requirements, Attachment 2 ¶ 2.j	**2 Detailed Attributes**	**Applicability A=Applicable N = Not Applicable P = Partially Applicably**	**3 Doc Citation /Justification**
	g. Procedures specify how to check throttled valves. Local mechanical position indicators, scribe marks, or other authorized methods are preferred over shutting and then opening a prescribed number of turns. If shutting/opening is necessary, facility procedures consider concurrent dual verification.		
	h. Procedures favor direct local position checks over surveillance testing to show component positions. If surveillance tests are used, they must conclusively prove component position and must be specifically approved by operations management.		
	i. Procedures specify that components danger tagged per the lockout/tagout program will not be manipulated for independent verification.		
	j. Procedures specify that verifiers do not change component position or status to correct an inconsistency.		

Organization and Administration, DOE O 422.1 Attachment 2			
1 Requirements, Attachment 2 ¶ 2.j	**2 Detailed Attributes**	**Applicability A=Applicable N = Not Applicable P = Partially Applicably**	**3 Doc Citation /Justification**
	k. Procedures specify how to document independent verification, including component identification; normal or expected position, desired position, final position, identification and signature or initials of positioners and verifiers for each item, and supervisory review.		
2.j.(4) Situations, if any, allowing concurrent dual verification.	a. Procedures specify situations where concurrent dual verification is used. Examples are throttled valves that must be repositioned to determine position, or sequential operations such as a bolt torquing pattern.		
2. j. (5) Methods for performing concurrent dual verification, if used.	a. Procedures specify how concurrent dual verification is done, if at all.		

Organization and Administration, DOE O 422.1 Attachment 2			
1 Requirements, Attachment 2 ¶ 2.j, ¶ 2.k	**2 Detailed Attributes**	**Applicability A=Applicable N = Not Applicable P = Partially Applicably**	**3 Doc Citation /Justification**
	b. Procedures for concurrent dual verification (if used) include provisions for maintaining independence to the maximum extent possible, and facility policies include provisions preventing the use of concurrent dual verification unless specifically authorized. [An example for a throttled valve: the operator would shut the valve, the verifier would verify the shut position, then the operator would open the valve the specified number of turns while the observer observes and counts turns silently, with both not influencing the other, and both record the position separately.]		
2. k. The operator must establish and implement operations practices to ensure thorough, accurate, and timely recording of equipment information for performance analysis and trend detection, addressing the following elements: **P**			• CCP-PO-005, *CCP Conduct of Operations* • Site MOU, SOW, Site Procedures and/or Site Interface Documents

Organization and Administration, DOE O 422.1 Attachment 2			
1 Requirements, Attachment 2 ¶ 2.k	**2 Detailed Attributes**	**Applicability A=Applicable N = Not Applicable P = Partially Applicably**	**3 Doc Citation /Justification**
2.k.(1) Narrative logs at all key positions, as defined by management, for the recording of pertinent information.	a. Procedures include provisions for narrative logs maintained by the operations supervisor or control area operator (or equivalent) at a minimum.	**A**	
	b. Procedures include provisions for narrative logs at stations staffed part-time to provide continuity and information pass-down.	**A**	
	c. Procedures include provisions for narrative sections on round sheets when a separate narrative log is not maintained.	**N**	CCP does not utilize round sheets, per CCP-PO-005, *CCP Conduct of Operations*, operator narratives are captured in applicable operations logbooks.
2.k.(2) Prompt and accurate recording of information.	a. Procedures include provisions for information to be recorded in a timely fashion to prevent incomplete or inaccurate entries.	**A**	
2.k.(3) Type, scope, and format for log entries.	a. Management provides written direction on information to be recorded in each log, including the following elements to be recorded in at least one log, but not necessarily all in the same log:	**A**	
	1. Facility mode changes	**A**	
	2. Criticalities and criticality information (for reactors or critical experiments)	**A**	

Organization and Administration, DOE O 422.1 Attachment 2			
1 Requirements, Attachment 2 ¶ 2.k	**2 Detailed Attributes**	**Applicability A=Applicable N = Not Applicable P = Partially Applicably**	**3 Doc Citation /Justification**
	3. Abnormal facility configurations	**A**	
	4. Status changes of safety-related or other major equipment	**A**	
	5. Occurrence of reportable events	**A**	
	6. Starting and completing surveillance tests	**A**	
	7. Entering and exiting Limiting Conditions for Operations	**A**	
	8. Security incidents	**A**	
	9. Out-of-specification chemistry or process analysis results or measurements	**A**	
	10. Shift reliefs	**A**	
	11. Significant information concerning emergencies, abnormal, or unexpected events, but not to interfere with taking appropriate response actions	**A**	
	b. Management provides written direction on the format for log entries, including legible, permanent, smear-proof, entries capable of machine copying	**A**	
	c. Management provides written direction on electronic log entries, if used.	**N**	CCP does not utilize electronic logkeeping

Organization and Administration, DOE O 422.1 Attachment 2			
1 Requirements, Attachment 2 ¶ 2.k	**2 Detailed Attributes**	**Applicability A=Applicable N = Not Applicable P = Partially Applicably**	**3 Doc Citation /Justification**
2.k.(4) Method for recording late entries and correcting erroneous entries without obscuring the original entry.	a. Management provides written direction on how to make late entries, including noting the actual time late entries are made and prohibiting rewriting logs to make entries appear timely.	**A**	
	b. Management provides written direction on how to make log corrections. A widely-accepted industry standard is to make a single lineout through the incorrect entry without obscuring it and writing the correct entry in a nearby space, with the date and initials of the person making the correction.	**A**	
2.k.(5) Periodic supervisory reviews for accuracy, adequacy, and trends.	a. Management provides written direction for periodic supervisory review of logs for accuracy, completeness, timeliness, trends, and conformance with management direction.	**A**	
	b. Log review practices include periodic operations supervisor review of control area logs, and periodic review of operating station logs outside the control area by the control area supervisor or other appropriate manager.	**A**	

Organization and Administration, DOE O 422.1 Attachment 2			
1 Requirements, Attachment 2 ¶ 2.k, ¶ 2.l	**2 Detailed Attributes**	**Applicability A=Applicable N = Not Applicable P = Partially Applicably**	**3 Doc Citation /Justification**
2.k.(6) Document retention requirements.	a. Management provides written direction on keeping logs available for operator review after return from periods of absence.	**A**	
	b. Management provides written direction on log storage and preservation for the expected life of the facility or as directed by DOE and National Archives and Records Administration regulation.	**A**	
	c. Management provides written direction on how to retrieve stored logs.	**A**	
2. l. The operator must establish and implement operations practices for thorough, accurate transfer of information and responsibilities at shift or operator relief to ensure continued safe operation, addressing the following elements: **A**			• CCP-PO-005, *CCP Conduct of Operations* • Site MOU, SOW, Site Procedures and/or Site Interface Documents

Organization and Administration, DOE O 422.1 Attachment 2			
1 Requirements, Attachment 2 ¶ 2.l	**2 Detailed Attributes**	**Applicability A=Applicable N = Not Applicable P = Partially Applicably**	**3 Doc Citation /Justification**
2.l.(1) Definitions for all key positions requiring a formal turnover process.	a. Procedures contain provisions for using a turnover process for at least the supervisory positions.		
	b. Procedures contain provisions for using a turnover process for key positions, including appropriate stations staffed part-time.		
2.l.(2) Turnover of equipment/facility status, duties, and responsibilities that results in the safe and effective transfer of equipment status and in-progress or planned activities from one shift or workgroup to the next.	a. Turnover procedures contain provisions for documenting a review of checklists or other documents that record key information appropriate for the position, either operational or supervisory, such as: Facility operating mode and status Key process parameters Key tank or vessel levels Status of safety equipment Operational limits in effect Limiting Conditions for Operations in effect, either normal or abnormal Any procedures, either standard or temporary, in progress Changes in radiological or hazardous material conditions Waste management status Required samples or analyses Upcoming or in-progress maintenance, testing, or evolutions.		

Organization and Administration, DOE O 422.1 Attachment 2			
1 Requirements, Attachment 2 ¶ 2.l	**2 Detailed Attributes**	**Applicability A=Applicable N = Not Applicable P = Partially Applicably**	**3 Doc Citation /Justification**
	b. Turnover procedures contain provisions for operators and supervisors to complete document reviews before assuming responsibility for their position, reviewing in enough detail to understand status, important history, and plans. Such reviews normally extend back the shorter of 24 hours or their last shift.		
	c. Turnover procedures contain provisions for operators and supervisors to walk down appropriate control panels and computer displays to determine facility status, alarms, lineups, and equipment configuration. For control areas, the oncoming and offgoing personnel jointly walk down the control panels and displays. Supervisors and operators walk down panels early in the shift and preferably before turnover.		
	d. Turnover procedures contain provisions for offgoing and oncoming operators and supervisors to discuss, during stable facility conditions whenever possible, turnover documentation and clarify any questions.		

Organization and Administration, DOE O 422.1 Attachment 2			
1 Requirements, Attachment 2 ¶ 2.l	**2 Detailed Attributes**	**Applicability A=Applicable N = Not Applicable P = Partially Applicably**	**3 Doc Citation /Justification**
	e. Turnover procedures contain provisions that when all turnover items are complete and the oncoming person understands the status, they formally state that they assume responsibility and make a narrative log entry to that effect.		
	f. Turnover procedures contain provisions for operations supervisors to conduct briefings as needed for their oncoming shift operators and appropriate support personnel (vendors, maintenance, crafts) to review status, problems, upcoming work, or other appropriate topics.		
2.l.(3) Process for reliefs during a shift	a. Turnover procedures contain provisions for conducting operator and supervisor reliefs during shifts. These turnovers may include a less exhaustive process than the regular shift change as long as the oncoming person is at least as knowledgeable as they would be from a regular turnover.		

Organization and Administration, DOE O 422.1 Attachment 2			
1 Requirements, Attachment 2 ¶ 2.m	**2 Detailed Attributes**	**Applicability A=Applicable N = Not Applicable P = Partially Applicably**	**3 Doc Citation /Justification**
2. m. The operator must establish and implement operations practices to ensure interrelated processes do not adversely affect facility safety or operations, addressing the following elements: **A**			• CCP-QP-002, *Training & Qualification Plan* • CCP-PO-005, *CCP Conduct of Operations* • Site MOU, SOW, Site Procedures and/or Site Interface Documents
2.m.(1) Defined responsibilities with respect to the control of interrelated processes (Processes or activities that can affect operations, but are under the control of persons other than the affected operators, such as shared support systems or special testing).			• Site MOU, SOW, Site Procedures and/or Site Interface Documents

Organization and Administration, DOE O 422.1 Attachment 2			
1 Requirements, Attachment 2 ¶ 2.m	**2 Detailed Attributes**	**Applicability A=Applicable N = Not Applicable P = Partially Applicably**	**3 Doc Citation /Justification**
2.m.(2) Operator training and qualification to understand interrelated processes, to interpret instrument readings, and provide timely corrective action for process-related problems.			• CCP-QP-002, *CCP Training & Qualification Plan*
2.m.(3) Establish lines of communication between operating personnel, process support personnel, and other interrelated process operators for coordination of activities.			• Site MOU, SOW, Site Procedures and/or Site Interface Documents

Organization and Administration, DOE O 422.1 Attachment 2			
1 Requirements, Attachment 2 ¶ 2.n	**2 Detailed Attributes**	**Applicability A=Applicable N = Not Applicable P = Partially Applicably**	**3 Doc Citation /Justification**
2. n. The operator must establish and implement operations practices for an effective required reading program to keep operators updated on equipment or document changes, lessons learned, or other important information, addressing the following elements: **A**			• CCP-PO-005, *CCP Conduct of Operations* • Site MOU, SOW, Site Procedures and/or Site Interface Documents
2.n.(1) Identification of material to be distributed via required reading.	a. Directives contain provisions for a required reading program, including, as appropriate, procedure changes, equipment design changes, operating experience information, and other facility-specific items.		
	b. Directives for the required reading program include provisions for listing designated items, screening them for appropriate content, and procuring copies of the documents.		

Organization and Administration, DOE O 422.1 Attachment 2			
1 Requirements, Attachment 2 ¶ 2.n	**2 Detailed Attributes**	**Applicability A=Applicable N = Not Applicable P = Partially Applicably**	**3 Doc Citation /Justification**
2.n.(2) Identification of which personnel are required to read specific required reading items.	a. Directives for the required reading program include provisions for designating specific items for specific operators or groups of operators.		
	b. Directives for required reading program include provisions for ready access to required reading materials.		
2.n.(3) Distribution of required reading to appropriate personnel and documentation of their timely completion.	a. Directives for the required reading program include provisions for assigning due dates for items, including, where appropriate, completion before operators go on shift again.		
	b. Directives for the required reading program include provisions for documenting and tracking completion of designated specific items for specific operators or groups of operators.		
	c. Directives for required reading program include provisions for retaining documentation of completion and for periodic management review for timely assignment completion.		
	d. Directives for the required reading program include provisions for removing completed items from distribution.		

Organization and Administration, DOE O 422.1 Attachment 2			
1 Requirements, Attachment 2 ¶ 2.o	**2 Detailed Attributes**	**Applicability A=Applicable N = Not Applicable P = Partially Applicably**	**3 Doc Citation /Justification**
2. o. The operator must establish and implement operations practices for timely written direction and guidance from management to operators, addressing the following elements: **A**			• CCP-PO-005, *CCP Conduct of Operations* • Site MOU, SOW, Site Procedures and/or Site Interface Documents
2.o.(1) Appropriate circumstances for the use of timely instructions/orders.	a. Directives for timely instructions/orders specify appropriate information items such as special operations, administrative directions, special data collection campaigns, or notification of expected visitors.		
	b. Directives for timely instructions/orders specify appropriate orders such as direction to perform special evolutions or tests, limitations on performing certain operations, direction to perform maintenance actions, or other direction.		

Organization and Administration, DOE O 422.1 Attachment 2			
1 Requirements, Attachment 2 ¶ 2.o	**2 Detailed Attributes**	**Applicability A=Applicable N = Not Applicable P = Partially Applicably**	**3 Doc Citation /Justification**
	c. Directives for timely instructions/orders include provisions to prevent the use of timely instructions/orders as a substitute for administrative or operational procedure revisions.		
2.o.(2) Designated levels of review and approval prior to issuance.	a. Directives for timely instructions/orders include designation of review and approval authorities.		
2.o.(3) Configuration control of timely instructions/orders.	a. Directives for timely instructions/orders include segregation of timely instructions/orders into daily and long term categories.		
	b. Directives for timely instructions/orders include provisions for removing or canceling superseded or outdated items.		
	c. Directives for timely instructions/orders include provisions for periodic management reviews that only appropriate and current items are distributed, and that appropriate personnel review them within time limits.		

Organization and Administration, DOE O 422.1 Attachment 2			
1 Requirements, Attachment 2 ¶ 2.o	**2 Detailed Attributes**	**Applicability A=Applicable N = Not Applicable P = Partially Applicably**	**3 Doc Citation /Justification**
2.o.(4) Distribution of timely instructions/orders to appropriate personnel and documentation of their receipt and understanding	a. Directives for timely instructions/orders include provisions for distribution of timely instructions/orders to appropriate operators.		
	b. Directives for timely instructions/orders include provisions for appropriate operators to review items before or early in shift.		
	c. Directives for timely instructions/orders include provisions for documenting operator reviews every shift for daily items, including those that are delayed or remain in force longer than a day, and periodic and as-changed reviews of long term items		

Organization and Administration, DOE O 422.1 Attachment 2			
1 Requirements, Attachment 2 ¶ 2.p	**2 Detailed Attributes**	**Applicability A=Applicable N = Not Applicable P = Partially Applicably**	**3 Doc Citation /Justification**
2. p. The operator must establish and implement operations practices for developing and maintaining accurate, understandable written technical procedures that ensure safe and effective facility and equipment operation, addressing the following elements: **A**			• CCP-PO-005, *CCP Conduct of Operations* • Site MOU, SOW, Site Procedures and/or Site Interface Documents
2. p.(1) Expectations for the use of procedures to perform operations.	a. Management policies establish the expectation that operators will use written procedures for operations, will perform them as written, and will stop work and notify management when procedures cannot be executed as written.		
2.p.(2) A process for procedure development.	a. Directives include a written process for procedure development, including format, clear language standards, and configuration control.		

Organization and Administration, DOE O 422.1 Attachment 2			
1 Requirements, Attachment 2 ¶ 2.p	**2 Detailed Attributes**	**Applicability A=Applicable N = Not Applicable P = Partially Applicably**	**3 Doc Citation /Justification**
	b. Management policies designate procedures to be developed for all anticipated operations, evolutions, tests, and abnormal or emergency situations.		
	c. Management policies direct alarm/annunciator response procedures to be developed for all alarm panels.		
	d. Directives designate a senior manager responsibility for procedure development, and include provisions for the capabilities and experience of procedure writers.		
	e. Directives include a process for completing and documenting procedure review and approval of both hard-copy and electronic procedures.		
	f. Directives specify that procedures will provide administrative and technical direction to effectively conduct the operation, using detail appropriate to the complexity of the task, the experience and training of the operators, the frequency of performance, and the significance of the consequences of error.		

Organization and Administration, DOE O 422.1 Attachment 2			
1 Requirements, Attachment 2 ¶ 2.p	**2 Detailed Attributes**	**Applicability A=Applicable N = Not Applicable P = Partially Applicably**	**3 Doc Citation /Justification**
	g. Procedure preparation records contain documentation of the reason for key steps so they are not inadvertently deleted or changed in revisions and changes.		
2.p.(3) Procedure content, including consistent format and use of terms (e.g. prerequisites, warnings, cautions, notes, hold points, etc.), detail sufficient for accomplishing the operation, technically accurate procedures capable of performance as written, and procedure conformance with the facility design and manufacturer documentation.	a. Procedure scope and applicability are readily apparent.		
	b. Procedures for multiple equipment trains are clearly distinguishable from each other.		
	c. Emergency procedures are clearly distinguishable from normal operating procedures.		
	d. Procedures incorporate appropriate information from applicable source documents, including design, safety basis, and vendor technical documents.		
	e. Prerequisites and initial conditions are clearly specified.		
	f. Tools, equipment, and materials are specified and procedures provide measures to document their calibration or condition before use.		
	g. Hold points requiring independent verification or approval are clearly indicated.		

Organization and Administration, DOE O 422.1 Attachment 2			
1 Requirements, Attachment 2 ¶ 2.p	**2 Detailed Attributes**	**Applicability A=Applicable N = Not Applicable P = Partially Applicably**	**3 Doc Citation /Justification**
	h. Procedure language is clear, definitions are explained, and detail is appropriate for the operators' skill, experience, and training.		
	i. Procedure format standards: One action per step; Warnings, Notes, and Cautions are clear, do not contain actions, and precede the applicable step; Warnings, Notes, Cautions, and headings appear on the same page as the applicable step.		
	j. Procedures are technically and administratively accurate: instructions and information are correct; referenced documents are correctly identified; and instructions for transferring between procedures are clear.		
	k. Critical steps include signature/initial/checkoff blocks, with only one action per block.		
	l. Instrument readings and tolerances are specified and conform to instrument scales or readability.		
	m. Procedures contain explicit parameters and do not require mental arithmetic to determine acceptability. Any calculations are clearly explained and procedures provide space to record them.		

Organization and Administration, DOE O 422.1 Attachment 2			
1 Requirements, Attachment 2 ¶ 2.p	**2 Detailed Attributes**	**Applicability A=Applicable N = Not Applicable P = Partially Applicably**	**3 Doc Citation /Justification**
	n. Procedure step sequence conforms to normal operational sequence.		
	o. Procedures reflect human factors considerations such as procedure callouts exactly matching equipment labels, units in procedures match instrument markings, charts and graphs easily read, and important steps or information highlighted.		
	p. Emergency procedures provide guidance for both single and multiple casualties.		
	q. When procedures use or refer to other procedures or steps, they are clearly identified with the exact identification to prevent confusion in transferring to or from them.		
	r. Procedures specify the restoration or shutdown steps for equipment following tests or other operations.		
2.p.(4) A process for procedure changes (pen and ink or page changes) and revisions (complete reissues).	a. Directives include a documented process for review and approval of revisions and changes. Directives may also use only a revision process or may use an electronic publishing process. In all cases, configuration control most be maintained.		

Organization and Administration, DOE O 422.1 Attachment 2			
1 Requirements, Attachment 2 ¶ 2.p	**2 Detailed Attributes**	**Applicability A=Applicable N = Not Applicable P = Partially Applicably**	**3 Doc Citation /Justification**
	b. Procedure changes intended for more than one-time use are documented in a location readily available for operator reference and noted in timely orders/instructions and/or turnover documents.		
	c. Directives contain provisions for initiation of changes or revisions if procedure problems are found, including provisions for emergent changes or revisions necessary to proceed with operations when a procedure is faulty.		
	d. Directives contain provisions for initiating a procedure revision when changes remain in effect for extended periods (e.g. more than 6 months) or when several changes have accumulated (e.g. more than 5)		
	e. Directives contain provisions for including all outstanding changes in any procedure's revision.		
	g. Directives include provisions to review procedure development records of the reason for key steps to prevent inadvertent deletion or change.		

Organization and Administration, DOE O 422.1 Attachment 2			
1 Requirements, Attachment 2 ¶ 2.p	**2 Detailed Attributes**	**Applicability A=Applicable N = Not Applicable P = Partially Applicably**	**3 Doc Citation /Justification**
	h. Directives include provisions to use walkthroughs (procedure execution with actual or simulated operation of components by subject matter expert(s)) to validate procedure changes and revisions.		
2.p.(5) A process for training personnel on new, revised, or changed procedures.	a. Directives include provisions for communicating important procedure changes and revisions to operating personnel through required reading or other appropriate method.		
	b. Directives include provisions for communication of procedure changes and revisions to the training department to update training courses.		
	c. Directives include provisions for communication of procedure changes and revisions to the organizations responsible for personnel qualification to update qualification requirements.		
2.p.(6) A process for approval of new, revised, or changed procedures.	a. Directives include provisions for operations supervisor or manager approval of new or revised procedures prior to use, with reviews of revisions to at least the depth as the initial version.		

Organization and Administration, DOE O 422.1 Attachment 2			
1 Requirements, Attachment 2 ¶ 2.p	**2 Detailed Attributes**	**Applicability A=Applicable N = Not Applicable P = Partially Applicably**	**3 Doc Citation /Justification**
	b. Directives include provisions for safety committee or safety manager or equivalent, and, if applicable, emergency manager, review of procedures that affect safety-related equipment or emergency response.		
	c. Directives include provisions defining appropriate circumstances for expeditious approval of minor procedure changes and the process, with a minimum of at least one designated senior qualified operator and one senior operations manager approval, followed up by standard review and approval within a short period, up to 2 weeks.		
	d. Directives include provisions for using the standard review and approval process for changes that do not meet the facility's criteria for minor changes.		
2.p.(7) Initial-issue and periodic review and testing of procedures.	a. Directives include provisions for review of new and revised procedures prior to use and periodically for technical accuracy and human factors considerations.		

Organization and Administration, DOE O 422.1 Attachment 2			
1 Requirements, Attachment 2 ¶ 2.p	**2 Detailed Attributes**	**Applicability A=Applicable N = Not Applicable P = Partially Applicably**	**3 Doc Citation /Justification**
	b. Directives specify the frequency of periodic procedure reviews, considering the complexity of the operation, maturity of operations, and facility life cycle.		
	c. Directives include provisions for reviewing procedures after a significant occurrence, either human error or equipment upset.		
	d. Procedure reviews include comparison to source documents to verify accuracy.		
	e. Procedure reviews include validation walkthroughs.		
2.p.(8) Availability and use of the latest revisions of procedures.	a. Directives include provisions for maintenance of a controlled copy of all operating procedures at the control area for operator reference, and selected procedure controlled copies at appropriate locations outside the control area.		
	b. Directives include provisions for verifying working copies of procedures against controlled copies for use during evolutions, and controlling working copies to prevent using outdated procedures.		

Organization and Administration, DOE O 422.1 Attachment 2			
1 Requirements, Attachment 2 ¶ 2.p	**2 Detailed Attributes**	**Applicability A=Applicable N = Not Applicable P = Partially Applicably**	**3 Doc Citation /Justification**
	c. Directives include provisions for maintenance of controlled copies of alarm and annunciator response procedures readily accessible to operators for alarm response.		
	d. Directives detail how operators obtain current copies of electronic or hard-copy procedures for performing evolutions, and how to determine procedure approval and revision status.		
2.p.(9) Specified and defined procedure use requirements, i.e. reader-worker method, reference use only, use-each-time, and emergency response.	a. Operators are trained in procedure use requirements and management oversight reinforces the expectations.		
	b. Directives and management policy contain provisions for operators to report deficient procedures and initiate changes or revisions to correct them instead of continuing on. During emergency conditions, operators may take necessary action to place the facility in a safe condition, and to protect equipment, personnel, and public safety without first initiating a procedure change.		
	c. Directives define applicable procedure use methods and specify when to use them. Options include reader-worker, reference; fill out steps as a checklist, and others.		

Organization and Administration, DOE O 422.1 Attachment 2			
1 Requirements, Attachment ¶ 2.p, ¶ 2.q	**2 Detailed Attributes**	**Applicability A=Applicable N = Not Applicable P = Partially Applicably**	**3 Doc Citation /Justification**
	d. Directives include provisions for use of procedures for emergency response. Normally, immediate actions are committed to memory and may be executed without reference to the procedure. When conditions permit, operators use the procedure to check completion of the immediate actions and continue with follow-up actions.		
2. q. The operator must establish and implement operations practices to provide accurate, current, and approved operator aids, addressing the following elements: **A**			• CCP-PO-005, *CCP Conduct of Operations* • Site MOU, SOW, Site Procedures and/or Site Interface Documents
2.q.(1) Technical evaluation and management approval of operator aids.	a. Directives contain a process for developing, approving, and controlling operator aids.		
	b. Operators, maintenance staff, and other facility staff are trained on the operator aids process.		

Organization and Administration, DOE O 422.1 Attachment 2			
1 Requirements, Attachment 2 ¶ 2.q	**2 Detailed Attributes**	**Applicability A=Applicable N = Not Applicable P = Partially Applicably**	**3 Doc Citation /Justification**
	c. Operator aids are approved by operations management prior to posting. Approving authorities determine the accuracy and necessity of operator aids.		
	d. Directives and management practice do not allow operator aids to alter procedures, but instead initiate procedure revisions or changes if necessary.		
2. q. (2) Operator aids serve as conveniences, not operational requirements.	a. Directives and training provide that operator aids serve as a convenient reminder or quick reference source for information, not a substitute for procedures.		
2.q.(3) Operator aids do not obscure equipment.	a Directives call for posting operator aids close to the point of use in a manner that does not obscure indications or controls.		
	b. Directives call for operator aids to be sturdy, and securely mounted or stowed, and waterproof where necessary.		

Organization and Administration, DOE O 422.1 Attachment 2			
1 Requirements, Attachment 2 ¶ 2.q	**2 Detailed Attributes**	**Applicability A=Applicable N = Not Applicable P = Partially Applicably**	**3 Doc Citation /Justification**
2.q.(4) Administrative control of installed operator aids.	a. Directives controlling operator aids include provisions for maintaining a master list and copy of all approved operator aids in the control area or other appropriate area. The listing includes: - Unique identification numbers for each operator aid. - Listing of source documents for operator aid content, including revision status - Date of approval, revision, and posting location for operator aids.		
	b. Directives controlling operator aids include provisions to update operator aids when their source material is updated.		
2.q.(5) Periodic review for adequacy and correctness.	a. Verify the accuracy, necessity, and condition of posted operator aids.		
	b. Verify only approved operator aids are posted.		
	c. Verify agreement between the master list and actual postings; remove or replace operator aids and update the master list as needed.		
	d. Verify operator aids reflect the latest revisions of source material.		

Organization and Administration, DOE O 422.1 Attachment 2			
1 Requirements, Attachment 2 ¶ 2.r	**2 Detailed Attributes**	**Applicability A=Applicable N = Not Applicable P = Partially Applicably**	**3 Doc Citation /Justification**
2. r. The operator must establish and implement operations practices for clear, accurate equipment labeling, addressing the following elements: **A**			• CCP-PO-005, *CCP Conduct of Operations* • Site MOU, SOW, Site Procedures and/or Site Interface Documents
2.r.(1) Components that require a label.	a. Directives contain provisions for component labeling, including identification of components and standardized label format and colors. Labeled components include:		
	1. Valves		
	2. Major equipment		
	3. Switches		
	4. Circuit breakers		
	5. Fuse panels or locations		
	6. Instruments and gauges		

Organization and Administration, DOE O 422.1 Attachment 2			
1 Requirements, Attachment 2 ¶ 2.r	**2 Detailed Attributes**	**Applicability A=Applicable N = Not Applicable P = Partially Applicably**	**3 Doc Citation /Justification**
	7. Busses and motor control centers		
	8. Cabinets, including, where appropriate, listing major components inside		
	9. Room doors		
	10. Emergency equipment		
	11. Fire protection systems		
	12. Piping		
	13.Any named SSC, item, or operator control.		
2.r.(2) Label information that uniquely identifies components and is consistent with regulations, standards, and facility documents.	a. Directives for component labeling contain provisions for label information to match facility documentation, including design and safety basis documents, procedures, lineup sheets, and other documents that refer to components.		
	b. Label nomenclature, abbreviations, and identification codes are standardized and included in operator training.		
	c. Labeled components have unique identification numbers.		

Organization and Administration, DOE O 422.1 Attachment 2			
1 Requirements, Attachment 2 ¶ 2.r	**2 Detailed Attributes**	**Applicability A=Applicable N = Not Applicable P = Partially Applicably**	**3 Doc Citation /Justification**
	d. Color codes are consistent and unambiguous.		
	e. Piping labels indicate the fluid and normal flow direction.		
	f. Piping is color coded per OSHA/ANSI standards and piping for hazardous and explosive materials is uniquely identified.		
2.r.(3) Durable and securely attached labels that do not interfere with controls or equipment.	a. Labels, adhesives, and fasteners are made of durable materials compatible with the material to which they are attached.		
	b. Labels are securely attached		
	c. Labels are oriented for easy reading and located as close as practical to the labeled item.		
	d. Labels do not interfere with equipment operations or indicators.		

Organization and Administration, DOE O 422.1 Attachment 2			
1 Requirements, Attachment 2 ¶ 2.r	**2 Detailed Attributes**	**Applicability A=Applicable N = Not Applicable P = Partially Applicably**	**3 Doc Citation /Justification**
2.r.(4) Administrative control of labels, including a process for promptly identifying and replacing lost or damaged labels, preventing unauthorized or incorrect labels, and control of temporary labels.	a. Directives prohibit informal labels and provide a process for replacing labels.		
	b. Directives provide for deliberate inspections for missing or damaged labels, such as post-maintenance checks, operator tours, lineup sheets, or other appropriate means.		
	c. Directives include a process to document lost, damaged, or incorrect labels and procure replacements.		

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CCP-PO-500

Revision 6

CCP/ANL RH-TRU Waste Interface Document

EFFECTIVE DATE: 06/21/2013

Irene Joo

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RECORD OF REVISION

Revision Number	Date Approved	Description of Revision
0	06/01/2006	Initial issue.
1	11/16/2006	Revised to implement the Waste Isolation Pilot Plant Hazardous Waste Facility Permit requirements resulting from the Section 311/Remote-Handled (RH) Permit Modification Request (PMR).
2	08/02/2011	Revised to incorporate remote-handled (RH) waste sampling and update actual work process.
3	10/01/2012	Revised to incorporate Nuclear Waste Partnership (NWP) transition changes.
4	10/11/2012	Revised to address Carlsbad Field Office (CBFO) Corrective Action Request (CAR) 12-039.
5	02/11/2013	Revised to clarify roles associated with providing measuring and testing equipment (M&TE) Certificates of Calibration to Central Characterization Program (CCP).
6	06/21/2013	Revised to implement the Permit Modification Request Class 2 approved by New Mexico Environment Department (NMED) dated March 13, and add CH-TRAMPAC for shielded container shipments.

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1.0 PURPOSE

The Central Characterization Program (CCP) is a mobile program designed to characterize, certify, and transport transuranic (TRU) waste from various U.S. Department of Energy (DOE) sites to the Waste Isolation Pilot Plant (WIPP) in New Mexico. The CCP is operated by Nuclear Waste Partnership (NWP), at the direction of the DOE Carlsbad Field Office (CBFO).

CBFO has deployed the CCP to the Argonne National Laboratory (ANL). CCP has been deployed to this site to process remote-handled (RH) TRU waste.

This document defines the interfaces between the CCP and the Host facility organization(s) necessary to perform this work. This document is invoked via a Statement of Work (SOW) between the Host facility organization and NWP. This document is intended to clarify and expand on details contained in the upper tier SOW and program documents. It is not intended to be used in lieu of a task-specific SOW.

CCP has primary responsibility for waste characterization activities. CCP services include compilation, reporting, and confirmation of acceptable knowledge (AK), nondestructive examination (NDE), radiological characterization, visual examination (VE), RH waste sampling, data validation and verification, waste certification, WIPP Waste Information System/Waste Data System (WWIS/WDS) Data Entry, and Waste Transportation Packaging and Shipment.

In providing these services, CCP may opt to use other CBFO-certified TRU programs. CCP will accept batch data reports (BDRs) validated through the data generation level from these other certified programs and perform all project office activities in accordance with the CCP program.

These services will be performed with CCP and/or Host facility equipment with appropriate DOE/CBFO-certified procedures. All services provided by CCP will comply with RH-TRU requirements delineated in DOE/WIPP-02-3214, *Remote-Handled TRU Waste Characterization Program Implementation Plan* (WCPIP); DOE/WIPP-02-3122, *Transuranic Waste Acceptance Criteria for the Waste Isolation Pilot Plant* (WAC); and the *Waste Isolation Pilot Plant Hazardous Waste Facility Permit* (WAP), including those requirements pertaining to waste disposal and transportation. This work will be performed under a DOE/CBFO-certified quality assurance (QA) program that meets requirements defined in DOE/CBFO-94-1012, *U.S. Department of Energy Carlsbad Field Office Quality Assurance Program Document* (DOE/CBFO-QAPD).

The Host facility may augment CCP characterization efforts as requested by CCP. Where required, all augmented services provided by the Host facility shall comply with CCP-certified procedures.

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The Host facility has primary responsibility for assuring that requirements for safety, (including Radiological Control, Emergency Management, Industrial Safety, and Industrial Hygiene [IH]), security, safety basis, environmental permits, and other areas are met for CCP activities, and that CCP activities support the scheduled objectives.

Throughout this document the Host facility contractors' responsibilities are limited to the specific CCP activities being conducted within their facilities.

The CCP will certify DOE RH-TRU waste at the ANL for disposal in accordance with the certification authority that has been granted by the DOE/CBFO.

This document addresses specific requirements for the following areas:

- Training and Qualification
- Container Management
- Deficiencies and Nonconformances
- VE
- Radiological Characterization (includes dose-to-curie methodology)
- NDE
- RH Waste Sampling
- AK
- Data Validation and Reconciliation
- Measuring and Test Equipment (M&TE)
- Work Standards
- QA
- Project Control
- Procedures
- Document Transmittals
- Procurements
- Records
- Waste Certification and WWIS/WDS Data Entry
- Transportation
- Authorization Safety Basis and Configuration Management (CM)

The Host facility will report conditions or concerns that have or may have safety, health, QA, security, operational or environmental implications to the DOE Argonne Site Office (DOE/ASO). CCP shall report their similar issues to the Host facility and to DOE/CBFO.

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2.0 REQUIREMENTS

This document implements the applicable requirements of the following:

DOE/WIPP-02-3214, *Remote-Handled TRU Waste Characterization Program Implementation Plan*

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

CCP-PO-002, *CCP Transuranic Waste Certification Plan*

CCP-PO-026, *CCP Configuration Management*

CCP-PO-003, *CCP Transuranic Authorized Methods For Payload Control (CCP CH-TRAMPAC)*

CCP-PO-505, *CCP Remote-Handled Transuranic Waste Authorized Methods for Payload Control (CCP RH-TRAMPAC)*

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3.0 RESPONSIBILITIES

3.1 Initial Setup

3.1.1 CCP is responsible for the following during initial setup:

[A] Providing information and procedures to the Host facility Site Technical Representative (STR)/Designee, who will coordinate facility, QA, and Environmental Safety & Health (ES&H) reviews to determine satisfactory compliance with Host facility safety basis requirements, radiological control requirements, and other safety and operational requirements.

[B] Completing readiness activities as needed to support authorization of CCP activities at the Host facility.

[C] Providing project support to complete administrative reviews and approvals of technical and administrative procedures or processes.

[D] Mobilization of project management and staff.

3.2 Operations

3.2.1 CCP is responsible for the following activities to support operations:

[A] Performing system start-up and calibration of characterization equipment at the Host facility.

[B] Performing safety walk-downs, management, and laboratory assessments prior to operation.

[C] Responding to and resolving assessment and surveillance findings for CCP startup activities.

[D] Ensuring CCP and Host facility personnel are trained and qualified in accordance with the requirements specified in Section 4.1.

[E] Successful completion of DOE/CBFO Certification Audit.

[F] Providing drum tracking support for the drums introduced into characterization activities.

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[G] CCP, through NWP established programs, maintains the responsibility for reporting potential Price-Anderson Amendments Act (PAAA) issues resulting from the certification of TRU waste by CCP at ANL. This includes filing any Occurrence Reporting and Processing System (ORPS) reports resulting from the certification of TRU waste by CCP at ANL. CCP shall allow the Host facility to participate in the investigation of any waste certification event that results in an ORPS or PAAA report.

[H] CCP shall support and participate in Host facility investigations when CCP characterization activities result in a Host facility initiated ORPS or PAAA report.

[I] CCP shall maintain records in accordance with CCP-QP-008, *CCP Records Management,* and CCP-QP-028, *CCP Records Filing, Inventorying, Scheduling, and Dispositioning*.

3.2.2 The Host facility provides the following support for CCP activities:

[A] Radiological controls as needed to support characterization activities, including:

- Radiological postings.
- Radiation protection surveys, both initial and routine, on characterization equipment and provide approved survey reports to the CCP Site Project Manager (SPM) as required.
- Personnel dosimetry.
- Dose assessments and dosimetry reports.
- Calibrated and source checked survey instrumentation, as required.
- Radiological Work Permits (RWP) to support CCP activities, as required.
- Bioassay sample collection, evaluation, and reports. Bioassay reports will be provided to the CCP Vendor Project Manager (VPM) within 90 days of sample collection, if applicable.

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- Radiological source controls.
- Radiological Technicians for monitoring.
- Responsible for secondary generated waste.
- Personal Protective Equipment, as necessary.
- Personnel facilities to accommodate the characterization and loading process.

[B] Provides site-specific training, as needed, to ensure safe operations within the facility.

[C] Provides ES&H support, as needed.

[D] Provides Fire Protection and Emergency Management support, as needed.

[E] Provides authorization basis oversight, including Unreviewed Safety Question (USQ) evaluations.

[F] Provides environmental impact oversight and support, as needed.

[G] Provides on-site sample and drum transportation.

[H] Provides drum handling, inventory control, and storage location tracking.

[I] Provides personnel to be trained and qualified under the CCP program as needed to support CCP activities such as AK, VE, radiological characterization, and solids sample collection.

[J] Performs document classification reviews as required to allow the public release of documents such as the AK Summary Report.

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[K] The Host facility maintains the responsibility for reporting potential PAAA issues resulting from issues with safe operation of CCP characterization activities (e.g., Technical Safety Requirements, Radiation Safety, Industrial Safety, IH, Maintenance, Lockout/Tagout, Conduct of Operations, etc.) at ANL. This includes filing any ORPS reports resulting from issues with safe operation of CCP characterization activities at ANL. The Host facility shall allow CCP to participate in investigations resulting in ORPS or PAAA reports from issues with safe operation of CCP characterization activities at ANL.

[L] The Host facility will be allowed to participate in CCP investigations when a waste certification event results in a CCP initiated ORPS or PAAA report.

[M] Provides adequate space and file storage capacity for CCP personnel to maintain records.

3.3 CCP Site Project Manager (SPM)

3.3.1 Functions as CCP's primary interface and point-of-contact between CCP and the Host facility for all waste characterization, certification, and transportation activities.

3.3.2 Ensures CCP and Host facility personnel are trained and qualified to perform WIPP-compliant TRU waste characterization and transportation activities at the Host facility prior to commencement of work activities.

3.3.3 Confirms sufficient characterization equipment is available to perform the required characterization activities at the Host facility.

3.3.4 Provides the AK Summary Report for DOE waste characterized by the CCP to the Host facility STR/Designee.

3.3.5 Works in conjunction with Host facility operations to establish and maintain reasonable and appropriate throughput of waste containers.

3.3.6 Ensures that project level verification and validation of BDRs are completed.

3.3.7 Provides status on CCP characterization operations to the Host facility STR/Designee.

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3.3.8 Reviews required software QA per CCP-QP-022, *CCP Software Quality Assurance Plan*.

3.4 Quality Assurance (QA)

3.4.1 Functions as CCP's primary interface and point-of-contact for QA matters between CCP, Host facility, DOE/ASO, and DOE/CBFO.

3.4.2 Validates the Nonconformance Reports (NCRs) generated by CCP personnel performing characterization activities at the Host facility.

3.4.3 Notifies the Host facility STR/Designee of any potential ORPS or Noncompliance Tracking System-Reportable PAAA issues resulting from the certification of TRU waste by CCP at ANL.

3.4.4 Provides copies of NCRs for information to the Host facility STR/Designee, as requested.

3.4.5 Ensures that nonconformances are dispositioned in a timely manner in accordance with CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control.*

3.4.6 Ensures receipt inspection per CCP-QP-026, *CCP Inspection Control,* of procured items and services is performed.

3.5 Host Facility Subcontract Technical Representative (STR)/Designee (Host Facility Management Position)

3.5.1 Functions as the Host facility's primary interface and point-of-contact between the Host facility and CCP.

3.5.2 Ensures any USQs that may be needed for proposed modifications to CCP hardware, software, or procedures are prepared and approved by the appropriately qualified Host facility personnel prior to CCP implementing the proposed modification.

3.5.3 Ensures needed site infrastructure support, such as radiological, industrial safety and IH, is available for waste characterization.

3.5.4 Ensures Host facility-specific training is provided to the CCP VPM, as requested.

3.5.5 Coordinates review, provides comments, and approves comment resolutions on procedures listed in Section 4.17.3 for the purpose of ensuring facility safety requirements are met.

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3.5.6 Provides local support to CCP, including but not limited to VE, radiological characterization, and sampling personnel to support characterization operations as needed. Also provides personnel to support the CCP AK Experts (AKE) in the collection of required documents and procedures as needed.

3.5.7 Ensures that periodic QA surveillances of CCP operations by the Host facility are conducted and reported to CCP.

3.5.8 Distributes the CCP documents listed in Section 4.17.3 to Host facility reviewers as required by the Host facility administrative controls.

3.5.9 Reviews and concurs in accordance with CCP-QP-010, *CCP Document Preparation, Approval, and Control*, on documents in Section 4.17.3 of this Interface Document.

3.5.10 Provides facilities, construction services, utilities, phone services, office services, and supplies.

3.6 CCP Vendor Project Manager (VPM)

3.6.1 Monitors the List of Qualified Individuals (LOQI) daily (when characterization activities are being performed) to confirm that only qualified personnel perform waste characterization activities.

3.6.2 Functions as CCP's primary interface and point-of-contact between CCP and the Host facility STR/Designee for characterization field operations.

3.6.3 Provides pre-operation briefings when activities are being conducted.

3.6.4 Ensures that in-process documents and the documents listed in Section 4.18.2 are transmitted to the CCP Site Project Office as soon as practicable in accordance with CCP-QP-008.

3.6.5 Ensures applicable Material Safety Data Sheets (MSDS) are maintained and available to support operations.

3.6.6 Provides oversight of field operations to ensure safe, efficient operations.

3.6.7 Supervises day-to-day TRU waste characterization activities.

3.6.8 Notifies the CCP SPM and the Nuclear Facility Manager of any abnormal events associated with safe operation of CCP characterization activities for reporting purposes.

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4.0 PROCEDURE

4.1 Training and Qualification

4.1.1 CCP personnel or Host facility personnel who perform work under CCP procedures will be trained and qualified to WIPP requirements according to CCP-QP-002, *CCP Training and Qualification Plan* and those positions not covered under the Certified CCP will be trained and qualified according to CCP-QP-040, *Support Training*.

4.1.2 CCP operations will be performed only by properly trained and qualified personnel as verified from the LOQI by the VPM in accordance with CCP-PO-005, *CCP Conduct of Operations*.

4.1.3 Administrative work, such as BDR reviews that require no access to characterization activities or processes, may be completed by personnel who have not completed the Host facility required site-specific training. Personnel who have not completed site-specific training will not be allowed unescorted access to the characterization activities.

4.1.4 CCP and Host facility personnel assigned to field operations must complete the Host facility site-specific training. The STR/Designee will ensure written notification of completed site-specific training is sent to CCP Training.

4.1.5 Both the CCP training and Host facility site-specific training must be completed prior to the individual being assigned to perform independent work at the Host facility.

4.1.6 Immediate notification, in writing, will be provided by CCP or the Host facility if any required qualification is revoked, suspended, or expires.

4.2 Container Management

4.2.1 The Host facility is responsible for drum movement and storage.

4.2.2 The Host facility will provide the dose rate and surface contamination information necessary to certify the container or canister for disposal.

4.2.3 CCP is responsible for container management throughout the CCP characterization process.

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4.2.4 The Host facility is responsible for providing documented information to the CCP SPM on any modification to a drum or canister after closure and/or AK has been approved.

4.2.5 The CCP SPM will review the documented information of modified drums and will notify the STR when the drums are approved for entrance into the CCP characterization process.

4.3 Deficiencies and Nonconformances

4.3.1 CCP Identified Deficiencies and Nonconformances

NOTE

QA will confirm appropriate closure of the deficiencies that are resolved by CCP.

[A] If CCP personnel identify a nonconformance condition associated with a waste container during the CCP characterization or certification process, CCP personnel will initiate an NCR in accordance with CCP-QP-005.

[B] If the deficiency or nonconformance is an issue that will be resolved by CCP, QA will provide notification (e.g., verbal or e-mail as required by the Host facility) to the Host facility STR/Designee. The Host facility STR/Designee may request any supporting documentation needed by the Host facility. CCP will ensure appropriate closure of the deficiency. A copy of any CCP NCR related to DOE TRU waste at the ANL will be provided to the Host facility STR/Designee upon request.

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NOTE

In some cases, ANL may perform the work required to resolve deficiencies identified in CCP NCRs and will initiate internal documentation as required by the ANL program. However, the CCP NCRs will remain open, and CCP NCR Hold Tags will remain on the affected containers until resolution of the NCR condition has been confirmed by CCP under its certified program. At that point, CCP will close the NCRs and remove the NCR tags.

[C] **IF** the deficiency or nonconformance cannot be resolved by the CCP (e.g., does not meet TRU Waste Acceptance Criteria),
THEN the specific drum will be returned with all required documentation to the Host facility for disposition.

[D] CCP personnel will immediately notify the CCP VPM of any abnormal event associated with the safe operation of CCP characterization activities. The CCP VPM will notify the CCP SPM and the Nuclear Facility Manager of the abnormal event.

[E] QA will notify the STR/Designee of potential CCP ORPS and PAAA reports resulting from the certification of waste by CCP at ANL.

4.3.2 Host facility Identified Deficiencies and Nonconformances

[A] Deficiencies or nonconformances identified by the Host facility during this project that affect waste characterization or certification activities shall be promptly identified to the CCP VPM, who will initiate an NCR in accordance with the existing CCP deficiency reporting process in accordance with CCP-QP-005.

4.4 Visual Examination (VE)

4.4.1 CCP will conduct VE at the time of waste packaging or as required by the governing documents in accordance with CCP-TP-500, *CCP Remote-Handled Waste Visual Examination*, using a facility provided by the Host facility.

4.4.2 Host facility will be responsible for all maintenance and repairs to the facility used for VE and/or repackaging operations.

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4.5 Radiological Characterization

4.5.1 The Host facility will provide a technical lead to support radiological characterization efforts based on the use of AK for stored RH-TRU waste.

4.5.2 CCP will provide qualified personnel, including Host facility personnel, to perform radiological characterization activities.

4.5.3 The Host facility will provide support for the CCP for performing calibration of Radiological Characterization instrumentation. This support includes delivery of surrogate drums and source control, as needed.

4.5.4 If the preliminary radiological results indicate an individual drum, or suite of RH-TRU drums staged for characterization in the Host facility, contains a ^{239}Pu fissile gram equivalent amount greater than 100 grams, the appropriate Host facility Shift Supervisor and Facility Manager shall be immediately notified. The Host facility operations will remove the container(s) and provide storage in a safe configuration. The CCP will provide a finalized Radiological Characterization analysis report to the Host facility STR/Designee within seven days.

4.6 RH Waste Sampling

4.6.1 CCP, with Host site's concurrence, will prepare and approve a Sampling and Analysis Plan (SAP) per the requirements of the WCPIP or Section C1 of CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan* when sampling S3000 or S4000 waste stream.

4.6.2 CCP will conduct RH waste sampling with CCP qualified operators per CCP-TP-512, *CCP Remote-Handled Waste Sampling*, and the SAP.

4.6.3 RH waste sampling is performed with Host site facility equipment.

4.6.4 Host site is responsible for the maintenance of the facility equipment used for RH waste sampling.

4.7 Source Control

4.7.1 No Special Nuclear Material (SNM) sources are anticipated to be required to support radiological characterization.

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4.7.2 The Host facility will be responsible for management of all Radiological Characterization Non-SNM reference sources. Responsibilities consist of: inventory control, storage, shipment, and usage. CCP will provide the Host site the number of sources and isotopic distribution with activity levels of the sources CCP needs to bring on site. The Host facility will provide CCP the names of the custodian and authorized users when required or requested by CCP.

4.7.3 The Host facility will be responsible for providing radiological control support associated with the CCP non-SNM reference sources. This support consists of maintaining the radioactive materials area postings, periodic surveys and performing a semi-annual leak check on the sources as requested by CCP.

4.7.4 The Host facility, as custodian of non-SNM sources, will provide to CCP the necessary sources for calibration as requested. Host facility personnel will load the sources into the matrix drums as requested by CCP. CCP personnel will be trained as users of the sources to the Host facility procedures, as required.

4.8 Acceptable Knowledge (AK)

4.8.1 CCP records personnel will maintain the auditable AK record necessary to support the AK Summary Report in accordance with the WIPP RH-TRU WAP and DOE/CBFO-QAPD.

4.8.2 CCP AK personnel will perform and document the AK collection, reporting, and confirmation per the WCPIP and CCP-TP-005, *CCP Acceptable Knowledge Documentation*. CCP shall submit the AK Summary Report for Host facility review and concurrence. As warranted, the Host facility STR/Designee will provide written comments. Upon satisfactory disposition of comments, the Host facility STR/Designee will provide written concurrence of the AK Summary Report.

4.8.3 Host facility personnel will assist CCP AK personnel in support of AK compilation, confirmation, discrepancy resolution, or AK reassessment of source documents.

4.8.4 CCP will provide training and qualification of Host facility personnel, as necessary, to support AK efforts.

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4.9 Data Validation and Reconciliation

4.9.1 CCP, using CCP-trained Host facility personnel where applicable, will provide data generation level validated data packages for all characterization activities. CCP will provide data generation level validated data packages for NDE, and Radiological Characterization in accordance with the approved CCP procedures governing these processes.

4.9.2 Wherever CCP has obtained the services of another CBFO-certified TRU Waste Program, that program will provide data generation level BDRs to CCP in accordance with their own programmatic documents.

4.9.3 CCP will provide project level validated data packages for NDE, Radiological Characterization, and VE.

4.9.4 The CCP SPM and AKE will perform data reconciliation with applicable data quality objectives (DQOs) in accordance with CCP-TP-002, *CCP Reconciliation of DQOs and Reporting Characterization Data,* and/or the Characterization Reconciliation Report.

4.10 Measuring and Test Equipment (M&TE)

4.10.1 The CCP M&TE Custodian will provide a recall notification for CCP M&TE that requires calibration to the Host facility STR/Designee.

4.10.2 For Host site M&TE furnished for use in the CCP program, the Host site STR/Designee will provide notification to the CCP M&TE Custodian when M&TE are added, deleted, found out-of-tolerance/defective, or failed calibration.

4.10.3 The Host facility will make available National Institute of Science and Technology (NIST)-traceable calibration services for M&TE to the CCP. The Host facility will maintain records on M&TE calibration in accordance with their Records Inventory and Disposition Schedule (RIDS). Copies of the Certificates of Calibration will be made available to the CCP VPM and/or CCP M&TE Custodian prior to issuing M&TE to CCP for use.

4.10.4 The Host facility will make available national standard-traceable calibration services for gamma and neutron dose measurement instrumentation. The Host facility will maintain records on calibration in accordance with their RIDS. Copies of the Certificates of Calibration will be made available to the CCP VPM

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and/or CCP M&TE Custodian prior to issuing the instrumentation to CCP for use.

4.10.5 The Host facility STR/Designee will make calibration documentation and processes accessible as needed for internal and external audits.

4.11 Work Standards

4.11.1 CCP operations personnel will work under the Host facility Lockout/Tagout procedure.

4.11.2 CCP and Host facility-provided personnel will perform quality-affecting work under CCP procedures for TRU waste characterization and certification activities. Host facility procedures and work packages will be used for non-waste characterization activities (e.g., equipment repairs).

4.11.3 CCP operations personnel will operate in accordance with CCP-PO-005.

4.11.4 CCP operations personnel will comply with Host facility procedures as they apply to established characterization areas.

4.11.5 CCP personnel will work under the Host facility safety basis and work control standards, (i.e., General Employee Radiological Training). Maintenance work control activities for CCP supplied equipment will be controlled using CCP-TP-140, *CCP Equipment Maintenance*. Maintenance work control activities on Host facility-supplied equipment will be controlled using Host facility work authorization procedures.

4.11.6 As outlined in CCP-CM-001, *CCP Equipment Change Authorization and Documentation,* and CCP-PO-005, it is the responsibility of the CCP VPM to maintain equipment configuration and authorize equipment changes to ensure characterization systems are operated and maintained in accordance with the Host facility safety basis. The CCP VPM will not authorize a change to any characterization system until steps 4.11.6 [A] and [B] have occurred:

[A] The CCP Cognizant Engineer has reviewed and approved the proposed change in writing to the CCP VPM (this may be accomplished via e-mail). In addition, any proposed change to any vendor-supplied characterization system must be reviewed and approved by an appropriate vendor engineer or representative. The vendor engineer or authorized

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representative must provide written approval to the CCP VPM (this may be accomplished via e-mail) for the proposed change.

[B] The Host facility STR/Designee must concur with the proposed change in writing (this may be accomplished by e-mail) and provide a copy of the approved USQ, if it is required.

[C] The Host facility will manage the configuration of the radiography and assay units in accordance with the appropriate Host facility procedures. Once these systems have been turned over to CCP for operation, no change to the configuration will be approved by the Host facility without CCP's concurrence in writing (this may be accomplished by e-mail) from the CCP VPM.

4.11.7 CCP personnel will participate in the Host facility bioassay program. CCP personnel involved in VE of waste will provide routine samples on for cause basis and upon project completion. All other CCP personnel will provide samples as requested under the routine/random program established by the Host facility. All CCP personnel will submit the bioassay samples required to establish a baseline for activities at the Host facility, if applicable.

4.11.8 The Host facility will analyze bioassay samples provided by CCP personnel within 90 days of their receipt.

4.11.9 The CCP VPM will be notified if any bioassay sample provided by CCP personnel indicates that an uptake of any radioactive isotopes may have occurred as soon as is reasonably possible.

4.11.10 Host facility radiological controls personnel will perform routine surveys for contamination and radiation as specified in Host facility policies or procedures. The CCP SPM or CCP VPM and appropriate Host facility management personnel will be notified immediately upon the discovery of any loose surface contamination in any CCP-occupied buildings or any of the CCP-operated characterization equipment contained in these buildings. Access to and copies of routine survey results will be made available to CCP upon request.

4.11.11 The Host facility will provide the CCP SPM or CCP VPM with the results of continuous or fixed air sample filter analysis within 21 days of the removal of the filter from the sampler head, in any monitored area routinely occupied by CCP personnel.

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4.11.12 The Host facility will provide the necessary dosimetry for CCP personnel. Dosimetry reports will be provided to the CCP SPM or CCP VPM.

4.11.13 CCP will provide historical information on the operation of any CCP equipment deployed at Host facility for the purpose of lessons learned and the implementation of any mitigating actions from these lessons learned.

4.12 Waste Certification and WIPP Waste Information System/Waste Data System (WWIS/WDS)

4.12.1 CCP will prepare Waste Stream Profile Forms (WSPFs) for the subject Host facility waste in accordance with CCP-TP-002.

4.12.2 CCP will transmit characterization and certification data in accordance with WWIS/WDS and CCP-TP-030, *CCP CH TRU Waste Certification and WWIS/WDS Data Entry*.

4.12.3 CCP shall submit copies of WSPFs to the Host facility for information before submittal to CBFO. The Host facility will provide written concurrence on the basis of continued compliance with procedures and programs and CBFO certification of the CCP characterization program.

4.12.4 The CCP Waste Certification Officials (WCO) will document and certify that all TRU waste payload containers meet the requirements of the WAC and submit the data to the WWIS/WDS for approval.

4.12.5 The CCP WCO will provide listings of drums requiring retrieval from storage for the purposes of loading into RH TRU 72B canisters.

4.12.6 CCP will begin their loading and shipping process using payload containers approved in WWIS/WDS.

4.13 Transportation

4.13.1 CCP is responsible for meeting all requirements for loading and shipping TRU waste certified by CCP as approved in WWIS/WDS.

4.13.2 The Host facility will load drums into canisters according to CCP WCO listings, using approved procedures, and will provide the CCP WCO with the necessary data to complete the process.

4.13.3 The CCP WCO will work with the Host facility as necessary to complete the appropriate transportation activities.

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4.13.4 The CCP Transportation Certification Official (TCO) will work with the Host facility as necessary to load the canisters into the RH TRU 72B casks or HalfPact.

4.13.5 The CCP TCO will coordinate the completion of the preparations of the RH TRU 72B Cask for shipment in accordance with DOE/WIPP-02-3283, *RH Packaging Program Guidance,* DOE/WIPP-02-3284, *RH Packaging Operations Manual*, DOE/WIPP-02-3183, *CH Packaging Program Guidance, and* DOE/WIPP-02-3184, *CH Packaging Operations Manual*.

4.14 Quality Assurance (QA)

4.14.1 All work performed in the completion of this waste characterization and certification scope will be in compliance with applicable DOE/CBFO-certified CCP procedures.

4.14.2 CCP will conduct periodic QA surveillances to assess compliance with applicable WIPP requirements.

4.14.3 The Host facility will conduct audits/surveillances to assess compliance with applicable procedures.

4.15 Procurement

4.15.1 All items and services to be purchased under CCP-PO-001 will be graded by CCP in accordance with CCP-QP-001, *CCP Graded Approach*. The grading will determine whether the items and services are quality-affecting (Quality Level 1 or Quality Level 2) or non quality-affecting (Quality Level 0) for WIPP characterization, certification, and transportation.

[A] CCP will procure all quality-affecting items and services in accordance with CCP-QP-015, *CCP Procurement.* These items and services are the sole responsibility of CCP with regard to their quality integrity.

[B] Host facility will procure items and services determined by the CCP grading process to be non quality-affecting for WIPP characterization, certification, and transportation. The Host facility will be responsible for verification and compliance for these items and services.

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[C] Items and services that are related to safe operation of the facility, and which do not affect WIPP characterization, certification, and transportation, are not required to be graded by CCP.

[D] Receipt inspection of quality-affecting items will be performed by personnel trained and qualified to CCP-QP-002.

[E] CCP will maintain Receipt Inspection Verification Sheets (RIVS) and associated objective evidence for each shipment in accordance with CCP-QP-026.

[F] CCP will provide Host facility advance notice (two weeks preferred) regarding anticipated receiving inspections that will be performed by Host facility personnel trained and qualified by CCP.

4.16 Project Control

4.16.1 CCP and Host facility will provide weekly status for their respective scheduled activities.

4.16.2 CCP will maintain and provide Host facility with an up-to-date organization chart listing CCP personnel, along with associated roles and responsibilities.

4.17 Procedures

4.17.1 As defined in CCP-QP-010, editorial or minor changes may be made to all CCP documents except CCP-PO-001; CCP-PO-002, *CCP Transuranic Waste Certification Plan*; CCP-PO-003, *CCP Transuranic Authorized Methods for Payload Control (CCP CH-TRAMPAC);* CCP-PO-505, *CCP Remote-Handled Transuranic Waste Authorized Methods for Payload Control (CCP-RH-TRAMPAC);* and CCP-QP-001 without the same level of review and approval as the original document. CCP will process any required changes in accordance with CCP-QP-010.

4.17.2 New Technical Operating Procedures (procedures that operate equipment) developed by CCP scheduled to be used at the Host site, shall be evaluated by the Host facility STR/Designee to determine if the procedure shall be added to the Host facility review lists defined below.

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4.17.3 The following documents, and all revisions to these documents, will be provided to the Host facility STR/Designee for review:

- CCP AK Reports
- CCP Waste Stream Profile Forms
- CCP-PO-500, *CCP/ANL RH-TRU Waste Interface Document*
- CCP-TP-093, *CCP Sampling of TRU Waste Containers*
- CCP-TP-140, *CCP Equipment Maintenance*
- CCP-TP-504, *CCP Dose-to-Curie Survey Procedure for Remote-Handled Transuranic Waste*
- CCP-TP-512, *CCP Remote-Handled Waste Sampling*
- CCP-TP-513, *CCP Procedure for Dimensional or Gravimetric Measurements for Radiological Characterization of Remote-Handled Transuranic Waste*
- CCP-TP-554, *CCP Remote-Handled Grapple Pre-Operational Checks and Operation*

4.17.4 The following documents, and all revisions to these documents, will be provided to the Host facility STR/Designee as Notify Only for review:

- CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*
- CCP-PO-002*, CCP Transuranic Waste Certification Plan*
- CCP-PO-005, *CCP Conduct of Operations*
- CCP PO-003, *CCP Transuranic Authorized Methods For Payload Control (CCP CH-TRAMPAC)*
- CCP-PO-505, *CCP Remote-Handled Transuranic Waste Authorized Methods for Payload Control (CCP RH-TRAMPAC)*
- CCP-QP-002, *CCP Training and Qualification Plan*

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- CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control*
- CCP-QP-006, *CCP Corrective Action Reporting and Control*
- CCP-QP-008, *CCP Records Management*
- CCP-QP-010, *CCP Document Preparation, Approval, and Control*
- CCP-QP-040, *Support Training*
- CCP-TP-001, *CCP Project Level Data Validation and Verification*
- CCP-TP-002, *CCP Reconciliation of DQOs and Reporting Characterization Data*
- CCP-TP-106, *CCP Headspace Gas Sampling Batch Data Report Preparation*
- CCP-TP-509, *CCP Remote-Handled Transuranic Container Tracking*

4.17.5 CCP will maintain control of procedures in accordance with CCP-QP-010.

4.17.6 The Host facility STR/Designee will review or designate the appropriate reviews of the CCP procedures listed in Section 4.17.3 and forward written comments to CCP Document Control in accordance with CCP-QP-010 for resolution.

4.17.7 The CCP SPM will confirm that the Host facility STR/Designee written comments are resolved with the Host facility STR/Designee concurrence prior to proceeding with CCP operations.

4.18 Document Transmittals

4.18.1 Documents listed in this section, which are provided from one organization to the other as information copies, may be transmitted via memo, fax, e-mail, or formal correspondence. Documents identified as QA records will be transmitted in accordance with CCP-QP-008.

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4.18.2 Documents to be provided to the Host facility by CCP include:

[A] List of equipment requiring calibration

[B] Copies of NCRs and Corrective Action Requests (CARs), as applicable

[C] Copies of AK Summary Reports

[D] Copies of AK source documents and source document summaries, as requested

[E] Copies of QA surveillance reports

[F] Copies of WSPFs

[G] Copies of VE, NDE, and Radiological Characterization, information and data, as requested

[H] Copies of RIVS and associated objective evidence for each shipment

[I] Information on chemical usage, sources required, and copies of applicable MSDSs as requested for inventory or reporting reasons

[J] Copies of training requirements and associated training records for CCP personnel supporting the Host facility

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

[L] CCP-PO-002, *CCP Transuranic Waste Certification Plan*

[M] Results of all DOE/CBFO/New Mexico Environment Department (NMED)/DEQ/U.S. Environmental Protection Agency (EPA) or other regulatory audit or compliance/enforcement actions that may impact its ability to characterize and transport TRU waste

[N] Copy of final data package to WIPP via WWIS/WDS, as requested

[O] Documented evidence of participating in and passing the CBFO performance demonstration program, if necessary

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[P] NMED and EPA approval of the CBFO Certification Audit Report

[Q] Documents called out in Section 4.16

4.18.3 Documents to be provided to CCP by Host facility include:

[A] Documentation of training completion for CCP and Host facility personnel for training received from the Host facility

[B] Copies of AK source documentation requested by CCP

[C] Radiological dose rate and surface contamination results on waste drums as needed to support WWIS/WDS data entry

[D] Radiological information as described per Section 3.2.2[A] of this document

[E] Copies of NCRs, deficiency reports, or other nonconformance documentation per Section 4.3

[F] Copies of the results of Host facility assessments pertaining to CCP

[G] Copies of calibration certifications

[H] Copies of QA surveillance reports

[I] Radiological workplace and exposure data including ALARA Planning documents for evaluation of activities

[J] Any documentation required for CCP to perform its scope of work, including correspondence pertaining to characterization activities

4.19 Authorization Safety Basis and Configuration Management

4.19.1 The Host site has primary responsibility to ensure that CCP equipment and processes have been appropriately considered within the DOE-approved Host site documented safety analysis.

4.19.2 CCP has primary responsibility to control operations and equipment configurations to ensure compliance with site procedures that protect the personnel, public, and environment.

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4.19.3 For CCP-provided equipment, CCP will provide documentation necessary for the Host site to perform the evaluation against the safety analysis. This documentation may include health and safety plans, hazards assessments, system descriptions, equipment drawings, or other information deemed necessary by the Host site.

4.19.4 For Host site-provided equipment, CCP will review operational and authorization basis documentation to ensure the safety of CCP personnel while operating equipment.

4.19.5 All changes to equipment operated by CCP will be controlled by the Host site work-control program to ensure appropriate authorization basis evaluations are conducted and associated controls are established.

4.19.6 The Host site will submit all changes to authorization-basis requirements that affect CCP operations for review and concurrence prior to implementation.

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5.0 RECORDS

5.1 Records generated during the performance of the waste characterization and certification scope are controlled by CCP.

5.2 QA records generated by CCP documents referenced in this plan are maintained in accordance with CCP-QP-008.

5.3 All QA records generated by CCP documents referenced in this plan shall be maintained by CCP.

5.4 All QA records generated by CCP will be maintained and dispositioned in accordance with CCP-QP-028.

5.5 Host facility will maintain the following records in accordance with Host facility requirements. The list includes, but is not limited to, the following:

5.5.1 MSDS

5.5.2 Calibration Certifications

5.5.3 Project Control schedules and cost data reports

5.5.4 Radiological records (Exposure records)

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6.0 OVERSIGHT

NOTE

Through the associated SOW, the Host facility has delegated the authority to characterize, certify, and ship TRU waste to the WIPP. Nonetheless, the Host facility retains the responsibility for proper disposal as the waste generator. Accordingly, the following actions will define the level of oversight of the CCP by Host facility personnel.

6.1 The Host facility will accept successful completion of the CBFO certification audit as adequate evidence that the CCP implementation at the Host facility is fully compliant with waste disposal requirements as set forth in the WAC and WAP. However, the Host facility may conduct, at their discretion, periodic surveillances of CCP operations.

6.2 Following successful completion of the certification audit, the Host facility QA will conduct periodic surveillances to ensure CCP work is conducted in accordance with CCP procedures. These surveillances will be conducted in accordance with the Host facility QA procedures.

6.3 The Host facility QA will provide copies of its surveillance reports to the CCP SPM. QA and the SPM will take the following actions:

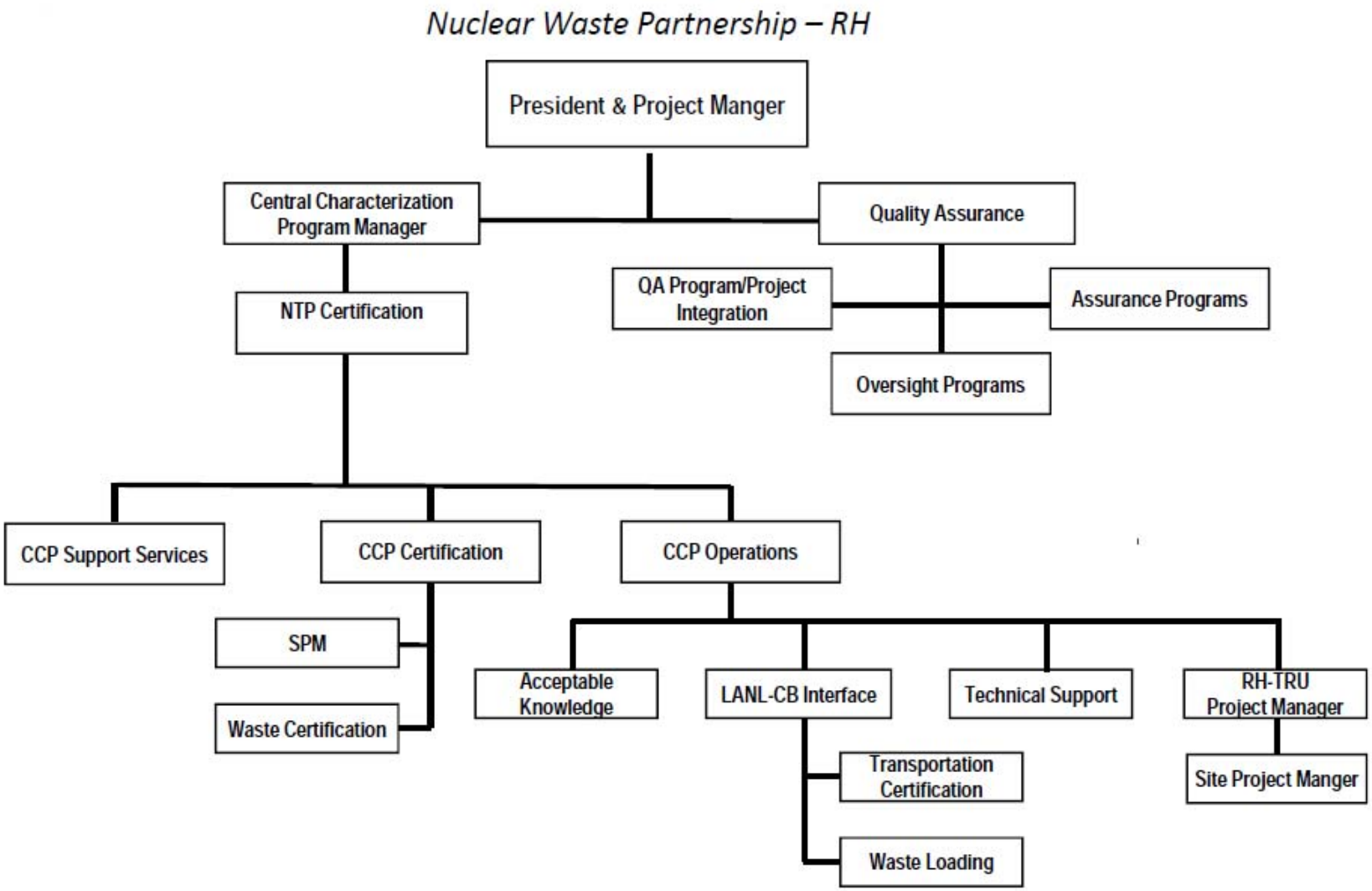
6.3.1 Review the Host facility surveillance reports for any finding or other deficiencies against the CCP SOW.

6.3.2 If required, prepare and process CARs in accordance with CCP-QP-006, *CCP Corrective Action Reporting and Control*, for deficiencies identified during the review.

6.3.3 Provide Host facility QA with CCP actions to correct the identified deficiencies, as documented in the CCP CAR.

6.3.4 QA will maintain an information file of the Host facility surveillance reports conducted on the CCP SOW.

Figure 1 – Nuclear Waste Partnership – RH



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CCP-QP-001

Revision 8

CCP
Graded Approach

EFFECTIVE DATE: 06/20/2013

Mike Ramirez

PRINTED NAME

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RECORD OF REVISION

Revision Number	Date Approved	Description of Revision
2	04/09/2002	Revised Scope; Modified Attachment 1-QA Grading Level Determination Checklist; Added a Table of Contents; Added the functions and responsibilities of a CCP Qual Level Database Administrator, Paragraph; Added Attachment 3 - Standard Quality Assurance Clauses and User Guide; Added notes between 4.1.1 and 4.1.2, 4.1.5 and 4.1.6, and 4.1.11 and 4.1.12; Modified wording in step 4.1.7 and 4.1.8.
3	03/29/2005	Revised to modify Attachment 1 form and update references in procedure. Added step 4.1.11 and 4.1.12. Added new Section 4.2. Deleted Attachment 3. Added ID# to Attachment 1.
4	11/16/2006	Revised to implement the Waste Isolation Pilot Plant Hazardous Waste Facility Permit requirements resulting from the Section 311/Remote-Handled (RH) Permit Modification Request (PMR).
5	09/18/2008	Revised to better define Graded Approach per DOE/CBFO-94-1012, *U.S. Department of Energy Carlsbad Field Office Quality Assurance Program Document.* Also revised to assign technical expertise to select grading requirements and provide for Department of Energy (DOE)/Carlsbad Field Office (CBFO) Quality Assurance (QA) Manager's approval.
6	04/25/2011	Revised to change steps to access database to the new Bellview page and clarify steps in the process; delete Section C of Attachment 1; delete Attachment 3; and, incorporate CBFO comments.
7	04/03/2012	Revised to update Graded Approach Module location (note before 4.1.1), improve chronological sequence, and for miscellaneous editorial corrections.

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RECORD OF REVISION

Revision Number	Date Approved	Description of Revision
8	06/20/2013	Revised to incorporate Nuclear Waste Partnership (NWP) transitions changes; to add a new 4.1.10, a step for entering ID number on the Attachment 1, Quality Level Determination Checklist; to add a checkbox for "All," delete "HSG," clarify question A.4, and clarify instruction in Section B, of Attachment 1.

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1.0 PURPOSE

This procedure establishes the responsibilities and requirements for implementing a graded approach to apply management and Quality Assurance (QA) controls to Central Characterization Program (CCP) items and services associated with transuranic (TRU) waste characterization, certification, packaging, and transportation to the Waste Isolation Pilot Plant (WIPP) for disposal.

1.1 Scope

This procedure defines the method for determining the appropriate level of quality controls necessary to manage items and services, including software, necessary to ship TRU waste to WIPP. This procedure applies to CCP personnel and subcontractors responsible for procurement, waste characterization, certification, packaging, and transportation, including Measuring and Test Equipment (M&TE), and Monitoring and Data Collection (M&DC).

The extent of management and QA controls applied to an item or service will vary as a function of the degree of confidence needed to achieve the desired quality of the item or service. Grading provides the flexibility to design and implement controls that best suit the facility or work. The use of the graded approach shall determine the appropriate level of controls necessary to manage the items, systems, and work necessary to ship TRU waste to WIPP.

Items such as office supplies and maintenance tools that do not require calibration, and work that is administrative in nature are exempt from the requirements of this procedure. QA levels are described in Section 4.1 and the criteria used in selecting the appropriate QA level for a particular item or service are detailed in Attachment 1, Quality Level Determination Checklist.

The graded approach is the process by which the level of analysis, documentation, verification, and other controls necessary to comply with QA program requirements are developed.

Use of the graded approach determines the appropriate level of controls necessary to manage the items and services necessary to ship TRU waste to WIPP. Grading of items or services not within CCP's scope will be conducted in accordance with WP 09-CN3005, *Graded Approach to Application of QA Controls* or WP 08-PT3006, *Quality Lists and Quality Category Assessments*, as appropriate.

Grading methods will provide for:

- The assignment of management and QA control levels
- The definitive criteria used in selecting those levels
- Detailed descriptions of the management and QA controls which correspond to those levels based on the definitive criteria.

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2.0 REQUIREMENTS

Baseline Documents

- DOE/WIPP-02-3214, *Remote-Handled TRU Waste Characterization Program Implementation Plan*
- WP 13-1, *Quality Assurance Program Description*

Referenced Documents

- CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*
- CCP-PO-002*, CCP Transuranic Waste Certification Plan*
- CCP-PO-003, *CCP Transuranic Authorized Methods for Payload Control (CCP CH-TRAMPAC)*
- CCP-QP-008, *CCP Records Management*
- CCP-QP-015, *CCP Procurement*
- CCP-QP-022, *CCP Software Quality Assurance Plan*
- WP 09-CN3005, *Graded Approach to Application of QA Controls*
- WP 08-PT3006, *Quality Lists and Quality Category Assessments*
- WP 13-QA3012, *Supplier Evaluation/Qualification*

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3.0 RESPONSIBILITIES

3.1 Initiator (CCP requesting personnel)

3.1.1 Reviews the items or services, related to CCP TRU waste characterization, certification, packaging, and transportation, and works with the Responsible Manager (RM) or Technical Specialist and QA to determine the appropriate quality requirements.

3.1.2 Documents on Attachment 1 the QA controls determined to be needed.

3.1.3 Applies the QA controls determined to be needed and ensures the identified QA controls are current.

3.2 Responsible Manager (RM) or Technical Specialist

3.2.1 Provides technical input to the initiator and QA and identifies the requirements based on the elements identified in Sections 4.1.4 and 4.1.5.

3.3 Quality Assurance (QA)

3.3.1 Develops and maintains the Graded Approach Program for the CCP including administration of the Graded Approach Module within the Integrated Data Center (IDC).

3.3.2 Ensures proper application of the QA Program.

3.3.3 Ensures coordination, implementation, and oversight of the Graded Approach Program.

3.3.4 Ensures the establishment of QA controls appropriate to the work to be completed.

3.3.5 Ensures information from Attachment 1 is entered into the Graded Approach Module.

3.3.6 Forwards completed Attachment 1 to CCP Records in accordance with CCP-QP-008, *CCP Records Management*.

4.0 PROCEDURE

4.1 Grading Items and Services to Apply QA Controls

Initiator

NOTE

The CCP Graded Approach Module is located on the WIPP Intranet by accessing http://churchrock/idc.

4.1.1 Check the CCP Graded Approach Module prior to continuing with this procedure for items or services to discover whether QA applicability has already been determined.

4.1.2 **IF** the item or service has been graded and there have been NO changes that would affect the previously determined QA applicability for the item or service,
THEN STOP **AND** apply the QA controls as listed in the CCP Graded Approach Module. Otherwise, proceed with step 4.1.3.

4.1.3 **IF** the item or service has **NOT** already been graded, **OR** there have been changes to the item or service,
THEN grade the item or service in accordance with Attachment 1.

4.1.4 Complete Attachment 1 according to instructions on the attachment, and:

- Use the following Graded Approach factors in determining the QA program requirements that apply to the item or service.
  - The importance of an item or service with respect to safety, waste isolation, and regulatory compliance
  - The importance of the data to be generated
  - The need to demonstrate compliance with specific regulatory design and QA requirements
  - The impact on the results of performance assessments and engineering analyses
  - The magnitude of any hazard or the consequences of failure
  - The life-cycle stage of a facility or item

- The programmatic mission of a facility
- The particular characteristics of a facility, item, or service (e.g., complexity, uniqueness, history, or the necessity for special controls or processes)
- The relative importance of radiological and nonradiological hazards

4.1.5 Consider the following when completing Attachment 1:

[A] **QL1**

Quality Level (QL)1 items and services are those directly required to demonstrate that the QA Program has been established and implemented.

QL1 items and services are governed by NWP WP 13-1, *Quality Assurance Program Document* (QAPD), State or Federal regulations, CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*, CCP-PO-002, *CCP Transuranic Waste Certification Plan*, and nuclear health and safety requirements.

QL1 items and services must comply with applicable programmatic documents and procedures.

[B] **QL2**

QL2 items and services are those not classified as QL1. QL2 items and services require good management and engineering practices.

QL2 items and services may require controls governed by recognized industry codes, standards, or certifications. Required industry codes, standards, certifications, or tests that need to be conducted or met are listed under Quality Requirements.

QL2 program elements for QL2 items and services apply at the discretion of the Initiator, RM/Technical Specialist, and QA and are listed under Quality Requirements.

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[C] **QL0**

QL0 items and services are those not classified as QL1 or QL2.

QL0 items and services are those which DO **NOT** require active QA Program controls beyond standard commercial practices.

4.1.6 Print name, sign, and date as Initiator on Attachment 1.

4.1.7 Forward to RM or Technical Specialist and QA.

RM or Technical Specialist and QA

4.1.8 Review Attachment 1; if unacceptable, return to Initiator for resolution.

4.1.9 When acceptable, sign and date Attachment 1.

QA

4.1.10 Enter ID number on Attachment 1.

4.1.11 Enter documentation on Attachment 1 into the CCP Graded Approach Module.

4.1.12 Forward Attachment 1 to CCP Records.

4.2 Qualified Supplier List (QSL) Determination

NOTE

Not all items or services conducted under the NWP QA Program require the use of a qualified supplier list (QSL) vendor.

Initiator

4.2.1 **IF** the desired item or service is graded QL1 or QL2, **AND** is available from a QSL vendor,
THEN GO TO CCP-QP-015 to initiate procurement.

4.2.2 **IF** the desired item or service is graded QL1 **AND** there is **NO** QSL vendor available,
THEN GO TO WP 13-QA3012, *Supplier Evaluation/Qualification*, to initiate the QSL process.

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4.2.3 **IF** the desired item or service is graded QL2, **AND** there is **NO** QSL vendor available,
THEN ensure the procurement includes a level of controls that addresses the provisions listed in Attachment 1, Section B.

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5.0 RECORDS

Records generated during the implementation of this procedure are maintained, controlled, and submitted as QA records in accordance with CCP-QP-008, *CCP Records Management.* The records include the following:

5.1 QA Nonpermanent

5.1.1 Attachment 1 – Quality Level Determination Checklist

5.1.2 CCP Graded Approach Module

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Attachment 1 – Quality Level Determination Checklist

Page 1 of 2 ID# _____

Facility Location:

Description of Item or Service:

System (Check All that Apply): ☐ **NDA** ☐ **NDE** ☐ **ALL** ☐ **Other:**

Section A - Nuclear Processes and Regulatory Compliance Issues

		Criterion	Yes	No	Quality Requirements
Quality Level 2	A.1	Does the item or service affect the potential to breach (drop, crash, puncture, etc.) any waste container?			
	A.2	Does the item or service affect the confinement or shielding of radioactive material?			
	A.3	Does the item or system affect the characterization, certification, packaging, or transportation requirements specified in CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan,* CCP-PO-002, *CCP Transuranic Waste Certification Plan,* or CCP-PO-003, *Contact Handled Transuranic Waste Authorized Methods for Payload Control (CCP CH-TRAMPAC)*?			
	A.4	Does the item or service require a quantitative measurement? (If yes, the measuring or test equipment must be calibrated in-house or by a QSL vendor and controlled by an approved calibration program.)			
	A.5	Does the item or service affect computations, computer codes, or methods used to demonstrate compliance with CCP-PO-001 or CCP-PO-002? (If yes, the software must be controlled through CCP-QP-022, *CCP Software Quality Assurance Plan.*)			

Instructions: Check Yes or No for each criterion. If any of the above blocks is checked Yes, the Quality Level is QL1 and all applicable QA requirements apply. Proceed with Section B.

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Attachment 1 – Quality Level Determination Checklist (Continued)

Page 2 of 2

ID# _____

Section B - Special Provisions

		Criterion	Yes	No	Quality Requirements
Quality Level 2	B.1	Is the item or service addressed by a recognized industry code or standard which requires certification?			
	B.2	Does the item or service require material certification or testing that is either difficult or impossible to verify at a later point or tests which must be carried out at some intermediate stage during fabrication?			
	B.3	Are there additional certifications or verifications warranted by unique conditions for the item or service as determined by the responsible individual?			
	B .4	Does the item or service require welding on pressure vessels, structural steel, or load-bearing components of hoisting, lifting, and rigging equipment (i.e., forklift tines)? (Welding on miscellaneous steel, such as ladders, platforms, stairs, handrails, bulkheads, and nonload-bearing components does not require additional QA controls or a welding program).			
	B.5	Does the item require Nondestructive Testing (NDT) or Nondestructive Examination (NDE) (SNT-TC-1A)? (If yes, NWP Fabrication Oversight or a QSL Vendor must conduct NDT or NDE.)			

Instructions: Check Yes or No for each criterion. If any criterion under Section A was answered Yes, the item or service will default to Quality Level QL1. If any block in Section B above was checked Yes (and none in Section A), the Quality Level is QL2. List any required industry code, standards, certification, or tests that need to be met or conducted. List any specific QA requirements that need to be met as determined by responsible individual and QA. If all blocks in Section A and Section B above are checked No, the Quality Level is QL0. Enter QL0 as the Quality Level designation. Print name, sign and date, and forward this form to QA for review and approval.

Quality Level Designation:
- ☐ **QL1**
- ☐ **QL2**
- ☐ **QL0**

Initiator Printed Name:	Signature:	Date:
RM or Technical Specialist Printed Name:	Signature:	Date:
QA Printed Name:	Signature:	Date:

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CCP-QP-002

Revision 35

CCP
Training and Qualification Plan

EFFECTIVE DATE: 06/06/2013

Mike Ramirez

PRINTED NAME

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RECORD OF REVISION

Revision Number	Date Approved	Description of Revision
9	02/20/2002	Major rewrite to streamline and create a more concise procedure. Document reduced from 57 pages to 16 pages.
10	06/05/2002	Added References. Changes to CCP Technical Supervisor responsibilities. Added Training Evaluations to Records section. Deleted 4.2.5 Audit Personnel Qualifications. Other changes for clarification and consistency.
11	09/12/2002	Deleted Sections 3.3.2 and 3.3.3.
12	10/24/2002	Added Steps 3.8.2 and 3.8.3 in response to SRS Recertification Audit.
13	06/30/2003	Added NDE RTR Section, revised qualification letter and other minor editorial changes. Separated electronically fillable forms and updated references in procedure.
14	12/02/2003	Revision initiated to address CAR# 04-002 identified during CBFO audit A-04-03 and CAR# CCP-0009-03. Added information about RTR audio/videotapes and Capability Demonstrations. Added paragraph 4.2.3[A.5] discussing qualification card addenda. Added section 4.2.4[C] discussing FQAO appointment requirements.
15	03/10/2004	Added Capability Demonstration Instructions (Attachment 2) and CCP Capability Demonstration Data Sheet (Attachment 3 or CCP-QP-002-A1).
16	12/07/2004	Deleted the Technical Supervisor responsibilities section and incorporated them into the Vendor Project Manager responsibilities. Added partial qualification section. Removed requirement for the Site Project Manager to appoint the Facility Quality Assurance Officer by letter.
17	06/06/2005	Addressed CAR 05-029 and CAR 05-033 identified during Carlsbad Field Office (CBFO) Audits A-05-09 and A-05-12. Areas modified were qualification requirements for Nondestructive Assay (NDA) Expert Analyst and examination requirements for Central Characterization Project (CCP) Helium Leak Detection (HLD) Level III.
18	12/13/2005	Clarified roles and responsibilities in reviewing Capability Demonstration training audio/video media and modified Attachment 3 – CCP Capability Demonstration Data Sheet.
19	12/15/2005	Clarification for Level of Qualification in step 4.2.2[B.1].

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RECORD OF REVISION (Continued)

Revision Number	Date Approved	Description of Revision
20	05/03/2006	Addressed CAR-RHINL-0001-06. Incorporated Remote-Handled waste training and position requirements. Restructured for improved flow.
21	06/13/2006	Updated step 4.2.5 to delete the word “training” from the requirements for VE Operator/ITR/TS/FQAO.
22	11/16/2006	Revised to implement the Waste Isolation Pilot Plant Hazardous Waste Facility Permit requirements resulting from the Section 311/Remote-Handled (RH) Permit Modification Request (PMR). Addressed Carlsbad Field Office (CBFO) Document Review Record (DRR) comments.
23	02/01/2007	Revised to address CCP Quality Assurance Surveillance Number SUR-CCP-0005-06.
24	02/27/2007	Revised to address concern raised during Surveillance #S-07-18.
25	05/08/2007	Revised to address Corrective Action Report (CAR) SRS-0002-07.
26	02/07/2008	Revised to address U.S. Department of Energy (DOE) Carlsbad Field Office (CBFO) Corrective Action Report (CAR) 08-004.
27	09/30/2008	Revised to change nondestructive examination (NDE) to comply with Management Assessment MA-CCP-0023-08. Also revised Section 5.1.1[J] in response to Carlsbad Field Office (CBFO) Corrective Action Report (CAR) 08-036.
28	05/26/2010	Revised to address Corrective Action Report (CAR)-CCP-0012-09, to clarify Acceptable Knowledge (AK) briefings, training for solids lab, and approval process for training material. References to Central Characterization Project (CCP) Program Manager/Project Manager were removed and the responsibilities assigned to the Lead Site Project Manager and CCP Manager responsible for Training.
29	07/08/2010	Revised to incorporate changes into Attachment 4, CCP Test Drum Data Sheet for Contact-Handled Waste, and other minor editorial changes.
30	12/29/2010	Revised to bring into compliance with the revision of the *Waste Isolation Pilot Plant Hazardous Waste Facility Permit.*

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RECORD OF REVISION (Continued)

Revision Number	Date Approved	Description of Revision
31	04/21/2011	Revised based on Revision 2 of the DOE/WIPP 02-3214, *Remote-Handled TRU Waste Characterization Program Implementation Plan*.
32	04/03/2012	Revised to simplify the process for tracking waste stream Summary Training in Section 4.2. Added full requalification as an option in Section 4.1.2 [I]. Added the Training Module in Integrated Data Center (IDC) as a source of Training information to the note in Section 4.1. Incorporated Standing Orders CCP-SO-051 in Section 4.4.1[C], CCP-SO-069 in Section 4.2, and CCP-SO-078 in Section 4.1.2[F]. Expanded Section 4.1.1 to add a documented analysis of positions requiring qualification, in response to Carlsbad Field Office (CBFO) Corrective Action Report (CAR) 12-010.
33	08/30/2012	As a corrective action in response to CBFO CAR 12-033, revised the document to remove references to Lead SPMs and Alternate SPMs, so that any qualified SPM may perform the actions in Section 3.1.
34	01/30/2013	Revised to incorporate Standing Order CCP-SO-086, *Clarification of the Time Period for Performance of the RTR Semiannual Training Container Required by CCP-QP-002*; incorporate changes to DOE/WIPP-02-3214, *Remote-Handled TRU Waste Characterization Program Implementation Plan*; update the title of the organization, as appropriate; and minor editorial changes.
35	06/06/2013	Revised to implement the Permit Modification Request Class 2 approved by New Mexico Environment Department (NMED) dated March 13, 2013 and CAR-CCP-0003-13.

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1.0 PURPOSE

NOTE

CCP-QP-040, *Support Training,* applies to those activities that do not fall under the scope of CCP-QP-002, *CCP Training and Qualification Plan* as defined herein. CCP-QP-040 applies to those positions which are not covered by the baseline documents listed in Section 2.1 of this document.

This plan describes the responsibilities of personnel involved in the Central Characterization Program (CCP) Qualification and Training Program. This plan also describes the process for identifying qualification and training requirements for all personnel and technical support personnel, who perform characterization, packaging, certification, and activities.

1.1 Scope

This plan applies to all personnel who conduct quality-affecting activities associated with transuranic (TRU) waste under the CCP, including characterization, packaging, certification, and transportation.

Personnel under this plan are qualified and trained to ensure suitable proficiency is achieved and maintained for assigned tasks. Training and qualification requirements are commensurate with the nature of the activities and level of responsibility.

Training will emphasize the correct performance of work, provide a description of why quality, safety, and TRU waste characterization and certification requirements exist, and describe the fundamentals of the work and its context.

Training will be subject to an on-going evaluation to determine instruction and training program effectiveness and will be upgraded whenever needed improvements or enhancements are identified.

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2.0 REQUIREMENTS

2.1 References

Baseline Documents

- DOE/WIPP 02-3183, *CH Packaging Program Guidance*
- DOE/WIPP 02-3184, *CH Packaging Operations Manual*
- DOE/WIPP 02-3185, *CH Packaging Maintenance Manual*
- NRC Docket 71-9212, *RH-TRU 72-B Safety Analysis Report*, Rev. 3, November 2002
- CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*
- CCP-PO-002, *CCP Transuranic Waste Certification Plan*
- CCP-PO-003, *CCP Transuranic Authorized Methods For Payload Control (CCP-CH-TRAMPAC)*

Referenced Documents

- DOE/WIPP 02-3214, *Remote-Handled TRU Waste Characterization Program Implementation Plan*
- ASNT SNT-TC-1A, *Recommended Practice for Personnel Qualification and Certification in Nondestructive Testing,* American Society for Nondestructive Testing (1980 Edition)
- ASTM C1490, *Standard Guide for the Selection, Training, and Qualification of Nondestructive Assay (NDA) Personnel*
- CCP-QP-008, *CCP Records Management*
- CCP-QP-030, *CCP Written Practice for the Qualification of CCP Helium Leak Detection Personnel*
- CCP-QP-032, *CCP Written Practice for the Qualification of CCP Pressure Change Leak Testing Personnel*
- CCP-TP-028, *CCP Radiographic Test Drum and Training Container Construction*

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3.0 RESPONSIBILITIES

3.1 Site Project Manager (SPM)

3.1.1 Oversees planning, characterization, and certification activities.

3.1.2 Ensures personnel are qualified and trained to perform their assigned job functions.

3.1.3 Determines initial and continuing qualification and training requirements in cooperation with appropriate Cognizant Engineer (CE), Manager Responsible for Training, and Training to ensure job proficiency is maintained.

NOTE

Staffing changes includes situations where individuals are brought into, re-assigned, or are leaving the program (i.e., situations which require a change to a List of Qualified Individuals [LOQI]).

3.1.4 Notifies Training of staffing changes and candidates for job positions and provides supporting documentation (e.g., resumes, certificates, diplomas, training records).

3.1.5 Verifies education/experience requirements for Nondestructive Assay (NDA) Expert Analysts (EA).

3.1.6 Appoints Visual Examination Experts (VEE), NDA Expert Analysts (EA), and the remote-handled (RH) Technical Staff, based on education and experience, if applicable.

3.1.7 Reviews and approves Qualification Cards.

3.1.8 Ensures project personnel who are assigned to perform project activities that affect quality:

[A] Are cognizant of the qualification and training requirements of this plan.

[B] Satisfy qualification and training requirements for the tasks associated with their assigned job classification(s).

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3.1.9 Ensures the requirements of this plan are implemented, as follows:

[A] Personnel receive training and qualification, as necessary, to achieve initial proficiency, maintain proficiency, and adapt to changes in technology, methods, job responsibilities, and quality implementing procedures, prior to performing or verifying any waste characterization, certification, or transportation activities.

3.1.10 Appoints qualified personnel as Subject Matter Expert (SME)/On-the-Job Training (OJT) Instructors.

3.1.11 Ensures qualification and training documentation is complete and is submitted to Training.

3.1.12 Evaluates and documents personnel job performance at periodic intervals (as a minimum, during requalification).

3.1.13 Notifies the Manager Responsible for Training when full requalification is required (e.g., when an individual has been disqualified for unsatisfactory performance).

3.1.14 Analyzes positions to determine major job/task responsibilities as a basis for preparation of qualifications cards (shared responsibility).

3.2 Vendor Project Manager (VPM)

3.2.1 May administer the annual eye examination.

3.3 Training

3.3.1 Determines initial and continuing qualification and training requirements for positions in cooperation with an appropriate SME/OJT Instructor, the CE, and a Site Project Manager (SPM) using a graded approach that is commensurate with scope, complexity, and nature of the work to include:

[A] Descriptions of the fundamentals of the work and the context in which the work is performed.

[B] Identification of the applicable quality and safety requirements related to job performance.

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[C] Emphasis on the correct performance of work in accordance with established procedures and/or other relevant technical documents.

[D] Inclusion of education in both principles and enhancement of skills.

3.3.2 Supports a SPM in evaluating training and qualification requirements of each position. This may be done by, but is not limited to, evaluating training requirements using a training analysis. The analysis will result in an approved task list from which tasks may or may not be selected for training. When completed, the analysis will be signed by participants, and the task list reviewed and approved by the designated SME/OJT, the CE, a SPM, and the Manager Responsible for Training for completeness of training requirements.

3.3.3 Develops, implements, and monitors training required to maintain qualification of personnel.

3.3.4 Ensures project-required training effectiveness is reviewed when the need for improvements or enhancements is identified, and ensures the training program is updated.

3.3.5 Maintains documentation of current personnel training status.

3.3.6 Issues approved training materials and assists in the completion of qualifications and training activities.

3.3.7 Prepares Qualification Cards.

3.3.8 Returns incomplete/incorrect training materials to candidate's manager, as applicable.

3.3.9 Ensures qualification, training records, and supporting documentation (including video and audio recorded media for test drum) are maintained, secured, and controlled in accordance with CCP-QP-008, *CCP Records Management*.

3.3.10 Prepares LOQIs delineating those individuals who have completed Qualification Cards, and distributes to the applicable site.

3.3.11 Reviews, develops, and approves Comprehensive Examinations for thoroughness and adequacy.

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3.3.12 Reviews real-time radiography (RTR) completed Attachment 3, Test Drum Data Sheet for Contact-Handled (CH) Waste, video and audio recorded media in accordance with CCP-QP-008.

3.4 SME/OJT Instructor

NOTE

Before any OJT can be performed, it is necessary to initially qualify one SME/OJT Instructor for each discipline based on education and experience. The basis for SME/OJT Instructor qualification will be provided by an SPM and documented in the applicable Training files. The qualification is by discipline and is non-site specific. The basis for qualification will be used to complete a qualification card for the candidate as an SME/OJT Instructor. The successful candidate will be added to the appropriate LOQI(s) once the qualification card is complete.

The SME/OJT Instructor will have adequate education and/or technical knowledge in the applicable discipline, communication skills, and ability to provide trainees with hands-on experience, as determined by an SPM. Technical knowledge may be based on experience with the applicable process or involvement in development of operational procedures or qualification requirements for the applicable process.

The Mobile Loading Unit (MLU) Field Operations Manager (or designee) will appoint SME/OJTs for Transportation activities.

All SME/OJT candidates must complete the SME/OJT briefing and pass the SME/OJT exam.

3.4.1 Provides supervised hands-on training in the work environment to accomplish performance objectives of the training tasks.

3.4.2 Determines initial and continuing qualification and training requirements for National TRU Program Certification (NTPC) positions in cooperation with a SPM, the CE, the Manager Responsible for Training, and Training.

3.4.3 Ensures trainee(s) have satisfactory knowledge of and competence in skills requirements, as defined on the Qualification Card.

3.4.4 Verifies the correct revision of the qualification card is being used.

3.4.5 Signs and dates Qualification Card, indicating acceptable performance levels are met.

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3.4.6 Provides all training documentation generated to an SPM for review and approval.

3.4.7 Analyzes positions to determine major job/task responsibilities as a basis for preparation of qualifications cards (shared responsibility).

3.5 Personnel

3.5.1 Provides copies of their qualification documents (e.g., resumes, education, and experience) to an SPM or Training as applicable.

3.5.2 Completes initial training in accordance with this procedure, as stated on each individual's Qualification Card.

3.5.3 Ensures qualification requirements are completed and signed off before performing assigned tasks without supervision.

3.5.4 Maintains requisite qualifications throughout the duration of work.

3.5.5 Attends CCP and site-specific training, as necessary.

3.6 Trainee

3.6.1 Completes Qualification Card(s) in a timely manner.

3.6.2 Works only under the supervision of a qualified operator or a SME/OJT Instructor.

3.7 Manager Responsible for Training

3.7.1 Reviews and approves all training material for applicability and technical content.

3.7.2 Determines when full requalification is required.

3.7.3 Analyzes positions to determine major job/task responsibilities as a basis for preparation of qualifications cards (shared responsibility).

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3.8 Cognizant Engineer (CE)

NOTE
A CE is not required for Transportation or Acceptable Knowledge.

3.8.1 The CE is designated for each specific process by the NTPC Manager based on their education, knowledge, and experience for the characterization process.

3.8.2 The CE has overall responsibility for the implementation and quality of the characterization activity.

3.8.3 The CE reviews material developed by Training for applicability and technical content.

3.8.4 Analyzes positions to determine major job/task responsibilities as a basis for preparation of qualifications cards (shared responsibility).

3.8.5 Reviews and evaluates training containers for RTR personnel.

3.8.6 Evaluates the training documentation for RTR personnel and determines if they meet the requirements for certification.

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4.0 PROCEDURE

4.1 General Training Requirements

NOTE

The Training Module in the Integrated Data Center (IDC) provides information that may be used to update and maintain the information in documents provided by training, such as the LOQI. Such usage will be described in the applicable sections of this procedure.

4.1.1 Personnel selected to perform or verify NTPC activities will have the education, experience, and training commensurate with job position requirements. The need for job position Qualification Cards will be determined by a SPM, the CE, and the Manager Responsible for Training.

[A] Job position requirements will be analyzed and documented to determine the major duties and tasks associated with the position, as a basis for developing the Qualification Card for each activity requiring qualification. The analyses will be performed by a SPM, a SME/OJT Instructor, the CE, and the Manager Responsible for Training.

[B] A separate analysis may not be required for new positions where the major duties and tasks are closely-related to those for an existing, already-analyzed position. This determination will be made and documented by the performers identified in [A], above.

4.1.2 All training candidates are required to complete a Qualification Card to verify that they possess the knowledge and skills necessary to competently perform specified tasks.

[A] Qualification Cards technical content will be determined by a SME/OJT Instructor, the CE, the Manager Responsible for Training, and a SPM based on project requirements and federal and state regulations.

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NOTE

The qualification cards for Helium Leak Detection Personnel are issued in accordance with CCP-QP-030, *CCP Written Practice for the Qualification of CCP Helium Leak Detection Personnel*. The qualification cards for Pressure Change Leak Testing (PCLT) personnel are issued in accordance with CCP-QP-032, *CCP Written Practice for the Qualification of CCP Pressure Change Leak Testing Personnel*.

[B] All Qualification Cards shall be issued by Training.

[C] The SME will verify current revision.

[D] Training will verify that prerequisites are met.

[E] Upon completion of the Qualification Card, candidates are considered qualified to perform their respective duties.

[F] The Qualification Cards will contain the following information:

[F.1] Name of job position.

[F.2] Revision number and effective date.

[F.3] Trainee's name.

[F.4] Signature spaces for approvals of format, technical content, and use by a SME/OJT, the CE, a SPM, and the Manager Responsible for Training, as applicable.

[G] The Qualification Card will be divided into the following parts, as applicable:

[G.1] Education/Experience.

[G.2] Job Specific Training (which may include):

- Indoctrination/Orientation
- Initial Reading
- Formal Training
- National Standards Certifications
- OJT
- Signature line and date for trainee
- Approval section for a SME/OJT
- Approval section for a SPM

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[G.3] If a Qualification Card requires changes, the following is performed:

(a) Training, prepare the revised Qualification Card, using the next sequential revision number.

(b) Training, route the revised Qualification Card to the following for review and approval: a SME/OJT, the CE, a SPM, and the Manager Responsible for Training.

(c) Training, upon approval, place a new effective date on the Qualification Card and issue the Qualification Card.

[G.4] Other required formal training materials, such as the Waste Analysis Plan (WAP)/Quality Assurance Project Plan (QAPjP) Briefing or training determined by a training evaluation (i.e., classroom, OJT, or self-paced instruction) shall be approved for format, technical content, and use by a SPM and the Manager Responsible for Training.

(a) As initial and continuing qualification and training requirements change, these approved training materials shall be revised by Training.

(b) All approved training materials shall be maintained, secured, and controlled by Training.

[H] Operational Positions (e.g., RTR, NDA, etc.) require requalification every two (2) years. Exceptions are: Helium Leak Detection (HLD) Level III (Limited) has a three year requalification requirement. If necessary, additional training may be required by a SPM, or the Manager Responsible for Training. The sections of the qualification card that must be re-performed during each requalification are identified on the Qualification Cards.

NOTE

Requalifications are due by the end of the month in which the qualification period falls, unless a specific date is listed on the qualification card.

[I] Requalification of Project Office positions is not required.

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[J] Unsatisfactory performance will result in disqualification by the Manager Responsible for Training. The candidate must successfully complete a full requalification (i.e., repeat the entire Qualification Card) to re-establish qualification.

[K] Full requalification is also required when a SPM and the Manager Responsible for Training jointly determine that an individual has not been performing in the qualified function for a significant period of time, due to re-assignment and return, or extended absence from the position for other reasons. Typically, full requalification would apply after an absence from the position of more than one year; however, there may be extenuating circumstances and each occurrence is reviewed and documented on a case-by-case basis.

4.1.3 Completion of the Waste Isolation Pilot Plant (WIPP) WAP/QAPjP Briefing is a pre-requisite for all personnel before they perform *Waste Isolation Pilot Plan, Waste Analysis Plan* (WIPP-WAP) specific tasks.

NOTE

RTR and visual examination (VE) personnel shall be trained on newly developed and revised waste stream reports which change the waste generating processes, packaging, and expected waste material parameters (WMP) expected to be found in each Waste Matrix.

4.2 Waste Stream Summary Training

4.2.1 An SPM in conjunction with Acceptable Knowledge Expert (AKE), develop the training in the form of a briefing which identifies as a minimum the following:

- Specific waste generating processes
- Packaging
- WMP for the waste matrix code

4.2.2 SPM, provide the briefing to the required RTR and VE personnel.

4.2.3 SPM, submit the briefing materials and the completed briefing sheet(s) (or personnel can send individual e-mail acknowledgements) to Training.

4.2.4 Training, update the LOQI for all personnel who received the briefing, showing that they are qualified to perform work on the identified waste stream.

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[A] Remove the qualified status for the identified waste stream from the LOQI when either:

[A.1] The SPM so directs, because the waste stream is no longer active, or

[A.2] The Training Module in the IDC shows that the waste stream is no longer active.

4.3 Specific Qualification and Training Requirements

4.3.1 Acceptable Knowledge (AK) Personnel

[A] Personnel assigned to compile, evaluate, and resolve discrepancies associated with acceptable knowledge (AK) information, require the following:

[A.1] WIPP-WAP Briefing.

[A.2] Waste Acceptance Criteria (WAC) knowledge.

[A.3] DOE/WIPP 02-3214, *Remote Handled TRU Waste Characterization Program Implementation Plan* knowledge.

[A.4] Training on Federal and State Resource Conservation and Recovery Act (RCRA) regulations associated with solid and hazardous waste determinations. Training requirement will be satisfied by documented completion of a formal RCRA training program, (e.g., a commercially available RCRA Seminar, or a SPM's documented evaluation of adequate training and/or experience).

[A.5] Knowledge of procedures associated with:

(a) Waste characterization using AK.

(b) AK records development including AK discrepancy resolution.

(c) Nonconformance Report (NCR)/Corrective Action Report (CAR) Process

[A.6] Knowledge of resolving and managing prohibited items as noted in nonconformance reporting.

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4.3.2 RTR Operator/Independent Technical Reviewer (ITR)

[A] Qualification Process

[A.1] An individual qualifying as an RTR Operator/ITR is considered a trainee. A trainee will work only under the supervision of a qualified operator or SME/OJT Instructor.

[A.2] All RTR personnel will be trained to the guidance of American Society for Nondestructive Testing (ASNT) Recommended Practice Number SNT-TC-1A, *Recommended Practice for Personnel Qualification and Certification in Nondestructive Testing,* modified to suit the RTR application/method.

[A.3] An RTR Operator/ITR will:

(a) Be able to set up and operate equipment, and qualified to interpret and evaluate results with respect to applicable codes, standards, and specifications.

(b) Be thoroughly familiar with the scope and limitations of RTR.

(c) Exercise the responsibility for OJT and apprenticeship of trainees.

(d) Be able to prepare written instructions.

(e) Be able to organize Batch Data Reports (BDRs) with the results of RTR.

[B] Education, Training, and Experience Requirements for Initial Qualification

[B.1] Personnel considered for qualification in RTR must have sufficient education, training, and experience to ensure understanding of the principles and procedures.

[B.2] Education requirements are listed in Attachment 1, Minimum Training, Education, and/or Experience.

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[B.3] Personnel being considered for qualification as an RTR Operator/ITR will complete organized training to become familiar with the principles and practices of the applicable RTR method.

[B.4] A certificate from an approved vendor stating that the individual operator is a qualified RTR operator Level II SNT-TC-1A.

[B.5] To be considered for qualification as an RTR Operator/ITR, the trainee must:

(a) Pass the required examinations in step 4.3.2[C].

(b) Complete the Qualification Card.

[B.6] Any previous training and experience gained in a position similar to the RTR Operator/ITR position may be considered in satisfying the qualification criteria of this procedure and shall be documented in the Training file (i.e., resume).

[C] Examinations

[C.1] Physical

(a) All trainees will pass an initial eye examination to ensure natural or corrected near-distance acuity in at least one eye. The trainee must be capable of reading Jaeger Number 2 at a distance of not less than twelve (12) inches on a standard Jaeger test chart.

(b) The eye examination will demonstrate the capability of distinguishing and differentiating contrast used in RTR.

(c) The eye examination will be administered on an annual basis and the results maintained in the Training files. The Vendor Project Managers (VPMs) at each site may administer the eye examination.

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[C.2] Comprehensive

(a) Pass a program-specific comprehensive exam with an 80 percent or better grade that addresses radiography operations, documentation, characterization, and procedural elements.

[C.3] Test Drum (Capability Demonstration)

NOTE

The requirement for completing the test drum defined in the Waste Characterization Program Implementation Plan (WCPIP) is met by successfully completing the Training Container.

Test Drums (Capability Demonstrations) are due by the end of the month in which the qualification period falls.

(a) At initial qualification and subsequent requalification, successfully examine a test drum that includes items common to the waste streams and is representative of the waste matrix codes and WAC required items.

(b) Use Attachment 2, Test Drum Instructions for Contact-Handled Waste Drums.

(c) Documentation required for test drums is as follows:

(c.1) Nondestructive Examination (NDE) Test Drum Inventory Sheet (from CCP-TP-028, *CCP Radiographic Test Drum and Training Container Construction*).

(c.2) Attachment 3, Test Drum Data Sheet for Contact-Handled Waste.

(c.3) Video and audio recorded media of the test drum.

[C.4] Training Container

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NOTE

A Training Container is required by CH and RH operators at initial qualification, requalification, and semi-annually. The nominal period for performance of the Training Container is every six months, due by the end of the month of the sixth month from the date the Training Container was successfully passed.

The Training Container will contain items which can be identified by RTR, are representative of the physical properties of the waste based on AK documentation reviewed, and prohibited items.

(a) At initial qualification, requalification, and semiannually, successfully examine a Training Container and identify 100 percent of the items required to meet the Data Quality Objectives (DQO's).

(b) Use Attachment 4, Training Container Instructions

(c) Documentation required for Training Containers is as follows:

(c.1) NDE Training Container Inventory Sheet (from CCP-TP-028).

(c.2) Attachment 5, Training Container Evaluation Data Sheet

(c.3) Video and audio recorded media of the Training Container

(d) The NDE CE will review the audio/video recording to ensure the operator's interpretations remain consistent and accurate.

(e) The NDE CE or the SPM may request an extension of the period between performances of the Training Container for up to one additional month (for a total of seven months between Training Containers, beginning with the date the examination was reviewed and approved by the CE).

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(e.1) Upon receipt of a written request from the SPM or NDE CE, Training will extend the Training Container due date for the operator on the LOQI.

(e.2) The request will be retained by Training.

(e.3) When Training receives evidence the operator has satisfactorily completed the Training Container, Training will enter a due date for the next Training Container that takes into account the earlier extension (e.g., 5 month due date, not 6 month).

(e.4) If the operator exceeds the one month extension due date on the LOQI, Training will remove the individual from the LOQI until the Training Container has been successfully completed.

(e.5) Extension is not permitted at the time of requalification.

NOTE

Certification of RTR operator/ITR personnel is documented on the completed qualification card.

[D] Qualification

[D.1] Successful qualification of the RTR Operator/ITR is documented by completing the Qualification Card.

[D.2] To maintain qualifications, the CH and RH RTR Operator/ITR must perform a Training Container semiannually, documented on Attachment 5.

[D.3] Complete an annual eye examination.

[E] Requalification

[E.1] Requalification is based on evidence of satisfactory performance of a test drum, a training container, and passing a comprehensive exam with a grade of 80 percent or better once every two years. If necessary, additional training may be required by a

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SME/OJT, a SPM, the CE, or the Manager Responsible for Training.

4.3.3 Transportation personnel who require qualification in HLD are trained in accordance with CCP-QP-030 and documented on Attachment 1, CCP HLD Qualification Card of CCP-QP-030.

4.3.4 Transportation personnel who require qualification in PCLT are trained in accordance with CCP-QP-032 and documented on Attachment 1, CCP PCLT Qualification Card.

4.3.5 NDA EA requires the completion of a EA Qualification Card.

4.3.6 Visual Examination (VE) Operator/ITR

[A] For the initial qualification and subsequent requalification, the Operator/ITR must:

[A.1] Pass comprehensive exam with an 80 percent or better grade that addresses VE operations, documentation, characterization, formal training elements, and procedural elements.

[A.2] VE Operators must demonstrate capability in the presence of the site VEE during OJT. However, the formal and OJT training is conducted by a qualified SME.

4.4 Appointments

4.4.1 For VEE candidate(s), a SPM performs the following:

[A] Review the training files for qualification/familiarity to waste stream, experience handling TRU waste, and VE Operator qualifications.

[B] Provide written notification to Training delineating the candidate's qualifications and experience.

[C] Ensures that the appointments are facility–specific.

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4.4.2 For NDA EA candidate(s), a SPM will perform the following:

[A] Review the training files for an undergraduate degree in physical science or engineering and five years NDA experience; or ten equivalent years of experience in the NDA field.

[B] Provide written notification to Training delineating the candidate's qualifications and experience.

4.4.3 For RH Technical Staff candidate(s), a SPM will perform the following:

[A] Review the training files for the minimum requirements identified in Attachment 1

[B] Provide written notification to Training delineating the candidate's qualifications and experience.

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5.0 RECORDS

5.1 Records generated during the performance of this plan are maintained as quality assurance (QA) records in accordance with CCP-QP-008. The records are the following:

5.1.1 <u>QA/Nonpermanent Records</u>

[A] Written Notification of Appointments/Designations

[B] Letters to Training

[C] Certificates of Completion

[D] Analysis documentation for positions requiring qualification

[E] Qualification and training records

[E.1] OJT records

[E.2] Completed exams

[E.3] Qualification Card

[F] Training materials (e.g., course presentation, exam)

[G] Completed attendance/briefing forms,

[H] Training evaluations (which may include a Table-Top Job Analysis)

[I] Attachment 3, Test Drum Data Sheet for Contact-Handled Waste

[I.1] Audio and Video Recording media (primary and backup)

[J] Attachment 5, Training Container Evaluation Data Sheet

[J.1] Audio and Video Recording media (primary and backup)

[K] Resumes as applicable

[L] Comprehensive Examinations

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[M] WAP Briefing

[N] Eye Examination (Medical)

- Attachment 6, Annual Record of RTR Eye Examination, when applicable
- Independent Eye Examination (from medical facility), when applicable

[O] Training Module (Electronic)

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Attachment 1 – Minimum Training, Education, and/or Experience

Personnel	Education/Experience/Requirements
1. Radiography	
Radiography Operators	Site specific training based on waste matrix codes and waste material parameters; requalification every two years.
2. Nondestructive Assay (NDA)	
NDA Personnel	In accordance with ASTM C1490, *Standard Guide for Selection, Training, and Qualification of Nondestructive Assay (NDA) Personnel;* ANSI N15.54, *Radiometric Calorimeters- Measurement Control Program.*
3. Technical Staff	
RH Technical Staff	B.S. Nuclear Engineering or the equivalent knowledge and experience to perform assigned tasks, including: • Calculation of reactor neutron spectra • Generate ORIGEN format cross sections • Perform ORIGEN isotope generation and depletion calculations • Ensure that appropriate samples are collected and analyzed from waste • Perform shielding calculation of waste containers **OR** B.S. degree in statistics or the equivalent knowledge and experiences to problem assigned tasks, including: • Develop Sampling plan to obtain representative samples of waste. Propagate uncertainties to determine Total Measurement Uncertainty.
RH Technical Reviewer	• Equivalent qualifications necessary to have originally performed the task under review. At least five years experience in the technical area applicable to the review task.

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Attachment 2 – Test Drum Instructions for Contact-Handled Waste Drums

OPERATOR

1.0 In the presence of a RTR SME/OJT Instructor, perform the following:

1.1 Pre-start operations and video and audio recording media system setup of the RTR equipment per site approved radiography operating procedure.

1.2 Load the test drum into the RTR unit.

1.3 Ensure the video/audio recording identifies the following information:

[A] The identifying test drum container (e.g., NDE-TEST-01)
[B] Exam date
[C] Operator's name

1.4 Complete Blocks 1 through 4 of Attachment 3.

1.5 Perform scan of the test drum, identifying test drum container, and complete Blocks 5 and 6 of Attachment 3. Provide a detailed description (including content) of all items found within the container.

1.6 Label the video/audio media with the following information:

[A] The identifying training container (e.g., NDE-TEST-01)
[B] Exam date
[C] Operator's name
[D] "A" for primary or "B" for backup

1.7 Complete Block 7.

1.8 Forward the video and audio recording media to a RTR SME/OJT Instructor.

SME/OJT INSTRUCTOR

2.0 Observe the test drum and complete Attachment 3 as follows:

2.1 **IF** the Operator has correctly identified the items within the test drum, **THEN** check PASS in Block 9, print name, sign, and date Block 10, **AND** forward the video and audio recording media and Attachment 3 to Training in accordance with CCP-QP-008.

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Attachment 2 – Test Drum Instructions for Contact-Handled Waste Drums (Continued)

2.2 **IF** the Operator DOES **NOT** identify all WAC required prohibited items in Block 8 on Attachment 3 correctly,
THEN perform the following:

2.2.1 Document unidentified WAC required prohibited items in Block 8 on Attachment 3.

2.2.2 Check FAIL in Block 9 of Attachment 3.

2.2.3 Print name, sign, and date in Block 10 of Attachment 3.

2.2.4 Notify an SPM and Training.

2.2.5 Forward Attachment 3 and the video and audio recording media to Training in accordance with CCP-QP-008.

NOTE

RTR Personnel who fail the test drum will be requalified after meeting initial qualification requirements.

2.3 **IF** any items (other than WAC-required items) were not identified,
THEN discuss and document the noted discrepancies with the Operator,
AND provide documentation along with the required test drum documentation.

2.3.1 Document unidentified items on Attachment 3, Block 8, **AND** discuss with the Operator.

2.3.2 Check PASS in Block 9 of Attachment 3.

2.3.3 Print name, sign, and date in Block 10 of Attachment 3.

2.3.4 Forward Attachment 3 with the video and audio recording media toTraining in accordance with CCP-QP-008.

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Attachment 2 – Test Drum Instructions for Contact-Handled Waste Drums (Continued)

TRAINING

3.0 Ensure receipt of all required test drum documentation stated in step 4.3.2[C.3](a) of CCP-QP-002.

4.0 **IF** notified by the RTR SME/OJT Instructor that a currently qualified Operator has failed the test drum,
THEN perform the following:

4.1 Remove the Operator from the LOQI.

4.2 Notify an SPM.

5.0 **IF** Attachment 3 indicates PASS,
THEN perform the following:

5.1 Update the LOQI and the Training files.

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Attachment 3 – Test Drum Data Sheet for Contact-Handled Waste

1. Name:	
2. Test Drum #:	**3. Date of Demonstration:**
4. Video and Audio Recording Media Label:	
5. Container Inventory (Provide detailed description)	
6. Operator Printed Name: _____ **Operator Signature:**_____**Date:**_____	

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Attachment 3 – Test Drum Data Sheet for Contact-Handled Waste (Continued)

7. Name:

8. As SME/OJT Instructor, I observed the above demonstration and discussed the below missed items with the Operator.

	WAC Required items missed by Operator (check applicable items)	**Other items missed by Operator**
	Aerosol can with puncture	
	Horsetail bag	
	Pair of coveralls	
	Empty bottle	
	Irregular shaped pieces of wood	
	Empty one gallon paint can	
	Full container	
	Aerosol can with fluid	
	One gallon bottle with three tablespoons of fluid	
	One gallon bottle with one cup of fluid (upside down)	
	Leaded glove or leaded apron	
	Wrench	

9. I have assigned a grade based on the review above.	**PASS**		**FAIL**	

10. SME/OJT Instructor printed name:

SME/OJT Instructor signature: **Date:**

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Attachment 4 – Training Container Instructions

OPERATOR

1.0 Perform the following:

1.1 Verify the RTR unit and video/audio system is configured to run the training container.

1.2 Load the training container into the RTR unit.

1.3 Ensure the video/audio recording identifies the following information:

[A] The identifying training container (e.g., NDE-TRAINING-01)
[B] Exam date
[C] Operator's name

1.4 Perform scan of the training container, identifying training container, detailed description of contents including container sizes and volumes of liquid if prohibited.

1.5 Label the video/audio media with the following information:

[A] The identifying training container (e.g., NDE-TRAINING-01)
[B] Exam date
[C] Operator's name
[D] "A" for primary or "B" for backup

2.0 Forward the video and audio (primary and backup) recording media to Training, in accordance with CCP-QP-008.

TRAINING

3.0 Forward a copy of the video and audio record to the NDE CE.

NDE CE

4.0 Complete information required in Blocks 1-4 of Attachment 5.

5.0 Review the Training Container scan and document discrepancies (accuracy and consistency) in Block 5 on Attachment 5.

6.0 Record in Block 6 on Attachment 5 if the operator passed or failed based on identification of the DQOs.

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Attachment 4 – Training Container Instructions (Continued)

7.0 Print, Sign, and Date in Block 7, Attachment 5.

8.0 Forward Attachment 5 and the video and audio recording media to Training.

TRAINING

9.0 Ensure receipt of all required documentation.

9.1 Update Training files and the LOQI.

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Attachment 5 – Training Container Evaluation Data Sheet

1. Name:			
2. Training Container #:		□ Box	□ Drum
3. Date of Demonstration:			
4. Video and Audio Recording Media Label:			
5. I have counseled the operator on the following interpretation issues.			
6. PASS		**FAIL**	
7. NDE CE Printed Name:			
NDE CE Signature:		**Date:**	

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Attachment 6 – Annual Record of Eye Examination

Employee Name:		
Examination Date:		
Examined by:		
	Printed name	
	Signature	
Examination Type:	**Jaeger- near acuity**	
Jaeger Level Tested:	**J-2**	
Results: **(circle one)**	**Pass**	**Fail**
Contrast Proficient: **(circle one)**	**Yes**	**No**

Note:

A visual acuity examination shall be administered to the candidate prior to the initial qualification and annually thereafter.

A professional optometrist, medical doctor, nurse, or personnel designee by procedure shall administer this examination.

The candidates shall have natural or corrected near distance acuity in at least one eye, capable of reading J-2 letters on a standard Jaeger test chart at a distance of not less then 30.5 centimeters (12 inches).

The candidate shall receive a contrast vision examination to verify the capability of distinguishing and differentiating contrast normally used.

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CCP-QP-005

Revision 23

CCP
TRU Nonconforming
Item Reporting and Control

EFFECTIVE DATE: 06/25/2013

Mike Ramirez

PRINTED NAME

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RECORD OF REVISION

Revision Number	Date Approved	Description of Revision
17	08/27/2008	Revised to include language describing the process the Central Characterization Project (CCP) personnel use when performing open Nonconformance Report (NCR) checks and whether the NCR is "resolved" for a particular container in conjunction with software changes to the Progress Tracking System (PT-S) (NCR status) portion of the CCP Datacenter. Also included additional language with respect to reconciliation of HOLD Tags once the NCR's are cleared for containers and incorporated the directive in Standing Order CCP-SO-30, Clarification of Rework and Reject. This is in response to U.S. Department of Energy-Carlsbad Field Office (DOE/CBFO) Corrective Action Report (CAR) CAR-08-025.
18	08/13/2009	Revised to incorporate freeze file editorial changes, clarify the ability to delete/remove containers from the Batch Data Report (BDR)/Container ID list when revising a nonconformance report (NCR) per CAR-LANL-0001-09, and incorporate Central Rev. Characterization Project (CCP) Standing Order (SO) CCP-SO-024, 1.
19	10/14/2010	Revised to: clarify hold tag application; Carlsbad Field Office (CBFO) notification requirements including responsibility, incorporate CCP-SO-054, 1 and CCP-SO-065, 0; revisions to Attachment 1, CCP Nonconformance Report (NCR); and other minor editorial changes.
20	04/26/2011	Revised to incorporate relevant steps from CCP-QP-004, *CCP Corrective Action Management,* and other editorial changes.
21	03/05/2012	Revised to incorporate clarification of K-trend code designees signature authority and other editorial changes and freeze file items.
22	09/27/2012	Revised to add definitions; to move 2.5.1 to 4.2.1 [F]; to clarify 4.4.15 and Attachment 1, 4.2.10, and Carlsbad Field Office (CBFO) notification in 4.3.1; to add new 4.9.3 to address removal of Hold Tags when voiding a Nonconformance Report (NCR); to incorporate freeze file changes; to modify Attachment 1; to correct some typos and editorial mistakes.

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RECORD OF REVISION (CONTINUED)

Revision Number	Date Approved	Description of Revision
23	06/25/2013	Revised to incorporate Nuclear Waste Partnership (NWP) transition changes; ensure chronological order; to change Notes that include action steps to action steps; to remove contradiction with CCP-PO-024, *CCP/INL Interface Document,* in 4.5.10 [A.2]; to add Attachment 2, Instructions for Completing Attachment 1, CCP Nonconformance Report, and Attachment 6, NCR Hold Tag Guidance, incorporating portions of Standing Order CCP-SO-036 and to implement the Permit Modification Request Class 2 approved by New Mexico Environment Department (NMED) dated March 13, 2013.

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1.0 PURPOSE

This procedure establishes the requirements and responsibilities for identifying, documenting, reporting, and dispositioning items and services that do not meet established requirements.

1.1 Scope

1.1.1 This procedure applies to Central Characterization Program (CCP) waste characterization, certification, packaging, and transportation. It establishes the process for identifying, documenting, controlling, evaluating, dispositioning, and verifying completion of dispositioning of nonconforming conditions associated with items, equipment, and Batch Data Reports (BDRs).

1.1.2 Nonconforming items will be controlled to prevent any adverse impact on test, installation, use, waste certification, or waste shipment. Organizations affected by the nonconformance will be notified.

1.1.3 Personnel evaluating and determining the disposition of nonconforming items will have demonstrated competence in the specific area they evaluate, adequate understanding of the requirements, and access to pertinent background information.

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2.0 REQUIREMENTS

2.1 References

Baseline Documents

- DOE/CBFO-94-1012, *U.S Department of Energy Carlsbad Field Office Quality Assurance Program Document* (QAPD)
- CCP-PO-002, *CCP Transuranic Waste Certification Plan*
- CCP-PO-003, *CCP Transuranic Authorized Methods for Payload Control (CCP CH-TRAMPAC)*
- CCP-QP-010, *CCP Document Preparation, Approval, and Control*

Referenced Documents

- DOE/WIPP-02-3214, *Remote-Handled TRU Waste Characterization Program Implementation Plan*
- CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*
- CCP-QP-008, *CCP Records Management*
- CCP-QP-014, *CCP Quality Assurance Trend Analysis and Reporting*
- CCP-QP-029, *CCP Corrective Action Management*
- CCP-TP-001, *CCP Project Level Data Validation and Verification*
- CCP-TP-035, *CCP Container Management*
- CCP-TP-068, *CCP Standardized Container Management*
- CCP-TP-120, *CCP Container Management*
- 10 Code of Federal Regulations (CFR) Part 71, *Packaging and Transportation of Radioactive Material*

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2.2 Definitions

As Low As Reasonably Achievable (ALARA)	A principle of all work at the site in the use or handling of radioactive materials in which personnel radiation exposure, including the work force and public, is kept at a level as low as possible by reasonable means.
CARM (Corrective Action Report Module)	Corrective Action Report Module, an electronic database that is part of the Integrated Data Center (IDC).
Condition Adverse to Quality (CAQ)	An all-inclusive term used in reference to any of the following: failures, malfunctions, deficiencies, defective items, nonconformances, and technical inadequacies.
Data Quality Objective (DQO) Process	A strategic planning approach based on the scientific method used to prepare for data collection. The DQO process provides a systematic procedure for defining the criteria that a data collection design should satisfy, including when and where to collect samples, the tolerable level of decision errors for the study, and how many samples to collect.
Item	An all-inclusive term used in place of any of the following: appurtenance, assembly, component, equipment, material, module, part, structure, subassembly, subsystem, system, unit, support system, or data.
NCRM (Nonconformance Report Module)	Nonconformance Report Module, an electronic database that is part of the IDC.
Nonconformance	A deficiency in a characteristic or record that renders the quality of an item or sample unacceptable or indeterminate.
Orphaned Hold Tag	A Hold Tag no longer attached to its associated nonconforming item.

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Price-Anderson Amendments Act (PAAA)	Law passed by Congress intended to minimize the risk to workers and the public by ensuring that U.S. Department of Energy (DOE) nuclear work is conducted so that human health and safety and the environment are protected adequately.
Repair	The process of restoring an item to a condition such that the capability of the item to function reliably and safely is unimpaired even though that item still does not conform to the original requirement. In container management, “repair” refers to nonconforming data for which the container(s) must be rerun through characterization and the associated BDR that will be superseded by a new one.
Reject	A disposition for nonconforming items for which no resolution that meets the given requirements is possible, and the item cannot be accepted, requiring discarding, replacement, or recharacterization.
Rework	The process by which an item is restored to original specifications by completion or correction. In container management, “rework” refers to nonconforming data that may be corrected without rerunning the container(s) through characterization and the BDR will be completed or corrected.
Scrap	A disposition for nonconforming items which requires discarding or return to supplier.
Supplier	Any individual or organization who furnishes items or services in accordance with a contract. An all-inclusive term used in place of any of the following: vendor, seller, source, participant, contractor, or subcontractor.

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Technical Change	Changes to container or BDR identifications, Interim or Final Dispositions, Actual Conditions, or Requirements.
Traceability	The ability to trace the history, application, and location of an item, data, or sample using documentation. As related to metrology, traceability means the ability to relate individual measurement results through an unbroken chain of calibrations to one or more of the following: • U.S. national standards maintained by National Institute of Standards and Technology (NIST) or the U.S. Naval Observatory • Fundamental or natural physical constants with values assigned or accepted by NIST • National standards of other countries which are correlated with NIST
Use-As-Is	A disposition permitted for a nonconforming item when it can be established that the item is satisfactory for its intended use.
Work	The process of completing a defined task. Examples include research and development, operations, maintenance and repair, administration, software development and use, inspection, safeguards and security, and data collection and analysis.

2.3 Nonconformance Report Module (NCRM)

2.3.1 The NCRM provides the capability for an accurate and timely assessment of the status of all NCRs.

2.3.2 The NCRM provides the capability to trend NCRs for conditions adverse to quality.

2.3.3 The NCRM provides, as a minimum, the following:

- NCR Number and Revision
- Initiation Date
- NCR Originator

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- Responsible Manager
- BDR/Container (as applicable)
- Actual Condition
- Final Disposition
- Trend Code
- Closure Date
- NCR Log

2.3.4 The NCRM is maintained in the CCP Project Office. The NCRM may also be updated by authorized personnel at specified Host sites.

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3.0 RESPONSIBILITIES

3.1 NCR Originator

3.1.1 CCP personnel who discover conditions adverse to quality are responsible for originating an NCR or ensuring an NCR is initiated.

3.1.2 Applies or ensures application of a CCP HOLD TAG or provides other segregation or control methods.

3.2 QA

3.2.1 Validates the NCR.

3.2.2 Evaluates NCRs in accordance with this procedure.

3.2.3 Approves interim and final dispositions.

3.2.4 Ensures that NCRs are entered into the NCRM.

3.2.5 Verifies interim and final disposition completion and closes NCRs.

3.2.6 Applies, removes, or ensures application or removal of CCP HOLD TAGS (as applicable).

3.2.7 Immediately notifies the SPM or Vendor Project Manager (VPM) when HOLD TAGS DO **NOT** reconcile or when orphaned HOLD TAGS are found in process areas.

3.2.8 Provides CCP Training with a notification of individuals who are designated to validate and approve dispositions for NCRs that are Trend Code K. These individuals will have been briefed and designated for this function by QA.

3.2.9 Assists the NCR Originator as needed to determine status of all affected containers associated with NCRs initiated at the Project level.

3.3 QA Designee

3.3.1 Validates Trend Code K NCRs.

3.3.2 Approves interim and final dispositions for Trend Code K NCRs.

3.3.3 Ensures that NCRs are forwarded to the Host site QA NCR Coordinator or the CCP Project Office NCR Coordinator for entry into the NCRM.

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3.3.4 Applies, removes, or ensures application or removal of CCP HOLD TAGS (if applicable) for Trend Code K NCRs and delivers removed HOLD TAGS to QA for confirmation of removal.

3.4 Responsible Manager

3.4.1 Provides interim and final dispositions to correct identified deficiencies.

3.4.2 Identifies resolutions to deficiencies and (when applicable) identifies actions to preclude recurrence.

3.4.3 Monitors progress of nonconformance resolution, including completion of dispositions in a timely manner.

3.4.4 Provides for the control of further processing, delivery, installation, or operation of nonconforming items or equipment.

3.5 CCP Site Project Manager (SPM) or Project Manager (PM)

3.5.1 Ensures NCR process is followed in accordance with this procedure and is accountable for the implementation of the nonconformance program.

3.5.2 Coordinates CBFO notification between the Certification Manager and the NCR Coordinator.

3.5.3 Prepares interim and final dispositions.

3.5.4 Verifies interim and final disposition completion.

3.5.5 Ensures forwarding of validated and in-process NCRs to the CCP Project Office for NCRM updates, as necessary.

3.5.6 Ensures distribution of completed NCRs as required by applicable interface documents.

3.5.7 Notifies Carlsbad Field Office (CBFO) of nonconformances as required by this procedure.

3.5.8 Monitors to ensure timely completion of NCRs in their area of responsibility, developing a plan to identify and track all nonconformances and reporting this information (approval of this procedure fulfills development of the plan).

3.5.9 Carries out responsibilities of the Responsible Manager, when an NCR so specifies.

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3.6 Vendor Project Manager (VPM)

3.6.1 Ensures site personnel evaluating and dispositioning NCRs have demonstrated competence in the specific area they evaluate, have an adequate understanding of the requirements, and have access to pertinent background information.

3.6.2 Monitors to ensure timely completion of NCRs in their area of responsibility.

3.6.3 Carries out responsibilities of the Responsible Manager, when an NCR so specifies.

3.6.4 Concurs with interim and final dispositions (as requested).

3.6.5 Ensures the application of CCP HOLD TAGS and, in coordination with QA, ensures their removal, as required, and will assure removed CCP HOLD TAGS are delivered to Quality Assurance (QA) for verification of removal.

3.6.6 Notifies the Host site representative of drums that are inaccessible with a request to make them available as soon as possible so that the drums may be monitored and tagged as soon as they are available.

3.7 NCR Coordinator (Site QA serves as the NCR Coordinator for the assigned site)

3.7.1 Maintains the NCR Log.

3.7.2 Distributes NCRs in accordance with this procedure.

3.7.3 Submits closed NCRs to CCP Records.

3.7.4 Updates the NCRM.

3.8 CCP Training

3.8.1 Annotates each site-specific List of Qualified Individuals (LOQI) with a qualified statement for individuals who have been designated by QA.

3.8.2 Maintains designation notifications in each individual’s training file.

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3.9 Certification Manager

3.9.1 Ensures a consistent review for all NCRs that have the potential to require CBFO notification according to the seven (7) calendar days notification requirement.

3.10 Waste Certification Official (WCO)

3.10.1 Assists the NCR Originator as needed to determine status of all affected containers associated with NCRs initiated at the Project level.

3.11 Packaging Manager

3.11.1 Reviews NCRs whose description is Transportation for 10 CFR, Part 71, *Packaging and Transportation of Radioactive Material,* applicability.

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NOTE
Action steps need not be completed in the order given, unless otherwise directed.

4.0 PROCEDURE

4.1 NCR Initiation

QA

4.1.1 Maintain an NCR log (either manual or electronic at the Host site or CCP Project Office), identifying the following as a minimum:

- NCR number
- Initiation date
- NCR Originator

[A] Account for all NCRs issued during a calendar year, including voided NCRs. Number and log NCRs uniquely.

[B] The NCR number is composed of:

NCR-xxxxxx-yyyy-zz, where:

- "NCR" represents "Nonconformance Report"
- "xxxxxx" represents Site Designator (when applicable to remote-handled (RH) waste, include "RH" as a prefix to the site designator [e.g., Savannah River Site remote-handled waste = "RHSRS"])
- "yyyy" represents numerical digits beginning at 0001
- and "zz" represents the final two digits of the calendar year in which the NCR is initiated

Revision control applies.

[C] Examples of NCR Numbers:

- NCR-INL-0001-12, Rev. 0
- NCR-SRS-0361-12, Rev. 1
- NCR-LANL-2841-12, Rev. 2
- NCR-CCP-0015-12, Rev. 0
- NCR-RHLANL-0001-12, Rev. 0

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NCR Originator

4.1.2 CCP personnel who discover nonconforming items or processes are responsibile for initiating NCRs or to notify their managers for assistance in ensuring that an NCR is initiated. Personnel are encouraged to suggest improvements. Nonconformances are documented, evaluated, and dispositioned with a no-fault attitude fostered by management at all levels. On identifying a nonconforming item, obtain the current issued revision of Attachment 1, CCP Nonconformance Report (NCR), from the sftp site.

[A] Document nonconforming items by NCR, including those found by CCP personnel at a supplier's facility or during receipt inspection.

4.1.3 Obtain an NCR number from the NCR Coordinator or QA Designee, **AND** enter the number and revision on all pages of Attachment 1.

[A] Complete Blocks 1 through 7, as applicable, of the NCR (see Attachment 2, Instructions for Completing Attachment 1, Nonconformance Report [NCR]; see also 4.1.6 in regard to Block 7d).

[A.1] Enter "N/A" (Not Applicable) for those blocks **NOT** applicable to the NCR. Use Attachment 3, CCP Nonconformance Report [NCR] Continuation Sheet, whenever available space is inadequate.

[B] **IF** the NCR is documented against a container and a BDR, **THEN** ensure that Block 3 correctly identifies the container number and BDR number, matching exactly the identifications (IDs) identified in the BDR (see also 4.2.1[C.1]).

NCR Originator/Waste Certification Official (WCO)/QA

[C] Determine the status of all affected container(s) associated with NCRs initiated at the Project level as follows:

[C.1] **IF** the containers are not in a shipping lot, **THEN** go to 4.1.5.

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[C.2] **IF** the containers are in a shipping lot,
THEN it must be determined whether the container is in Waste Data System (WDS).

(a) **IF** the containers are in WDS **AND** the NCR is not data-affecting,
THEN go to 4.1.5.

(b) **IF** the containers are in WDS **AND** the NCR is data-affecting,
THEN the container(s) must be moved into assigned pre-sub certification **OR** removed from WDS before the NCR can be validated by QA.

CCP Training

4.1.4 Maintain a list of personnel designated to validate NCRs and approve Interim and Final Dispositions for Trend Code K NCRs.

[A] Designated CCP personnel may validate and approve Interim and Final Dispositions for these NCRs. Those steps in Section 4.0 that designated CCP personnel may carry out as described above identify the responsible individual as "QA Designee."

[B] However, QA must validate and approve NCRs which are not Trend Code K.

[C] QA SHALL verify disposition completion and closing of **ALL NCRs**.

NCR Originator or QA Designee

4.1.5 Select method(s) to be used to control nonconforming items, but they SHALL **NOT** be solely reliant on a single administrative control to differentiate waste containers that are acceptable for shipment to the Waste Isolation Pilot Plant (WIPP).

[A] DO **NOT** use NCRs as administrative holds (e.g., to stop a shipment when there is **NO** nonconformance). Refer to the container management procedures at the specific sites for more details on the proper use of administrative holds.

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4.1.6 Determine whether CCP HOLD TAGS will be applied **OR** whether other methods will be used to control the affected items that do not affect end use, **AND** document in Block 7d of the NCR as applicable. Verify CCP HOLD TAGS by physically placing or confirming tag placement on the container by VPM's or QA Designee's confirmation in writing. If NCRs are initiated at the Project Office, they may be issued with block 7d incomplete. Once notification is received by QA that NCR Hold Tags have been applied, update the NCR by completing block 7d. Completion of this block does not require NCR revision.

[A] Apply CCP HOLD TAGS (see Attachment 6, NCR Hold Tag Guidance) UNLESS one or more of the following conditions exist:

- **IF** containers are physically inaccessible, **THEN** inform the VPM to notify the Host site representative of drums that are inaccessible with a request to make them available as soon as possible so that the drums are monitored and tagged as soon as they are available
- Container is an RH container
- Other physical identification methods (i.e., Permanent Reject Labels Not Certifiable to WIPP)
- If Final Disposition is already specified, is "Use-As-Is" with no action pending, and is QA approved

[B] Enter the following minimum information on the CCP HOLD TAG:

- NCR number
- Container or Item number
- BDR number (if applicable)
- Brief description of nonconforming condition
- Name, date, and signature of individual who applies the CCP HOLD TAG
- Any limitations on further processing

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[C] When they are applied, the CCP HOLD TAGS SHALL remain on the containers until the nonconforming condition has been resolved and the disposition has been implemented and verified under the QA Program.

[D] Verify the acceptable resolution of the disposition for individual containers and release them for shipment to WIPP by using the “Resolve” or “Return” disposition in the NCRM.

[E] Other methods used to control the affected items may include segregation or the use of dual, independent check systems (for noncompliant RH waste packages based on the ALARA principle), which use two separate and distinct processes and data sets for verifying waste packages are acceptable for shipment.

[F] **IF** marking or tagging of a nonconforming item is impractical, **OR** segregation is impractical or impossible because of physical conditions,
THEN employ other precautions to preclude inadvertent use or shipment.

[G] Control nonconforming items to prevent adverse impact on test, installation, use, waste certification, or waste shipment.

[H] Notify organizations affected by the nonconformance.

4.1.7 Complete Blocks 7a, 7b, and 7c of Attachment 1

[A] Check the Transportation box in block 7a only when issues with TRUPACT-II Authorized Methods for Payload Control, TRAMPAC limits, and packaging materials or conditions for shipped containers are identified.

[B] Ensure the 7b Requirement(s) correctly includes the procedure, revision, section, and quoted text, and the 7c Actual Condition is accurate.

[C] Print name, sign, and date Block 8.

4.1.8 Forward the NCR to the QA Engineer or QA Designee (Trend Code K NCRs only).

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4.1.9 **IF** the NCR is initiated at the Host site, **AND** there is **NO** SPM, QA Engineer or QA Designee available,
THEN:

[A] Copy the NCR and forward it to the responsible individual at the Host site for NCR Log update, if needed.

[B] Forward the NCR to the NCR Coordinator in the CCP Project Office. The NCR Coordinator will initiate a review by a QA Engineer.

4.2 NCR Review

<u>QA Engineer or QA Designee</u>

4.2.1 Review the NCR for the following, at a minimum:

[A] Verify that the identified condition and requirement meet the criteria for an NCR (i.e., hardware items or BDRs, or both) and do **NOT** represent **a** programmatic or process failure, malfunction, or deficiency as specified in CCP-QP-029.

[B] **IF** the nonconformance is determined to meet the criteria for a CAR,
THEN void the NCR in accordance with Section 4.11, **AND** instruct the NCR Originator to initiate a CAR in accordance with CCP-QP-029.

[B.1] When control of nonconforming items **AND** programmatic issues related to the nonconformance both apply, initiate both an NCR **AND** a CAR.

[C] **IF** the NCR is documented against a container and a BDR,
THEN verify that Block 3 correctly identifies the container number and BDR number, matching exactly the IDs identified in the BDR.

[C.1] **IF** the IDs do not match,
THEN ensure there is a valid reason for the difference, such as WDS number prefixes, historical ID number differences, etc., OR ensure the numbers in question are captured on the AK Tracking spreadsheet and show a clear correlation between the two.

[D] Verify that the current revision of Attachment 1 has been used, the NCR number and revision are on all pages of the NCR, **AND** the form is filled out correctly.

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[E] Verify that the identified requirement (procedure no., revision no., section, and quoted text) is correct and applies to the actual condition requiring disposition.

[F] Verify the disposition, if already documented in Block 19, was not completed prior to the date of NCR validation.

4.2.2 Resolve any inconsistencies, clarifications, or other concerns identified, with the NCR Originator, who returns to 4.1.2[A] **AND** repeat the process in accordance with Section 4.1.1.

4.2.3 **IF** the NCR is determined to be invalid,
THEN void the NCR in accordance with Section 4.11.

4.2.4 Determine whether the identified condition has the potential to impact AK (i.e., related to waste stream variance, waste matrix code, etc.), and, if so, enter Trend Code L in Block 10. Examples of possible changes to the AK of a waste stream include:

- Incorrect assignment of a waste container to a waste stream (e.g., sludge matrix in a debris container)
- Identification of unanticipated waste material parameters (WMPs) in a container (e.g., metal in a combustibles-only debris container)

4.2.5 Verify that the Hold Tags have been applied as needed, **AND** complete Block 7d, if not addressed by NCR Originator or QA Designee (see 4.1.6).

4.2.6 Determine whether a Significant Condition Adverse to Quality exists by comparing with the following criteria:

[A] Does the noncompliance adversely impact the capability to characterize, certify, or ship waste?

[B] Is the noncompliance a violation of the Hazardous Waste Facility Permit (HWFP)?

[C] Could the noncompliance have a serious effect on health and safety of employees, the public, or the environment?

4.2.7 **IF** the determination is YES to any criterion in 4.2.6 (see also 4.2.10),
THEN discuss with the Assurance Programs Manager, **AND** if directed, initiate a CAR in accordance with CCP-QP-029, control as a “Significant” Condition, cite the NCR number and revision in the

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CAR, **AND** document the determination in an email to the NCR Coordinator, who will include it as part of the NCR QA record file.

4.2.8 Search the Corrective Action Report Module (CARM) and NCRM to determine whether there are previous violations of the same requirement and the Actual Condition is the same or similar (recurring conditions adverse to quality).

4.2.9 **IF** three (3) or more NCRs are identified within the last 12 months, or two (2) in the past six (6) months,
THEN discuss with the Assurance Programs Manager, who will determine whether the recurring nature of the conditions represents a Significant Condition Adverse to Quality.

[A] Email the determination to the NCR Coordinator who will include it as part of the QA record file.

[B] If the determination of a Significant Condition Adverse to Quality is affirmed, check “yes” in NCR Block 12, and GO TO 4.2.7.

4.2.10 Identify the Trend Code using NCR Trend Codes in Attachment 5, **AND** enter the Trend Code in Block 10, if not previously identified in 4.2.4.

[A] Most NCRs are initiated to document conditions that DO **NOT** reflect on the adequacy of the QA program (e.g., NCRs for containers that have a prohibited item, or those involving acceptable knowledge). Assign these NCRs Trend Code K or L in accordance with CCP-QP-014 (see also Attachment 5).

4.2.11 Forward NCRs that identify possible changes to the AK of a waste stream (Trend Code L) to the SPM as the Responsible Manager.

[A] **IF** re-evaluation is warranted as a result of:

- Inconsistencies noted during the process of comparing AK information to characterization results, **OR**
- The initiation of an NCR identifies potential changes to the AK of a waste stream,

THEN the SPM notifies the AK Expert.

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NOTE

The Responsible Manager determination is based on agreements between the SPM and/or QA Engineer, or both, and applicable Responsible Managers.

4.2.12 Determine the manager responsible for resolution.

4.2.13 Enter the Responsible Manager's name in Block 11.

4.3 NCR Validation

4.3.1 Before validation (Block 14), line through incorrect technical information and enter correct information, initial, and date.

4.3.2 Correct editorial mistakes (grammar or spelling, renumbering sections, attachments or pagination; transcription errors and date) that DO **NOT** affect technical content by lining through, entering correct data, initialing, and dating at any time during the life cycle of the NCR.

4.4 NCR Process

NCR Coordinator

4.4.1 At receipt of the NCR:

[A] Verify the information in the NCR log matches that on the NCR.

[B] Enter the NCR information in the NCRM.

[C] **IF** the NCR Description in Block 7a is Transportation, **THEN** forward a copy of the NCR to the Packaging Manager or designee for consideration of 10 CFR, Part 71, applicability and request the results of the review.

Packaging Manager

[C.1] Review NCRs whose description is Transportation (in block 7a) for 10 CFR, Part 71, applicability and email the NCR Coordinator the results of the review.

NCR Coordinator

[D] File a copy of the email from the Packaging Manager with the NCR.

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[D.1] **IF** the NCR was generated at or after the SPM signature level,
THEN forward a copy of the project-level NCR to the Certification Manager for review.

Certification Manager

[D.2] Review the project-level NCR to determine whether any nonconformance first identified at or after the SPM signature release level (e.g., CCP-TP-001) does not meet applicable requirements of CCP-PO-001, or DOE/WIPP-02-3214, *Remote-Handled TRU Waste Characterization Program Implementation Plan* (i.e., a failure to meet a Data Quality Objective [DQO]), and if so,
THEN inform in writing or by email the NCR Coordinator and SPM, the latter of whom notifies the CBFO as required.

SPM

[D.3] Notify the CBFO in accordance with Attachment 4, Additional CBFO Notification Details, and as follows:

- **IF** the Certification Manager determined that the project-level NCR is reportable,
  THEN notify CBFO within seven (7) calendar days of identification of the deficiency.

- Copy the NCR Coordinator on the CBFO notification.

[D.4] **IF** the NCR was unready for submittal when the notification was made,
THEN submit the NCR to DOE CBFO within thirty (30) calendar days of identification of the deficiency.

Certification Manager

[D.5] **IF** the project-level NCR is determined not to be reportable,
THEN email the NCR Coordinator that the NCR is not reportable.

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NCC Coordinator

[D.6] The NCRM is updated automatically. File a copy of the CBFO notification and related e-mails with the NCR.

[E] Forward the NCR to the Responsible Manager.

4.5 Disposition Determination

Responsible Manager

4.5.1 Determine the need for interim disposition, **AND**, if applicable, identify any additional approval requirements.

[A] Use Interim Dispositions only when necessary to determine the Final Disposition.

4.5.2 **IF** Interim Disposition is required,
THEN complete Block 15a and 15b of the NCR, **AND** print name, sign, and date Block 16a.

4.5.3 **IF** interim disposition is **NOT** required,
THEN check “N/A” in Block 15a.

4.5.4 Evaluate the nonconforming condition, **AND** provide a final disposition to correct the identified deficiency(ies).

4.5.5 For Final Dispositions, address all items and deficiencies identified in Block 7c of the NCR. Final Dispositions are limited to Use-As-Is, Reject, Repair, Rework, and Scrap. DO NOT close validated NCRs until completion and verification of the Final Disposition. Limit further processing, delivery, installation, or use of a nonconforming item, pending evaluation and approval of the disposition.

4.5.6 Check the Final Disposition Type in the appropriate box in Block 19. Limit Interim or Final Dispositions to only one type in each NCR.

4.5.7 For Use-as-is dispositions, provide Technical Justification in Block 19a.

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4.5.8 For Repair dispositions, provide Technical Justification in Block 19a and instructions for completion in Block 19b.

[A] Items that do not meet original design requirements that are dispositioned Use-As-Is or Repair are subject to design control measures commensurate with those applied to the original design.

4.5.9 For Reject or Scrap dispositions, provide instructions for completion in Block 19b.

[A] **IF** containers that have been characterized are identified on an NCR, and the disposition specifies that the containers are to be returned to the Host site for correction of the nonconforming condition,
THEN the Final Disposition SHALL BE Reject, and include Instructions for Completion "Return to Host site for remediation or repackaging, or both," or similar.

[A.1] DO NOT **CLOSE** the NCR in such a case. The container is returned to the Host site with the CCP HOLD TAG attached to the container (e.g., a container has a prohibited item and requires remediation to bring it into compliance with CCP-PO-001 acceptance criteria). For such containers, DO NOT **REMOVE** CCP HOLD TAGS until nonconforming conditions have been corrected **AND** verified by CCP under the QA Program.

[A.2] There may be circumstances when a nonconforming container is returned to the Host site for remediation or repackaging under the Host site's management system. When the container is removed from the AK tracking spreadsheet for return to the Host site, CCP will follow the Host site Interface Agreement in regard to application and removal of CCP Hold tags. Close the associated NCR(s) and update the NCRM according to this procedure.

4.5.10 Any orphaned tags found SHALL BE presented to QA for action to be taken in accordance with 4.8.5 [A].

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4.5.11 **IF** the nonconforming condition is data which requires that the container be rerun through that characterization (e.g., NDA, Real-Time Radiography [RTR] or Visual Examination [VE], Flammable Gas Analysis [FGA], Gas Generation Testing [GGT]), **THEN** the NCR will disposition the container Reject.

4.5.12 **IF** the nonconforming condition is data for the container that will be corrected without rerunning the container through characterization, **THEN** the NCR will disposition the container Rework.

4.5.13 For Rework dispositions, provide instructions for completion in Block 19b.

[A] In the disposition of an item to be reworked or repaired, include requirements to reexamine, reinspect, retest, or conduct nondestructive examination (NDE) to verify acceptability. Reexamine repaired or reworked items using the original process and acceptance criteria, unless alternative acceptance criteria or methods have been established and approved as part of the nonconforming item disposition.

4.5.14 **IF** changes to the specifying document are required to agree with the as-built condition,
THEN ensure the disposition requires action to change the specifying document to agree with the as-built condition.

4.5.15 **IF** a document or QA record change is required by the disposition, **THEN** specify the change in the disposition **AND** ensure that the document or record cites the NCR number.

4.5.16 Evaluate the need for Actions to Prevent Recurrence (Repair or Rework), **AND** document corrective action(s) or “N/A” in Block 19c.

4.5.17 For Reject Dispositions, include instructions for the disposal of the item(s), such as “scrap,” or “return to vendor,” according to applicable procedures.

4.5.18 Identify any additional approval requirement, if applicable, **AND** document in appropriate block(s).

4.5.19 Print name, sign, and date Block 20, **AND** forward the NCR to the QA Engineer or QA Designee.

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QA Engineer or QA Designee

4.5.20 Review the NCR and determine the following:

[A] The disposition (Interim or Final) adequately addresses measures to be taken to correct the identified deficiency.

[B] The disposition (Interim or Final) has been completed in accordance with this Section.

[C] Actions to prevent recurrence (as applicable) address adequate measures to control recurrence.

[D] Assure any attachments have been completed as required by Section 4.11.

4.5.21 **IF** disposition is deemed appropriate,
THEN approve by completing Block 16b (Interim) or Block 21 (Final), **AND** GO TO step 4.5.23.

4.5.22 **IF** disposition is deemed to be deficient,
THEN recommend changes, resolve with the Responsible Manager, **AND** reprocess according to Section 4.5.

4.5.23 **IF** the NCR is initiated by the Data Generation Level (DGL) against a container or BDR,
THEN copy the validated and dispositioned NCR, **AND** submit it to the appropriate DGL process to be included in the BDR, **OR,** if an NCR revision, to be submitted with the corrected data as an update to the BDR.

4.5.24 **IF** the NCR is initiated by the CCP Project Office against a container or BDR during CCP-TP-001 review,
THEN copy the validated and dispositioned NCR, **OR,** if an NCR revision, forward a copy to the SPM to be included in the BDR.

4.5.25 **IF** the NCR is initiated by the CCP Project Office against a container or BDR, **AND** the disposition is required to be completed at DGL that corrects data in an existing BDR,
THEN, at DGL, include a copy of the validated and dispositioned NCR, **OR,** if an NCR revision, with the corrected data as an update to the BDR.

4.5.26 Forward the NCR to the NCR Coordinator.

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4.6 NCRM Update

NCR Coordinator

4.6.1 At receipt of the NCR:

[A] Enter the NCR in NCRM.

[B] Retain the NCR and any attachments in a working file until NCR closure.

4.7 Disposition Completion

Responsible Manager/VPM/SPM

4.7.1 Monitor disposition completion to assure timely completion.

Responsible Manager

4.7.2 At completion of the required dispositions (Interim or Final), request the original (if necessary) from the NCR Coordinator.

4.7.3 Provide objective evidence of completion of disposition (Interim, Final, and Actions to Prevent Recurrence as applicable) by one or more of the following:

[A] Prepare attachments as required by Section 4.11.

[B] Cite traceable documentation that substantiates completion of dispositions and actions to prevent recurrence.

[C] Sign and date statement(s) of fact or include as attachment.

[D] If desired, discuss with SPM, reviewing the documentation that substantiates completion of dispositions prior to formal submittal to ensure adequacy.

4.7.4 Document in an attachment prepared as required by Section 4.10 that substantiates completion of dispositions (as applicable).

4.7.5 Print name, sign, and date Block 17 (Interim) or Block 22 (Final), or both, **AND** submit original NCR with attachments (as applicable) to the QA Engineer.

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4.8 Completion Verification and Closeout

QA Engineer

4.8.1 If desired, allow nonconforming items to continue through the normal process under certain controlled circumstances while their NCR is open, but always implement and verify the approved disposition(s) prior to NCR's closing.

4.8.2 Review the NCR and verify the following:

- Attachments provide traceability to objective evidence substantiating completion of disposition.
- Documentation provides adequate objective evidence of completion of disposition.
- Attachments (if applicable) have been completed as required by Section 4.11.
- Review the NCR and all attachments (if applicable) to assure conformance to applicable requirements.

4.8.3 Document the Attachment number(s) in Block 23 as needed. If no attachments, enter "N/A."

4.8.4 **IF** Interim disposition **AND** other requirements in accordance with 4.8.2 are satisfactorily completed,
THEN print name, sign, and date in Block 18, **OR** continue to 4.8.5 for Final Disposition.

4.8.5 **IF** Final Disposition,
THEN ensure removal of all CCP HOLD TAGS as required, either by removing them personally or in coordination with the VPM or QA Designee. Verification will be so noted by checking the box in Block 24 of Attachment 1 prior to closing the NCR.

[A] **IF** verification identifies missing tags,
THEN immediately notify the SPM or VPM.

4.8.6 Print name, sign, and date Block 25.

4.8.7 **IF** disposition (Interim **OR** Final) **AND** other requirements in accordance with 4.8.2 are **NOT** satisfactorily completed,
THEN return to Responsible Manager (with detailed reasons for return) for correction and resubmittal.

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4.8.8 Determine any distribution requirements as identified in applicable interface documents.

4.8.9 Forward the closed NCR and applicable attachments to the NCR Coordinator.

4.9 Closeout

NCR Coordinator

4.9.1 At receipt of the closed NCR:

[A] Update the NCR in the NCRM.

[B] Distribute as required.

[C] Submit the completed NCR with attachments, if applicable, to CCP Records in accordance with CCP-QP-008, *CCP Records Management*.

4.10 Voiding the NCR

NCR Originator or QA Engineer

4.10.1 **IF** an NCR is determined to be invalid during the review in accordance with Section 4.2 (prior to NCR validation), **THEN**:

[A] On the open NCR, document the detailed justification for voiding. Write anywhere on the NCR as long as it does not obliterate existing information, OR use Attachment 3, or create an attachment according to CCP-QP-008.

Ensure that the NCR Originator and the QA Engineer print name, sign, and date.

[B] Forward the NCR to the NCR Coordinator.

[C] GO TO step 4.10.3.

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Responsible Manager, SPM, QA Engineer, or NCR Originator

4.10.2 **IF**, after NCR validation when the NCR is still open, the NCR Originator, the SPM, the Responsible Manager, and the QA Engineer agree that it is appropriate to void a validated NCR, **THEN**:

[A] On the NCR, document the technical justification for voiding, **AND** ensure that the NCR Originator, the SPM, the Responsible Manager, and the QA Engineer print name, sign, and date.

[B] Stamp or write “void” on the first page of the NCR, initial, and date.

[C] Forward the NCR to the NCR Coordinator AND copy the SPM.

NCR Coordinator

4.10.3 Verify Section 24 of Attachment 1 (NCR) has been completed.

4.10.4 Update the NCR Log that the NCR is voided, if needed.

4.10.5 Input the NCR into NCRM.

4.10.6 Submit voided NCR to CCP Records in accordance with CCP-QP-008.

4.10.7 Ensure a copy of the NCR is submitted to the appropriate DGL personnel as required by CCP-TP-001.

4.11 Attachments

NCR Originator/SPM/QA Engineer/Responsible Manager

4.11.1 When using attachments to an NCR:

[A] Identify the NCR number and revision number on each page of the attachment.

[B] Identify the attachment number.

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[C] Paginate each page of the attachment.

EXAMPLE:
NCR-LANL-0700-12, Rev 0, Attachment 1,
Page 1 of 1

NCR-SRS-0800-12, Rev 1, Attachment 3, Page 1 of 6,
2 of 6, etc.

4.12 Revisions

NCR Originator/SPM/Responsible Manager

4.12.1 After validation of the NCR, change technical content by revising the NCR as follows:

[A] Obtain a blank copy of the current revision of the NCR from the sftp site.

[B] Apply next sequential revision number to all pages of the NCR and all attachments.

[C] Document the reason for revision in Block 7c.

NCR Originator, SPM, Responsible Manager, or NCR Coordinator

[D] Supersede the previous revision by drawing a diagonal line across the first page of the NCR, **AND** adding a statement, "Superseded by Revision # (next sequential revision #)," **AND** initial and date.

[E] Attach the superseded revision to the new revision.

[F] Submit new revision for review and approval in accordance with Section 4.2.

4.13 NCR Log Reconciliation - CCP Project Office and Host Site

NCR Coordinators/QA Engineer

4.13.1 At the end of the calendar year, reconcile NCR numbers issued with NCR logs maintained at Host sites (where applicable), the NCR Log, and the NCRM, as follows:

QA Engineer:

[A] Verify that all NCR numbers issued and that appear in the Host Site Log, are accounted for in the NCRM.

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[B] Resolve all discrepancies identified with the NCR Coordinator.

[C] Prepare and submit a report to the CCP Project Office NCR Coordinator that documents the reconciliation effort.

CCP Project Office NCR Coordinator

4.13.2 Reconcile NCR numbers issued to the QA Engineer at Host sites with the NCR Log, based on the report submitted by the QA Engineer.

4.13.3 Note any NCR numbers **NOT** used during the year as "Number Not Used" in the Report.

4.13.4 Submit the NCR Reconciliation Report to CCP Records in accordance with CCP-QP-008.

4.14 Work Suspension and CBFO Stop Work Orders

Personnel Working

4.14.1 During Normal Work

[A] All CCP employees shall be responsible and authorized to suspend work if concerned with employee safety, the safety of the environment, or the quality of the work.

[B] **IF** work CAN **NOT** be carried out as specified in a procedure **OR** continuing work would result in an undesirable situation, a condition adverse to quality or the environment, or an unacceptable safety risk,
THEN suspend work in a safe configuration **AND**, inform the Lead Operator (LO) or VPM.

Lead Operator or Vendor Project Manager

[C] Resolve the concerns of the employee or inform the SPM of the work suspension and the reason it is suspended.

CCP Management

[D] Resolve the concerns prior to resuming operation **OR** initiate actions to correct the condition using existing procedures. In either event, keep the employee who raised the concern informed of actions taken in response.

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[E] Initiate the appropriate documentation in accordance with CCP-QP-029, *CCP Corrective Action Management,* and CCP-QP-005, as applicable to the situation.

SPM

[F] **WHEN** all corrective actions have been completed and verified,
THEN direct restart of suspended work.

4.14.2 CBFO Stop Work Orders

CCP Personnel

[A] Immediately comply with the terms of any Stop Work Order issued by the CBFO, which is authorized to issue Stop Work Orders for the protection of the environment and health and safety of CCP employees and the public.

CCP Management

[B] Accept direction set forth in CBFO Stop Work Orders and carry out such directives in a safe and responsible manner in accordance with established procedures.

[C] Submit Stop Work Orders and related documentation to CCP Records according to CCP-QP-008.

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5.0 RECORDS

5.1 Records generated during implementation of this procedure are maintained and controlled as QA records in accordance with CCP-QP-008. The records are the following:

5.1.1 <u>QA/Nonpermanent Records</u>

- Attachment 1, CCP Nonconformance Report (NCR) (including related emails and supporting documentation [if applicable])
  - Attachment 3, CCP Nonconformance Report (NCR) Continuation Sheet (if applicable)
  - CBFO Notifications (if applicable)
- NCR Reconciliation Report
- CCP NCRM Database
- Written Directive to suspend work (e.g., memo, email [if applicable])

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Attachment 1 – CCP Nonconformance Report (NCR)

CCP NONCONFORMANCE REPORT (NCR)

(Use NCR Continuation, Attachment 3, if necessary)

NCR No. NCR-	Revision	
1. Lot No., Heat No., or Serial No. (if applicable):	2. Process (e.g., NDA, NDE, VE, Other):	3. Batch Data Report #(s):
4. Order/Work Order/Job Control Number (if applicable):	5. PO # (if applicable):	Container #(s):
	6. Supplier (if applicable):	

DESCRIPTION OF NONCONFORMANCE

7a. NCR Description: ☐ < 100 nCi/g ☐ Prohibited Item ☐ E-Flag ☐ Receipt Inspection ☐ Transportation ☐ WWIS/WDS ☐ Other

7b. Requirement(s) (Enter Implementing Procedure No., Revision, Section No., & Quoted Text):

7c. Actual Condition:

7d. Have the CCP HOLD TAGS associated with this NCR been applied? ☐ YES ☐ NO If no is checked, explain:

8. NCR Originator:

printed name _____ signature _____ date _____

9. Does the identified condition have the potential to impact AK? If YES or INDETERMINATE, enter Trend Code L in Block 10. ☐ YES ☐ NO ☐ INDETERMINATE

10. Trend Code:	11. Responsible Manager:
12. Significant Condition? ☐ YES ☐ NO (If Yes, enter CAR No.):	13. Recurring Condition? ☐ YES ☐ NO (If YES, list NCRs and CARs):

14. QA Engineer or QA Designee validation:

printed name _____ signature _____ date _____

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Attachment 1 – CCP Nonconformance Report (NCR) (Continued)

NCR No. NCR- Revision

INTERIM DISPOSITION

15a. Interim Disposition (Check Only One):

☐ N/A (See Final Disposition) ☐ Hold ☐ Conditionally Accept ☐ Conditionally Use

☐ Sort ☐ Reinspect or Retest ☐ Remediate

15b. Instructions for Completion of the Interim Disposition:

INTERIM DISPOSITION APPROVALS

16a. Responsible Manager or Individual:

printed name signature date

16b. QA Engineer or QA Designee:

printed name signature date

Additional Approval:

printed name signature date

Additional Approval:

printed name signature date

COMPLETION OF INTERIM DISPOSITION

17. Interim Disposition Complete – Responsible Manager or Individual:

printed name signature date

18. Interim Disposition Verified – QA Engineer:

printed name signature date

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Attachment 1 – CCP Nonconformance Report (NCR) (Continued)

NCR No. NCR- Revision

FINAL DISPOSITION

19. Final Disposition (Check Only One: Use-As-Is, Repair, Reject, Rework, or Scrap):
☐ Use-As-Is ☐ Repair

19a. Technical Justification – Required for Use-As-Is or Repair dispositions. [☐ N/A for Reject, Rework, or Scrap]

☐ Reject ☐ Rework ☐ Scrap

19b. Instructions for Completion – Required for Reject, Repair, Rework, or Scrap [☐ N/A for Use-As-Is]

19c. Corrective Actions (Actions to Prevent Recurrence – For Repair or Rework, if applicable.
[☐ N/A if not applicable, and for Use-As-Is, Reject, and Scrap]

FINAL DISPOSITION APPROVALS

20. Responsible Manager or Individual:

printed name signature date

21. QA Engineer or QA Designee:

printed name signature date

Additional Approval:

printed name signature date

Additional Approval:

printed name signature date

CLOSURE

22. Final Disposition Complete - Responsible Manager or Individual:

printed name signature date

23. Attachments:

24a. HOLD TAG removal has been verified and reconciled for all nonconforming items on the NCR: ☐
24b. If HOLD TAG is not applicable, check: ☐ and explain:

25. Final Disposition Verified – NCR Closed QA Engineer:

printed name signature date

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Attachment 2 – Instructions for Completing Attachment 1, Nonconformance Report (NCR)

Block	Responsible Individual(s)	Instructions
1	NCR Originator	Enter Heat no., Lot no., or Serial no. (as applicable) of material or item, measuring or test equipment, or item purchased from a supplier. If not applicable, enter "N/A."
2	NCR Originator	Enter kind of process. Choose one or a combination from the following: AK, CRMU Project, DA, Exterior Surface Radiological Survey, FGA, GGTP, HE-RTR, Lot Evaluation, MOVER, NDA, NDE, OSRP, Radiochemistry, Receipt Inspection, RH-DTC, RH-NDE, RH-RTR, RH-Sampling, RH-VE, Solids Analysis, Surface Finish, Testing, Transportation, VE, WCO, WWIS/WDS, Other. If not applicable, enter "N/A."
3	NCR Originator	Enter Batch Data Report number(s) if applicable. If not applicable, enter "N/A." Enter Container number(s) if applicable. If not applicable, enter "N/A."
4	NCR Originator	Enter Order, Work Order, or Job Control Number if applicable. If not applicable, enter "N/A."
5	NCR Originator	Enter Purchase Order number if applicable. If not applicable, enter "N/A."
6	NCR Originator	Enter Supplier if applicable. A Host site is not a supplier. If not applicable, enter "N/A."
7a	NCR Originator	Check applicable box to match NCR Description.
7b	NCR Originator	Enter the requirement that applies to the nonconforming condition. Include implementing procedure number, its revision, the applicable section or paragraph number, and quote the text.
7c	NCR Originator	Enter the actual, nonconforming condition. Provide enough detail so that a disposition can be developed to correct it.
7d	NCR Originator or QA or QA Designee	Check "Yes" if Hold Tags have been applied or "No" if another method has been selected to control the item(s). If Hold Tags were not applied because of the Remote-Handled ALARA principle, enter the following: "Hold Tags will not be applied to items identified on this NCR because of ALARA consideration. Container management will apply through administrative control. In addition, these containers have been identified on the CCP sftp site. Container information from this NCR has been included in the list, which is to alert Mobile Loading Unit personnel as a second method of control of non-tagged containers." If NCR was originated at the Project Office, the site will be advised to apply Hold Tags and confirm when done. At that time, QA or QA Designee may check Block 7d "Yes." The NCR does not require revision as a result.

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Attachment 2 – Instructions for Completing Attachment 1, Nonconformance Report (NCR) (Continued)

Block	Responsible Individual(s)	Instructions
8	NCR Originator	Print name, sign, and date.
9	QA or QA Designee	Determine whether the Block 7c Actual Condition impacts or may impact AK. If so, check Block 9 "Yes." If it cannot be determined whether AK is impacted, check "Indeterminate." If not, check "No." If "Yes" or "Indeterminate" was checked, enter Trend Code 'L' in Block 10.
10	QA or QA Designee	If no Trend Code is entered in Block 10, determine the applicable code and enter it.
11	QA or QA Designee	Determine the Responsible Manager and enter (see Note before 4.2.12).
12	QA or QA Designee	After discussion with Assurance Manager, determine whether a Significant Condition Adverse to Quality exists (see 4.2.6) and check box accordingly. If "Yes" is checked, enter applicable CAR number.
13	QA or QA Designee	Determine whether a recurring condition exists (see 4.2.9) and check box accordingly. If "Yes" is checked, enter applicable NCR or CAR numbers.
14	QA or QA Designee	If NCR is determined valid, print name, sign, and date.
15a	Responsible Manager	If Interim Disposition is needed, check one box: "Hold," "Conditionally Accept," "Conditionally Use," "Sort," "Reinspect or Retest," or "Remediate." Proceed to Block 15b. If Interim Disposition is not needed, check "N/A" and proceed to Block 19.
15b	Responsible Manager	Enter instructions for completion of the Interim Disposition.
16a	Responsible Manager or Individual	Print name, sign, and date.
16b	QA Engineer or QA Designee	Print name, sign, and date.
17	Responsible Manager or Individual	When Interim Disposition is to be closed, print name, sign, and date.
18	QA Engineer or QA Designee	If verified adequate, print name, sign, and date.
19 or 19b	Responsible Manager or Individual	Check only one box: "Use-as-is," "Repair," "Reject," "Rework," or "Scrap."
19a	Responsible Manager or Individual	Enter Technical Justification if Disposition is "Use-as-is" or "Repair." If not, enter "N/A," and proceed to 19b.

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Attachment 2 – Instructions for Completing Attachment 1, Nonconformance Report (NCR) (Continued)

Block	Responsible Individual(s)	Instructions
19b	Responsible Manager or Individual	Enter Instructions for Completion if Disposition is “Reject,” “Repair,” “Rework,” or “Scrap.”
19c	Responsible Manager or Individual	Enter Action(s) to prevent recurrence, if applicable. Enter “N/A” if not applicable, or for “Use-as-is,” “Reject,” and “Scrap” dispositions.
20	Responsible Manager or Individual	Print name, sign, and date.
21	QA or QA Designee	If Final Disposition is acceptable, print name, sign, and date.
22	Responsible Manager or Individual	When Final Disposition is completed, print name, sign, and date.
23	QA or QA Designee	If there are any Attachments, enter number and title or description of each.
24a	QA or QA Designee	If Hold Tag removal was verified for all nonconforming items on the NCR, check box.
24b	QA or QA Designee	If Hold Tags are not applicable, check box and enter explanation.
25	QA Engineer	When Final Disposition is verified, print name, sign, and date for closure of NCR.

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Attachment 3 – CCP Nonconformance Report (NCR) Continuation Sheet

NCR No. NCR-	Revision	Attachment #	Page	of
Continuation from Section Number:				

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Attachment 4 – Additional CBFO Notification Details

This attachment details reporting notification requirements for CCP-generated Nonconformance Reports (NCRs) which meet the condition identified in CCP-PO-001, Section C3-13, and 4.4.1[D.5] of this procedure.

WIPP e-mail Address: wipp.notify@wipp.ws

Electronic notification is strongly encouraged. If electronic notification is used, the following criteria are required:

On the subject line, preceding the subject, [ncr]. The term “ncr” in brackets [ ] allows the automatic transfer into the proper folder of the receiving system.

Include the NCR number, description of the deficiency, and the date identified.

CCP must email an NCR containing CCP’s procedurally required information thirty (30) days after the nonconformance was identified.

CCP may choose to transmit the NCR within the required seven (7) days, and satisfy both notification requirements, provided the following information is submitted:

- Site NCR #
- Responsible Organization
- Date initiated
- Individual who identified the NCR
- Deficiency
- Requirement violated
- Actions
- Date closed, if applicable

General Notification

If CCP does not have the capability of transmitting documents by e-mail, or elects not to, hard-copy transmittal may be used instead. Correspondence must be sent to the following address:

[Assigned CBFO Contact]
Carlsbad Field Office
U.S. Department of Energy
P.O. Box 3090
Carlsbad, NM 88221-3090

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Attachment 5 – Trend Codes

Trend Codes	Descriptions	Definitions and Examples
A*	Personnel Error and Failure to Follow Procedure	Personnel wrongly entered data or transposed figures or letters; inattention to detail; lack of understanding; use of superseded or incorrect version of specifying document; used procedure, but before required approval(s); required review missed problem(s); failed to follow procedure(s); deliberate violation.
C	Engineering Deficiency	Inadequate or erroneous engineering design, design input, or design output.
D	Procedure Less Than Adequate	Procedure erred or was vague in specifying requirements; failure to revise procedure when work processes change; no procedure to control QA work.
E	Software Deficiency	Software error resulted in deficient data; unqualified software used to obtain QA data; failure to initiate software qualification process; failure to verify software following software or operating system upgrade.
F	Vendor Deficiency	Deficiencies related to a vendor (i.e., procured item including hardware does not meet a requirement prescribed in the purchase order); wrong or less than adequate vendor documentation.
H	Material or Equipment Control Deficiency	Failure of material, equipment, or items because of damage, failure of a component, inadequate maintenance, etc.

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Attachment 5 – Trend Codes (Continued)

Trend Codes	Descriptions	Definitions and Examples
I	Calibration Deficiency	Calibration was inadequate, resulting in nonconforming or indeterminate data; use of out-of-calibration M&TE.
J	Inadequate Documentation	Record is nonconforming: does not include required data; required data are incorrect; record(s) improperly stored.
K	WAP/WAC Deficiency	Noncompliance with a WAP or WAC requirement **(Exempt from trending)**.
L	Acceptable Knowledge Deficiency	Possible changes to the AK of a waste stream (e.g., assignment of waste container to wrong waste stream; identification (ID) of unanticipated waste material parameters in a waste container) **(Exempt from trending)**.
M	Inadequate Communication	Personnel were given ambiguous or incorrect information or instructions to do their work; inadequate or lack of planning.
O	Ineffective Control of Corrective Action	Actions intended to correct deficiencies or preclude recurrence proved ineffective; identification of nonconforming item(s) less than adequate.
P	Inadequate Training	Condition Adverse to Quality resulted from lack of or inadequate indoctrination, training, or qualification; work done before indoctrination, training, or qualification or after qualification expired.
Q	Deficiency Caused by Others	The deficiency was caused by non-WTS personnel working to non-WTS QA program or none at all.
R	Control of Electronic Data Less Than Adequate	Inadequate security access control; inadequate protection of data; failure to backup data; inadequate traceability of data; failure to verify transferred data.

* Former Trend Code B was combined with A.

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Attachment 6 – NCR Hold Tags Guidance

Applicability
This Attachment applies to all CCP personnel applying or removing CCP Nonconformance Report (NCR) Hold Tags.

Vendor Project Manager (VPM) Administrative Hold Tags are addressed in Container Management procedures CCP-TP-035, CCP-TP-068, and CCP-TP-120.

When PLACING an NCR Hold Tag on waste container:

- Use only CCP-provided NCR Hold Tag
- When applying the NCR Hold Tag, enter the information using a Sharpie permanent marker or equivalent
- The NCR Hold Tag when possible should be applied so that the drum number, BDR number, etc. face out
- Place the NCR Hold Tag on the waste container locking ring bolt or lifting handle, using the cable tie in accordance with the following:
    - Use a separate cable tie for each Hold Tag placed on a waste container
    - Ensure the the cable tie locks and does not protrude past the bottom of the device
    - If the wire protrudes past the bottom of the device, wrap the exposed wire with tape

When REMOVING an NCR Hold Tag from a waste container:

- Wrap the area where the cable is to be cut with tape prior to cutting to prevent the cable wires from splaying. Cut the cable tie holding the NCR Hold Tag to the container using CCP-approved cable cutters.
- DO NOT cut or pull the tag off the cable tie
- Return the NCR Hold Tag to the VPM or SPM directing removal of the tag. The VPM or SPM will then turn the tags over to the QA Engineer for tracking with the corresponding NCR.
- DO NOT remove Host site tags or tamper-indicating devices (TID). Immediately report accidental removal of these to the VPM.

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Attachment 6 – NCR Hold Tags Guidance (Continued)

When a cable or wire is found on a waste container without an NCR Hold Tag attached, or when an NCR Hold Tag is damaged or faded:

- Treat the container as though it has an NCR Hold Tag applied.
- If the NCR Hold Tag is found damaged or faded, document the container number and any information from the remaining Tag and notify the VPM or SPM.
- If a loose tag is found on a waste container or on the ground, turn the tag over to the VPM or SPM.
- Replace loose, damaged, faded, or missing NCR Hold Tags as directed by the VPM or SPM.

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CCP-QP-008

Revision 21

CCP
Records Management

EFFECTIVE DATE: 02/28/2013

Mike Ramirez

PRINTED NAME

APPROVED FOR USE

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RECORD OF REVISION

Revision Number	Date Approved	Description of Revision
6	03/11/2002	Additions for use of e-QA system
7	06/07/2002	Incorporation of instructions for pagination and removal of text in Attachments.
8	09/04/2002	Added the definition of magnetic tape and incorporated text to clarify the requirements of computer generated electronic records (clarified steps 2.3.7 and 4.8.3). Updated Attachment 2 to reflect new fax machine number. Added new steps regarding duties for the CCP Site Project Manager and the release of records (steps 3.1 and 4.7).
9	08/27/2003	Updated to reflect issuance of Revision 5 of the QAPD. Made other editorial changes. Separated electronically fillable forms and updated references in the procedure.
10	10/15/2004	Clarified CCP Personnel and Facility Records Custodian responsibilities. Editorial changes throughout.
11	08/22/2005	Reorganized sections for improved flow and added clarifications. Deleted Attachments 3 through 6.
12	11/16/2006	Revised to implement the Waste Isolation Pilot Plant Hazardous Waste Facility Permit requirements resulting from the Section 311/Remote-Handled (RH) Permit Modification Request (PMR).
13	04/24/2007	Revised to change title in responsibilities and body of procedure and to add statement (Note) from QAPD and remove verbiage about in-process records.
14	09/19/2007	Revised to address finding from U.S. Department of Energy, Carlsbad Field Office, Corrective Action Report 07-016, Audit A-07-24. Also revised to provide some clarifications within the procedure, added a step to address superseding and voiding of documents (i.e., Batch Data Reports, Nonconformance Reports), and added a note at the beginning of section 4.9 to address computer modeling results methods.
15	10/28/2009	Revised to make personnel title changes and name changes to organizations. Added section 4.7.1[G] for lost records as well as a section for receipt and handling of Official Use Only (OUO) and Unclassified Controlled Nuclear (UCN) documents.
16	07/06/2010	Revised to clarify and address the submittal of historical source documents.

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RECORD OF REVISION (Continued)

Revision Number	Date Approved	Description of Revision
17	11/02/2010	Revised to change the submittal process for Acceptable Knowledge (AK) documentation and section on historical source documents.
18	03/30/2011	Revised to support corrective action report (CAR)-LANL-0004-10.
19	08/02/2011	Revised to change the number of the form in the definition of retention period. Change to Section 4.8 for clarification.
20	08/10/2012	Revised to clarify editorial changes, transmitting of records, and destruction of QA records.
21	02/28/2013	Revised to incorporate Nuclear Waste Partnership (NWP) transition changes.

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1.0 PURPOSE

This document outlines the Central Characterization Program (CCP) Records Management Program. The records program involves CCP Records and interaction with WIPP Records Management Services (WRMS) as outlined in this procedure.

1.1 Scope

This procedure applies to the creation, maintenance, use, and disposition of records generated by the CCP.

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2.0 REQUIREMENTS

2.1 References

Baseline Documents

- DOE/CBFO-94-1012, *U.S. Department of Energy Carlsbad Field Office Quality Assurance Program Document* (QAPD)

Referenced Documents

- *National Archives Records Administration (NARA) Approved Record Schedules*
- CCP-QP-002, *CCP Training and Qualification Plan*
- CCP-QP-028, *CCP Records Filing, Inventorying, Scheduling, and Dispositioning*

2.2 Training Requirements

2.2.1 Personnel performing this procedure will be trained and qualified in accordance with CCP-QP-002, *CCP Training and Qualification Plan,* prior to performing this procedure.

2.3 Definitions

2.3.1 **Authentication** - Synonymous with validation.

2.3.2 **Computer System** - A configuration, or working combination, of hardware, software, and data communication devices.

2.3.3 **Destruction** - The physical destruction of records by shredding, incinerating, or other permanent means.

2.3.4 **Disposition** - The action taken regarding records no longer needed for current government business. Actions may include transfer to the Carlsbad Field Office (CBFO) Records Holding Facility or Federal Records Center, transfer from one federal agency to another, transfer of permanent records to the National Archives and Records Administration (NARA), or destruction of nonpermanent records.

2.3.5 **Electronic Record** - A record in a form that is readable only by a computer. Electronic records are most frequently recorded on media such as disk, diskette, tape, and tape cartridges.

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2.3.6 **External Records** - Records generated by the waste generating sites (e.g., procurement records, procedures, radiological surveys, facility operating logs, container packaging records, historical source documents, etc.). These records are not subject to the requirements of this procedure concerning legibility, pagination, accuracy, completeness, or revision.

2.3.7 **Inactive Record** - A record no longer required to conduct government business and therefore dispositioned in accordance with approved records schedules and stored for authorized retention periods.

2.3.8 **Index** - A listing of records and cross-reference information. At a minimum, an index will indicate record location within the record filing and storage system.

2.3.9 **Internal Use Only (IUO)** - A document that has been identified as Internal Use Only (IUO) and is considered proprietary, which is not to be disseminated beyond the organization.

2.3.10 **Legible** - For the purpose of this document, legible means that the characters, letters, and numbers making up data or information contained in a record can be read without difficulty or magnification.

2.3.11 **Lifetime QA Records** - Records that are required to be retained and preserved in an acceptable condition for the operating life of the repository (i.e., until termination of the repository permit). Prior to destruction of any lifetime record, it shall be evaluated for upgrade to a post-closure record.

2.3.12 **Magnetic Tape** - A tape with a magnetizable surface on which data can be stored and retrieved. A tape or ribbon of any material impregnated or coated with magnetic or other material on which information may be placed in the form of magnetically polarized spots.

2.3.13 **Medium** - Refers to the physical form of recorded information such as paper, film, disk, magnetic tape, or other materials on which information can be recorded.

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2.3.14 **Microfilming** - A photographic process used to record images of records on a fine-grain, high-resolution film in sizes greatly reduced from the original. Formats in general use are rolls of 16 millimeter (mm) images, pages of 16 mm images called microfiche, and 35 mm images mounted in aperture cards. Microform is a generic term for all microfilm formats.

2.3.15 **Migrate** - In electronic records, the process of moving from one computer system to another.

2.3.16 **National Archives and Records Administration (NARA)** - An independent government agency responsible for establishing policies and procedures for managing the records of the federal government. NARA exercises final authority for approving the disposition of government records.

2.3.17 **Nonpermanent Records** - Records having value for a specific, limited time and authorized by NARA (via approved disposition schedules) to be destroyed after that time. Nonpermanent records are sometimes referred to as temporary records.

2.3.18 **No Foreign National (NOFORN)** -No Foreign National (NOFORN) is a marking that identifies a document is not to be given to a person who is a foreign national – not a United States citizen.

2.3.19 **Nonrecord Material** - Those classes of documentary or other material that fail to meet the general definition of a record or fall under one of the following categories: (a) library or museum material made or acquired for reference or exhibition purposes; (b) extra copies of documents preserved only for convenience of reference on which no action is recorded or taken; (c) stocks of publications or other processed documents that require no action and are not part of a case on which action is taken; (d) routing slips and transmittal sheets adding no information to that contained in the transmitted material (i.e., concurrences or direction on how to proceed or implement); and (e) papers of a private or nonofficial character that pertain to an individual's private affairs.

2.3.20 **Official Use Only (OUO) Information** - Certain unclassified information that may be exempt from public release under the Freedom of Information Act and has the potential to damage governmental, commercial, or private interests if disseminated to persons who do not need to know the information to perform their jobs or other U.S. Department of Energy (DOE) authorized activities.

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2.3.21 **Personal Papers** - Materials of a private nature maintained by personnel at their work place that DO **NOT** relate to, or have an effect on, the conduct of business or activities related to the CCP. Personal papers maintained in desks and file drawers in the work place must at all times be segregated and stored separately from records.

2.3.22 **Post-closure Records**

- Records that assist in preventing action that could impair the long-term isolation of the waste.
- Records preserving information that would prevent inadvertent human intrusion, such as the nature and hazard of the waste and locations of the geologic repository operation area, the underground facility, bore holes, shafts, and boundaries of the controlled area.
- Records providing information relevant to post-closure monitoring and assessment of performance of the repository system.
- Records preserving, for future generations, information regarding the geologic setting relevant to mitigation of releases of radioactive materials.
- Records which would be of significant value after decommissioning and closure of the repository.

2.3.23 **Privacy Record** - Any item, collection, or grouping of information about an individual that contains his or her name or other personal identifier.

2.3.24 **Project Participant** - Any DOE site, generator site, or contractor organization that participates in a CBFO program. Subcontractor's records are the responsibility of the participant.

2.3.25 **Project Records** - Records created or received in support of the CCP.

2.3.26 **Quality Assurance (QA) Record** - An authenticated record that provides objective evidence of the quality of items or activities.

2.3.27 **Record Medium** - Refers to the physical form of recorded information such as paper, film, disk, magnetic tape, or other materials on which information can be recorded.

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2.3.28 **Records** - Those classes of documentary materials which may be disposed of only after the archival authority is obtained. The statutory definition of records (44 United States Code §3301, Definition of Records), "...includes all books, papers, maps, photographs, machine-readable materials or other documentary materials, regardless of physical form or characteristics, made or received by an agency of the United States government under federal law or in connection with the transaction of public business and preserved or appropriate for preservation by that agency or its legitimate successor as evidence of the organization, functions, policies, decisions, procedures, operations or other activities of the government or because of the informational value of the data in them." This definition applies to all departmental records including those created, received, and maintained by contractors pursuant to their contracts. Virtually all recorded information in the custody of the government (including information held by contractors which is considered by contract to be government information) regardless of its' media (hard copy, machine-readable, microform), is considered "government records." For the CCP, information meeting the above criteria is considered to be a record, unless it can be clearly identified as a nonrecord.

2.3.29 **Records Custodian** - An individual identified within an organization who is assigned the responsibility of, and trained for, assisting record originators regarding records management issues.

2.3.30 **WIPP Records Archive (WRA)** - A facility that meets the regulatory requirements for the storage of noncurrent records pending their destruction or transfer to a Federal Records Center or the NARA. The WIPP Records Archive (WRA) is located in Carlsbad, New Mexico.

2.3.31 **Records Inventory and Disposition Schedule (RIDS)** - The DOE form used to indicate the appropriate disposition of records. The purpose and content of the form may be placed in electronic media as long as all the requirements of the form are met.

2.3.32 **Record Series** - File units or documents arranged according to a filing system or kept together because they relate to a particular subject or function; result from the same activity; document a specific kind of transaction; take a particular physical form; or have some other relationship arising out of their creation, receipt, or use, such as restrictions on access and use. A record series may also include related elements physically separated from it such as finding indexes or large documents (also sometimes called a file series). These records are generally handled as a unit for disposition purposes.

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2.3.33 **Software Generated** - A form that is generated by controlled software that performs approved calculations.

2.3.34 **Unclassified Controlled Nuclear Information (UCNI)** - Certain unclassified but sensitive Government information concerning nuclear material, weapons, and components whose dissemination is controlled under section 148 of the Atomic Energy Act.

2.3.35 **Record Systems** - A common, integrated set of manual and/or automated activities for creating and identifying; collecting and controlling; processing and organizing; distributing; microfilming; storing and preserving; retrieving; and disposing of records applicable to preparation for storage, as well as the storage of machine readable records such as magnetic tapes, floppy disks, etc.

2.3.36 **Retention Period** - The period of time approved by NARA for records to be retained, whether in the originating office, Records Storage Facility or a Federal Records Center. The retention period is indicated on EA15RM300Z-2-0, *Records Inventory and Disposition Schedules (RIDS)*.

2.3.37 **Uniform File Code (UFC)** - A standard filing system for correspondence records required by the DOE.

2.3.38 **Unscheduled Records** - Records for which no disposition authority has been identified on an approved disposition schedule.

2.3.39 **Validation/Authentication** - An activity that certifies the content of a document as being authentic and complete. This certification is documented by signing (or initialing) and dating the document unless otherwise authenticated. Validation/authentication may be made by the author, assigned reviewers, or individual(s) specifically assigned to review and validate documents.

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3.0 RESPONSIBILITIES

3.1 CCP Manager or Designee

3.1.1 CCP Manager has the overall responsibility and authority for the content of records generated.

3.1.2 Verifies that the organization has a current approved Records Inventory and Disposition Schedule (RIDS).

3.1.3 Verifies that records are retained in accordance with retention requirements and not inadvertently or prematurely destroyed.

3.1.4 Verifies the timely disposition of records through in-house destruction.

3.1.5 Verifies that personnel are aware of the requirements to retain records according to approved retention requirements.

3.1.6 Provides adequate records management resources in the form of staff, equipment, and dedicated time to verify good record keeping practices.

3.1.7 Obtains written concurrence to destroy records exceeding their retention periods.

3.2 Cognizant Manager

3.2.1 Identifies those documents that become records.

3.2.2 Determines if the work activities are quality-affecting.

3.2.3 Identifies records in the implementing procedures.

3.3 Lead Records Custodian

3.3.1 Acts as the liaison between the CCP and WRMS for records management.

3.3.2 Carries out the records management duties in accordance with approved implementing procedures.

3.3.3 Determines which nonpermanent records series are eligible for destruction.

3.3.4 Informs the CCP Manager or designee of the records that have expired retention periods.

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3.3.5 After receiving approved written concurrence, dispositions the Quality Assurance (QA) and/or non-QA records.

3.3.6 Prepares and revises the RIDS in accordance with CCP-QP-028, *CCP Records Filing, Inventorying, Scheduling, and Dispositioning,* and verifies the RIDS remain current.

3.3.7 Identifies records that are eligible for in-house destruction.

3.3.8 Assists personnel with record retrieval from CCP Records as required.

3.3.9 Assists in obtaining approved disposition authorities for unscheduled records from NARA.

3.4 Records Custodian

3.4.1 Carries out the records management duties in accordance with approved implementing procedures.

3.4.2 Transmits completed QA records to the Host (generator/storage) site records centers or Waste Isolation Pilot Plant (WIPP) Records Archives (if applicable).

3.4.3 Assists personnel with record retrieval from CCP Records, as required.

3.4.4 Verifies that Records are complete. This includes verifying that there are no missing signatures, the page count is correct, and that the Batch Data Reports (BDRs) contents match their Table of Contents.

3.4.5 Ensure that the Attachment 2, Records Transmittal/Receiving Form, is in agreement with the transmitted record and that it is legible.

3.5 Facility Records Custodian

3.5.1 Coordinates the compilation and the transfer of records generated at the Host (generator/storage) sites.

3.5.2 Verifies that records are complete. This includes verifying that there are no missing signatures, the page count is correct, and that the BDRs contents match their Table of Contents.

3.5.3 Ensure that the Attachment 2 is in agreement with the transmitted record and that it is legible.

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3.5.4 Manages the transfer of completed and in-process records to CCP Records.

3.5.5 Assists personnel with record retrieval from CCP Records where applicable.

3.5.6 Carries out the records management duties in accordance with approved implementing procedures.

3.6 WIPP Records Management Services (WRMS)

3.6.1 Assists in the development and management of the records management system.

3.6.2 Assists with the review and approval of the CCP RIDS.

3.6.3 Assists in obtaining approved disposition authorities for unscheduled records to NARA.

3.7 Personnel

3.7.1 Generates the necessary records that document the activities assigned to them. Each individual who creates records must verify the record(s) are legible, accurate, and complete, appropriate to the work accomplished.

3.7.2 Are aware of, and provide reasonable protection during the generation and processing of records intended to become QA Records.

3.7.3 Ensures that records are legible, accurate and complete, appropriate to the work accomplished, when generating, reviewing and validating records.

3.7.4 Ensures that records are not inadvertently or prematurely destroyed.

3.7.5 Coordinates records issues with the respective Records Custodian(s)/Facility Records Custodian(s).

3.8 WRMS Manager

3.8.1 Provides concurrence for in-house destruction of records.

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4.0 PROCEDURE

4.1 Generation of Records

Cognizant Managers

4.1.1 Prior to conducting a work activity:

[A] Identify those documents that become records.
[B] Determine if the work activities are quality-affecting.
[C] Identify records in the implementing procedures.

NOTE
Records may be originals **OR** reproducible copies; however, original documents are preferred.

4.2 Legibility

Personnel

NOTE
Reproducible ink should be used whenever possible to verify maximum contrast on printed records. Records created in black ink typically produce better quality copies than do records printed in other color inks.

NOTE
Highlighter marking pens SHALL **NOT** be used on records. Bolding or underlining text are preferred alternatives to highlighting.

4.2.1 Verify that the records generated are legible and reproducible. If there is doubt, copy the record and then recopy the copied record (copy-a-copy test) to check the copied copy for legibility.

4.3 Accuracy

4.3.1 Verify that records are accurate to the work accomplished.

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4.4 Completeness

4.4.1 Verify that records are complete per the following:

[A] Blank spaces are filled in where information is required to be entered making the document complete.

[B] Not Applicable (N/A) is entered in spaces where information is not applicable or as otherwise indicated.

[C] Blank spaces are acceptable when a record is a software generated page/form which performs calculations.

[D] The document's intent is clear, even with some blanks not filled in. If so, the record is acceptable as is. A blank space in a record does not, in itself, make the record incomplete. For example:

Is the indicator light illuminated?
___✓___ YES _____ NO

This is an acceptable method of recording information, even when the NO space is blank.

NOTE

Individuals handling documents intended to become QA Records shall provide reasonable protection for the records from damage or loss until the records are submitted to the records system (this includes documents generated during field operations).

4.5 Storage, Maintenance, Control, and Protection of QA Records

4.5.1 Store, maintain, and protect completed QA records as follows:

[A] In an Underwriter Laboratories-listed one-hour fire rated (or equivalent) container, or a container certified by a person competent in the technical field of fire protection,

OR

[B] Retain a copy in a location sufficiently remote from the original to preclude destruction as a result of a single event such as fire or natural disaster,

ALSO

[C] Provide adequate protection of the QA records within the storage location to minimize the risk of damage or loss from

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humidity, natural disasters, adverse weather conditions, mold or infestations of insects or rodents.

[D] DO **NOT** store QA records where they may be exposed to water or heat sources, **OR** where food is kept (to reduce the potential for rodent or insect infestation).

4.5.2 Access

[A] Prevent access to QA records by unauthorized personnel as follows:

NOTE

Authorization must be documented either by signature and date on posted list, **OR** by letter on file. Authorization will be done by the CCP Manager or designee. The authorization list must be kept current.

[A.1] Generate, post, and maintain a list designating the personnel who are authorized and permitted access to the QA records.

NOTE

Provisions for installation of locking mechanisms will be made for storage areas requiring controlled access. Authorized personnel allowed access to the storage areas will be given the lock code **OR** controlled location of the keys.

[A.2] Protect locking mechanisms for storage cabinets/areas that require controlled access.

[A.3] Store all records not currently being used in appropriate storage equipment (e.g., file cabinets, shelving, desks).

[A.4] Lock file cabinets and offices as appropriate when leaving controlled access areas.

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4.6 Records Separation and Availability

NOTE
Records will be separated from non-records and personal papers.

4.6.1 Provide a means to retrieve records by indexing with one of the following methods:

[A] Numerically (such as audit case files):

OR

[B] By subject, with guides dividing different subjects.

4.7 Corrections, Additions, Revisions, Supplements, and Lost Records

NOTE
When in-process record/records intended to become QA Records are being generated they shall be maintained (do not remove or destroy) and if corrections are required, then perform this by proper correction, superceding, or voiding as directed in the following sections of this procedure.

4.7.1 Make necessary changes, additions, revisions and supplements in accordance with the following guidelines:

[A] Corrections

[A.1] Correct errors by drawing a single line through the incorrect information (leaving the original text readable), entering the correct information, **AND** initialing and dating each correction made.

[A.2] DO **NOT** use correction fluid (white-out) or correction tape on records.

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NOTE

Editorial changes may be made to records without the same level of review and approval as the original record. Editorial changes include ONLY the following:

- Clarification statements that do not affect the purpose of the record;
- Correcting grammar or spelling (the meaning has not changed);
- Renumbering sections, attachments or pagination;
- Date(s) that do **NOT** impact final disposition;
- Transcription errors
- Sections that require Not Applicable (N/A), but were left blank.

[A.3] Provide corrected or changed records (except for editorial changes) that have been validated back to the originating organization for review and revalidation.

NOTE

Original records may not be available for remote personnel to make necessary changes; therefore a printed copy of the scanned image from CCP Records may be used to make the changes. Changes will be transmitted in accordance with step 4.10.1.

[A.4] **IF** the original document is unavailable to the individual making a change to a record,
THEN use a printed copy of the scanned image from CCP Records and make the change. This will then become the original.

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[B] Additional Notations

[B.1] **IF** any additional information needs to be added to a record after validation,
THEN enter the notation, **AND** initial and date each notation(s) made.

[C] Revisions, Regeneration, and Supplements

[C.1] **IF** a record needs to be revised due to illegibility or damage,
THEN transcribe **OR** enhance the illegible, or damaged, portion of the record **AND** initial and date each part enhanced or transcribed.

[C.2] **IF** a record must be regenerated due to damage,
THEN regenerate the record and place a notation at the bottom of the regenerated page, "This record has been regenerated because of damage," sign, and date. Place the regenerated record in front or on top of the original damaged record.

[C.3] **IF** a record has already been sent to CCP Records,
AND needs a supplement or revision,
THEN contact CCP Records.

NOTE

The following is a standard way to add new pages to a document, to supersede a page, and to add a corrected page.

[D] Adding Pages to Documents

[D.1] When adding pages to a document, place new pages behind the page within the document that they will follow.

Example: The new pages are to be added right after page 35 within the document. Place the new pages behind page 35, **AND** number the new pages 35A, 35B, 35C.

[D.2] **IF** the pages are added to the end of the document,
THEN number them in sequential order.

Example: The last page of the document is page 40. Place the new pages after page 40, **AND** number the new pages as 41, 42, 43.

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[E] Superceding Pages

[E.1] When superceding a page with a new, corrected page, draw a single, diagonal line through the entire page to be superceded, **AND** initial and date.

[E.2] Place the new, corrected page to the front of the superceded page. Using the page number on the now superceded page, number the new, corrected page with the same number, then renumber the superceded page with the same number and an additional character (i.e., A, B, C).

Example: Superceded page was numbered 35. The new, corrected page will now be numbered 35, **AND** the superceded page will change to 35A.

[F] Superceding or Voiding of Whole Documents

[F.1] When superceding or voiding a whole document (not just pages within a document [i.e., BDRs, Nonconformance Reports]) stamp or write “superceded” or “void” on the first page of the document **AND** initial and date.

[G] Lost Records

[G.1] **IF** replacement or restoration of the record is **NOT** practical,
THEN action should be taken to ensure the quality of the items or activities affecting quality, by using re-examination, investigation, or by other means.

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4.8 Quality Assurance (QA) Record Authentication/Validation

NOTE

Records become QA records when they are completed and authenticated/validated. Authentication/validation may be by the author, assigned reviewer, individual specifically assigned to review and validate documents, or otherwise authenticated/validated.

NOTE

Individuals who review and authenticate/validate records are responsible for the completeness and accuracy of those records.

[A] Authenticate/validate QA records through one of the following methods:

[A.1] Initial **OR** sign and date hard copy records, unless otherwise authenticated/validated.

[A.2] **IF** the nature of the record precludes signing, **THEN** validate the QA record using any reasonable form which clearly indicates that an authorized individual believes the record to be complete and accurate.

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4.9 Generation, Protection, and Preservation of Computer Generated Electronic Records

NOTE

There are two types of electronic records:

- Electronic records that can be printed in a hard copy format.
- Electronic records that cannot be printed in a hard copy format.

Regardless of type, all electronic records must be managed in accordance with the guidelines contained in this section. Properly performing these steps will ensure that electronic records are in compliance with the applicable requirements.

NOTE

Computer modeling results (e.g., Monte Carlo N Particle [MCNP], Origen2.2) that perform statistical and random computer runs of radionuclide distributions will not be maintained but summarized in the hardcopy calculation packages. The calculation packages document these computer runs and shall define the range of possible values, the methodology for randomly selecting from this range, and a representative example of the input values and output result.

NOTE

Electronic media for historical source documents transmitting Adobe portable document format (PDF) files or electronic databases may be compact discs (CDs) or digital video discs (DVDs).

4.9.1 Protection

[A] To minimize the risk of unauthorized additions, deletions, or alterations to electronic files, use power-on, file passwords, or control lists to control any unauthorized access.

[A.1] Place electronic records, when complete to read/write protection.

[B] Provide access of electronic records to authorized staff.

[C] Provide access in the work area of electronic file index printouts, logs, disk labeling, **OR** other means to facilitate retrieval of active records by authorized users. Indicate the method used (including the directory path, if applicable) to transfer the information, the date compressed (if applicable), and file encryption information.

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4.9.2 Preservation

[A] Preserve records for the duration of their authorized retention period to verify their availability and provide verification of work performed by the facility and its supporting agencies.

4.9.3 Storage

[A] Label all electronic media (computer generated) used to store records properly with the following: originating organization, filename, retention period (obtain from Lead Records Custodian), original software used, and the version of the software.

4.9.4 Media Backup

[A] Back up electronic records on a regular basis to safeguard against the loss of information due to equipment malfunctions or human error.

4.9.5 Hardware/Software Changes

[A] Protect records media **AND** migrate information before the media is no longer useful.

[A.1] As software programs change, transfer existing records to the newer software program.

[A.2] As hardware is phased out or upgraded, verify that all existing records can be read utilizing the new hardware.

(a) **IF** new software and hardware will **NOT** read the current electronic record(s),
THEN migrate the records to a more accessible media.

(b) **IF** migration is **NOT** possible,
THEN retain either the old software and hardware **OR** make a printout of the data **AND** file the hard copy.

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4.10 Transmitting Records

NOTE
Transmitting completed QA records is for records going from one location or site to another.

NOTE
Records being forwarded within a Host site location or between Project-Office personnel DOES NOT need an Attachment 2. Completed QA Records being sent from one location or site to another will be sent using Attachment 2.

4.10.1 Transmitting Complete QA Records

[A] Send completed QA records (e.g., BDRs) via Attachment 2 to the Records Custodians/Facility Records Custodians.

[B] Before the completed QA record is transmitted, make a copy of Attachment 2 and the record, **AND** retain until receipt acknowledgement is received from the recipient.

NOTE
Transmittal of completed characterization records to the Host (generator/storage) site (when available) is performed according to the site-specific procedure regarding the submittal of characterization records to their records center. These characterization records will be maintained in accordance with their site-specific records procedures.

NOTE
Records that are designated as lifetime records shall be maintained for the life of the waste characterization program at a participating generator/storage site plus six years, or transferred to the WIPP Records Archive facility. Records designated as non-permanent records shall be maintained for 10 years from the date of record/generation at the participating generator/storage site, or at the WIPP Records Archive facility.

<u>Records Custodian</u>

4.10.2 Transmitting of Completed Characterization Records to the Host (generator/storage) Site or WIPP Records Archive (as applicable)

[A] Return characterization records to the Host (generator/storage) site location or WIPP Records Archive (as applicable) either at pre-determined intervals **OR** at that end of the waste characterization process in accordance with approved RIDS.

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[B] **IF** the Host (generator/storage) site is closed and will no longer be in operation,
THEN submit the documentation pertaining to that site to CBFO for permanent archiving, **OR** the WIPP Records Archive at the end of the waste characterization process in accordance with approved RIDS.

NOTE

The Waste Confirmation Organization represents the permittees and is required to confirm that waste shipments comply with permit requirements prior to shipment.

4.10.3 Transmitting of Waste Confirmation Video and Audio Media Recording

[A] Transmit one copy of the video and audio recording media to the Waste Confirmation Organization.

4.11 Unclassified Controlled Nuclear Information (UCNI) and Official Use Only (OUO) Documentation

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NOTE

Transmission of Unclassified Controlled Nuclear Information (UCNI) or Official Use Only (OUO) documents must be by means that preclude unauthorized disclosure or dissemination.

NOTE

UCNI documentation must include the required release and markings identified in DOE M 471.1-1, *Identification and Protection of Unclassified Controlled Nuclear Information Manual*. OUO documentation must include the required release and markings identified in DOE M 471.3-1, *Manual for Identifying and Protecting Official Use Only Information*.

4.11.1 Transmitting of UCNI and OUO Documents

[A] Documents identified as UCNI must be transmitted to CCP Records with an Attachment 2 and the transmittal must have the following statement placed in the comment section:

Matter transmitted contains Unclassified Controlled Nuclear Information. When separated from enclosures, this transmittal document does not contain UCNI.

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[B] Documents identified as OUO must be transmitted to CCP Records with an Attachment 2 and the transmittal must have the following statement placed in the comment section: Document transmitted contains OUO information.

[C] When transmitting externally:

[C.1] The UCNI or OUO matter must be contained in a single opaque envelope or wrapping with the recipient's address, a return address, and the words "To Be Opened by Addressee Only".

[C.2] Must be sent by the following U.S. mail methods: First Class, Express, Certified, or Registered Mail,

OR

[C.3] Any commercial carrier, FedEx is preferred.

[D] When transmitting internally the documents may be hand carried as long as the transmitter can maintain control over access to the document being transmitted.

4.11.2 Access and Protection of UCNI and OUO Documents

NOTE

When giving an authorized individual a copy of an UCNI or OUO document, the requirements they will be expected to perform while the document is in their possession must be made clear to the individual, see requirements below.

NOTE

Only authorized individuals may have access to UCNI or OUO documents (e.g., an individual with an official need to know in connection with the performance of official DOE-authorized activities).

[A] Disseminate UCNI or OUO documentation to only authorized individuals.

[B] Must maintain physical control of UCNI or OUO documentation to preclude unauthorized disclosure; store in locked receptacles, such as file cabinets, desks, or bookcases.

[C] Reproduce only to the minimum extent necessary.

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[D] When a copy machine malfunctions during the copying of an UCNI or OUO document the copier must be cleared and all paper paths checked to verify that no UCNI or OUO material remains in the machine.

[E] After its necessary use by an authorized individual, all copies of UCNI or OUO documentation must be destroyed by using strip cut shredders that result in particles of no more than 1/4 inch wide strips or if on a CD the shredding of the disc.

[F] Electronic UCNI or OUO documentation (e.g., PDF) maintained by CCP Records will be stored on a protected server and the files will be properly marked as UCNI or OUO.

4.12 Internal Use Only (IUO) and No Foreign National (NOFORN)

4.12.1 Transmitting of IUO and NOFORN Documents

[A] Documents identified as IUO or NOFORN must be transmitted to CCP with an Attachment 2 and the transmittal must have it clearly identified in the Comments section that the document being transmitted is IUO or NOFORN.

4.12.2 Access and Protection of IUO and NOFORN

NOTE

Only individuals within the project may have access to IUO documents. Dissemination outside of the project will not be permitted.

[A] Disseminate IUO to internal project participants only. NOFORN is not to be disseminated to any Foreign National.

[B] Must maintain physical control of IUO or NOFORN to preclude unauthorized disclosure; store in locked receptacles, such as file cabinets, desks, or bookcases.

[C] Reproduce only to the minimum extent necessary.

[D] After its necessary use by an authorized individual, all copies of IUO and NOFORN must be destroyed by a paper shredder or if on a CD the shredding of the disc.

[E] Electronic IUO or NOFORN documentation (e.g., PDF) maintained by the CCP Records will be stored on a protected server and the files will be properly marked as IUO or NOFORN.

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4.13 Receiving Quality Assurance (QA) Records

4.13.1 Each Host (generator/storage) site or organization responsible for receipt of QA records, designate the person or organization responsible for receiving records.

4.13.2 Ensure that the Attachment 2 is in agreement with the transmitted record and that it is legible and complete.

[A] **IF NOT**,
THEN notify the sender and perform the following:

[A.1] Work to resolve the issues with the sender.

[A.2] **IF** unable to resolve the issues,
THEN identify the record was rejected on Attachment 2 and return Attachment 2 and record to the sender.

4.13.3 Receipt process provides the following:

[A] Provisions to permit a current and accurate assessment of the status of QA records.

[B] A method for identifying the records required to be included in the records system.

[C] A method for identifying the records that have been received.

[D] Procedures for receipt and inspection of incoming records, including verification that the QA records are received in agreement with the transmittal document and that the records are legible.

[E] Provisions to control and protect the records from damage or loss during the receiving processes.

[F] A method for submittal of completed records to the storage facility without unnecessary delay.

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NOTE

Once QA records have been received in CCP Records, original records will **NOT** be removed without a specific need for the original record to be released. If an original record is removed from CCP Records, it is to be returned within fourteen (14) calendar days.

4.14 Retrieval of Original Records from CCP Records at the Project Office

4.14.1 Requests for retrieval of **ORIGINAL** records are handled as follows:

[A] Requestor, provide a written request to CCP Records providing the reason for the request and when the record will be returned.

Records Custodian/Facility Records Custodian

4.14.2 Process requests for retrieval of records already placed into CCP Records as follows:

[A] Pull the requested record.

[B] Make a copy of the record or assure that there is a PDF copy of the record.

[C] **IF** there is not a PDF scanned copy of the record, **THEN** place a copy of record into the records file.

[D] Place a completed Check Out Card in the record file.

[E] Notify requestor of availability of the requested record for pick-up **OR** deliver the **ORIGINAL** requested record to the person who made the request.

4.15 Destruction of QA and Non-QA Records

4.15.1 Destruction of QA Records

[A] DO **NOT** destroy QA records until each of the following conditions are met:

[A.1] Expiration of the NARA approved retention, as noted in the CCP RIDS, has occurred.

[A.2] Evaluation of lifetime records for the potential need to upgrade them to post-closure records has been performed by the CCP Manager or designee.

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[A.3] CCP Manager or designee determines if regulatory requirements are satisfied, operational status permits the disposal of such records, and the related contractual requirements have been satisfied.

[A.4] In cases of conflicting requirements concerning records retention requirements, the most stringent requirements shall be used in determining the final disposition.

AND

[A.5] CCP Manager or designee determines that there are no enforcement actions against the CCP.

NOTE

QA records that may be relevant to an enforcement action, regardless of disposition, will be maintained until the New Mexico Environment Department (NMED) determines they are no longer needed for enforcement action, and then the records may be dispositioned as directed in step 4.15.2.

[B] **IF** all of the listed conditions are **NOT** met,
THEN DO **NOT** destroy the affected records series, **AND** CCP Manager or designee, follow step 4.15.3.

[C] **IF** all of the listed conditions are met,
THEN CCP Manager or designee complete the Written Request for Records Destruction, (See Attachment 1, Written Request for Records Destruction), for an example **AND** submit to the WRMS Manager before destroying QA records.

[D] Upon receipt of the approved written concurrence, CCP Manager or designee forward the approval to the Lead Records Custodian.

<u>Lead Records Custodian</u>

[E] Receive the approved written concurrence and disposition the QA records.

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4.15.2 Destruction of Nonpermanent, Non-QA Records

Lead Records Custodian

[A] Determine which nonpermanent records series are eligible for destruction by reviewing the RIDS to determine the length of time the records series is to be retained.

[B] Inform the CCP Manager or designee of the records which have expired retention periods.

CCP Manager or Designee

[C] **IF** in agreement,
THEN the CCP Manager or designee, completes and forwards Written Request for Records Destruction, including a reference to the current RIDS, to the WRMS Manager before destroying the nonpermanent, non-QA records.

Lead Records Custodian

[D] After receiving the approved written concurrence, disposition identified non-permanent or non-QA records.

4.15.3 Requesting an Extension of the Record Retention Period

[A] **IF** the CCP Manager or designee determines that the approved record retention period needs to be extended, **THEN** CCP Manager or designee, perform the following:

[A.1] Send a memorandum to the WRMS Manager with a request and justification of an extension.

[A.2] Maintain the memorandum with the respective RIDS.

[A.3] Take the appropriate action, depending on the response to the memorandum.

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5.0 RECORDS

5.1 Records generated during the performance of this procedure are maintained as QA records in accordance with the requirements of this procedure. The records are the following:

5.1.1 Non-QA

[A] Written Request for Records Destruction

[B] Written Request for Retrieval of Original Record

[C] Request for Extension Memorandum

5.1.2 QA/Nonpermanent

[A] Attachment 2 – CCP Records Transmittal/Receiving Form

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Attachment 1 – Written Request for Records Destruction (Example)

TRU SOLUTIONS

John Smith
S.M. Stoller Corporation
2101A South Canal
Carlsbad, NM 88220

SUBJECT: REQUEST FOR CONCURRENCE TO DISPOSE OF RECORDS

Dear Mr. Smith:

This is a request for concurrence to dispose of the following record series according to our current Records Inventory and Disposition Schedule dated April 10, 2004.

RECORD SERIES	RETENTION PERIOD	INCLUSIVE DATES
Landlord Housekeeping Pre-checklists - Item #24	1 year	January, 2003 through July, 2003
Key Inventory Logs - Item #17	2 years	January, 2002 through June, 2002

If you have any questions, please contact Ms. Jane Smith, of my staff, at (575)628- 5810.

Sincerely,

David Doe
Characterization Project Manager

CONCURRENCE:

_____
John Smith, Manager
WIPP Records Management Services (WRMS)

SP: ab

cc: J. Smith, S.M. Stoller Corporation

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Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523, 575-234-7431, or 575-234-7095

Fax Number: 575-234-7033

☐ Original Record ☐ Copy
☐ Fax Record
☐ Electronic Record

Attn: _____ From: _____

Ship to: _____ Site: _____

_____ Company: _____

_____ Telephone Number: _____

_____ Date Sent: _____

Telephone Number: _____

Document Number	Title / Description	Record Date	Total Pages

Comments

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

Records Accepted ☐ _____ _____ _____
Signature Printed Name Date

Records Rejected ☐ _____ _____ _____
Signature Printed Name Date

Reason for Rejection:

Re-submittal: _____ _____ _____
Signature Printed Name Date

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CCP-QP-010

Revision 24

CCP
Document Preparation, Approval, and Control

EFFECTIVE DATE: 07/19/2013

Mike Ramirez

PRINTED NAME

APPROVED FOR USE

RECORD OF REVISION

Revision Number	Date Approved	Description of Revision
15	03/14/2007	Revised note in Section 2.3, clarifying the format for documents previously used in a certified program.
16	08/02/2007	Revised to create consistency in wording pertaining to submitting data quality and performance criteria affecting changes to U.S. Department of Energy – Carlsbad Field Office (DOE/CBFO) for review and approval. Relocated section pertaining to validator review.
17	01/16/2008	Revised to allow additional unit of designation for acceptable knowledge (AK) documents. Also, revised to address concern raised during Quality Assurance (QA) audit A-08-07.
18	05/28/2009	Revised to move the site technical representative (STR) after the Site Project Manager (SPM) in order to reorganize the document review cycle. Added step 2.2.3[F] clarifying the process for obtaining CBFO signature approvals on cover sheets of certain CCP documents. Added a NOTE in step 3.6 and step 4.1.20 clarifying the validation process for technical operating procedures. Incorporated a number of editorial corrections throughout the procedure.
19	03/12/2010	Revised based on conditions identified in CAR-CCP-0001-10. Removed requirement to identify Corrective action Report (CARs) and Nonconformance Reports (NCRs) in revision history and clarified notes in Attachment 1, Technical Procedure Writer's Guide.
20	06/30/2010	Revised to bring this procedure in line with the new revision of CCP-TP-005, *CCP Acceptable Knowledge Documentation*, and to update the records section.
21	10/06/2010	Revised to update references to the *Waste Isolation Pilot Plant Hazardous Waste Facility Permit*.
22	03/29/2011	Revised to update figure/table formatting and referencing, records requirements, and other editorial changes.
23	04/11/2012	Revised Section 5.1.1 to identify the content of document record packages in response to CBFO CAR 12-011, added RH document designators in Section 2.3.1, and clarified the use of "example" forms in Section 4.6 of Attachment 1.
24	07/19/2013	Revised to incorporate the Nuclear Waste Partnership (NWP) transition changes.

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1.0 PURPOSE

This procedure describes the process for preparing, reviewing, approving, issuing, and controlling the distribution of Central Characterization Program (CCP) documents controlled by CCP Document Services.

1.1 Scope

This procedure applies to waste characterization and certification documents, including transportation, certification, and waste packaging. Documents can include instructions, procedures, plans, drawings, test plans, management plans, technical reports, performance reports, and test reports.

2.0 REQUIREMENTS

2.1 References

Baseline Documents

- CCP-PO-002, *CCP Transuranic Waste Certification Plan*

Referenced Documents

- DOE-STD-1029-92, *DOE Standard Writer's Guide for Technical Procedures*
- DOE/WIPP 01-3187, *Quality Assurance Program Plan for TRUPACT-II Gas Generation Test Program*
- DOE/WIPP-02-3122*, Transuranic Waste Acceptance Criteria for the Waste Isolation Pilot Plant*
- DOE/WIPP-02-3214, *Remote-Handled TRU Waste Characterization Program Implementation Plan*
- *Waste Isolation Pilot Plant Hazardous Waste Facility Permit, Waste Analysis Plan*
- DOE-CBFO-94-1012, *U.S. Department of Energy Carlsbad Field Office Quality Assurance Program Document*
- CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*
- CCP-PO-002, *CCP Transuranic Waste Certification Plan*
- CCP-PO-003, *CCP Transuranic Authorized Methods for Payload Control (CCP CH-TRAMPAC)*
- CCP-PO-006, *CCP Conduct of Operations Matrix*
- CCP-PO-016, *CCP Gas Generation Testing Program Quality Assurance Project Plan*
- CCP-PO-401, *CCP Contact-Handled Transuranic Authorized Methods for Payload Control (CCP CH-TRAMPAC) For Intersite Shipments*
- CCP-PO-505, *CCP Remote-Handled Transuranic Waste Authorized Methods for Payload Control (CCP RH-TRAMPAC)*

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- CCP-QP-001, *CCP Graded Approach*
- CCP-QP-008, *CCP Records Management*
- CCP-TP-005, *CCP Acceptable Knowledge Documentation*
- WP 09-10, *WIPP Preparation Guide for System Design Description Documents*

2.2 Quality Assurance (QA) Requirements

2.2.1 This procedure implements specific quality assurance (QA) requirements for preparing documents used in the characterization, certification, and packaging of transuranic (TRU) waste. This includes waste characterization and certification documents, including transportation, certification, and waste packaging. Documents can include instructions, procedures, plans, drawings, test plans, management plans, technical reports, performance reports, and test reports.

2.2.2 Documents are reviewed for adequacy, correctness, and completeness prior to approval and issuance.

2.2.3 The following requirements apply to new documents and revisions to documents and are followed when preparing or processing a document.

[A] New documents are denoted as “Revision 0,” and subsequent revisions are denoted by the next sequential revision number. The revision number is placed on the front page of the document, and in the header on each page of the document.

NOTE

The CCP reissues an entire document electronically rather than only changed pages. Deleted text is not displayed in the issued document.

[B] Revision bars, indicating a change to the text, are included along the left-hand margin of the page. Revision bars will only show the changes made to a new revision.

[C] Requests for a document revision identify the changes required. Document reviews consider technical adequacy and completeness, and assure that the revised contents continue to satisfy the requirements of CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan* (QAPjP), CCP-PO-002, CCP *Transuranic*

Waste Certification Plan, CCP-PO-003, *CCP Transuranic Authorized Methods for Payload Control (CCP CH-TRAMPAC)*, CCP-PO-401, *CCP Contact-Handled Transuranic Authorized Methods for Payload Control (CCP CH-TRAMPAC) For Intersite Shipments,* or CCP-PO-505, *CCP Remote-Handled Transuranic Authorized Methods for Payload Control (CCP RH-TRAMPAC),* DOE/WIPP 01-3187, *Quality Assurance Program Plan for TRUPACT-II Gas Generation Test Program* (QAPP), DOE/WIPP-02-3214, *Remote-Handled TRU Waste Characterization Program Implementation Plan,* and DOE-CBFO-94-1012, *U.S. Department of Energy Carlsbad Field Office Quality Assurance Program Document* (QAPD).

[D] Changes to documents, other than those defined as editorial changes or minor changes, shall be reviewed and approved by the same functional organizations that performed the original review and approval unless other organizations are specifically designated by the Site Project Manager (SPM). Section 4.5 discusses reviews required for minor changes.

[E] Document changes are evaluated and approved by the SPM and CCP QA before implementation. Documents requiring U.S. Department of Energy - Carlsbad Field Office (DOE/CBFO) approval are: CCP-QP-001, *CCP Graded Approach;* CCP-PO-001; CCP-PO-002; CCP-PO-003; CCP-PO-006, *CCP Conduct of Operations Matrix;* CCP-PO-016, *CCP Gas Generation Testing Program Quality Assurance Project Plan;* CCP-PO-401, and CCP-PO-505*.* DOE/CBFO also approves new documents and changes to documents that could impact data quality or performance criteria as defined in CCP-PO-001 and CCP-PO-002.

[F] Documents that require DOE/CBFO signature approval on the cover sheet are assigned Effective Dates using one of the following two options:

- The Effective Date is left blank until after all approval signatures have been obtained, including those of DOE/CBFO. The Effective Date is stamped on the original document once all the required approvals are complete. For this option, the Effective Date is the date that the document is actually issued in Q&MIS®.

- A pre-selected Effective Date is assigned that is several days later than the date the document and cover sheet are circulated for signature approval.

This option allows for the time it takes to obtain CCP Management and DOE/CBFO signature approvals. If all required approvals are complete before the pre-selected Effective Date, the document must be held until the pre-selected Effective Date before it can be issued in Q&MIS®.

2.3 Document Format Requirements

NOTE

CCP-PO-001 follows the document format of the *Waste Isolation Pilot Plant Hazardous Waste Facility Permit, Waste Analysis Plan* (WAP); CCP-PO-002 follows the format of DOE/WIPP-02-3122, *Transuranic Waste Acceptance Criteria for the Waste Isolation Pilot Plant* (WAC), CCP-PO-003, CCP-PO-401, and CCP-PO-505 follow the format of the *CH-TRAMPAC* and the *RH-TRAMPAC*, CCP-PO-016 follows the format of DOE/WIPP 01-3187, and CCP-PO-006 is a matrix.

The format for CCP acceptable knowledge (AK) summary reports is defined in CCP-TP-005, *CCP Acceptable Knowledge Documentation*.

The format for technical procedures developed jointly with Host sites is defined in the Host site-specific interface document. These procedures are approved by both the Host site and CCP. As a minimum, technical procedures developed jointly with Host sites contain the sections shown in Table 1, Procedure Format (Example) (not necessarily in the order shown in Table 1, but the sections must be included somewhere in each jointly-developed technical procedure).

The format for configuration management (CM) procedures will contain, as a minimum, the sections shown in Table 1 (not necessarily in the order shown in Table 1, but the sections must be included somewhere in each document).

The format for CM documents designated as equipment descriptions will follow the format designated in WP 09-10, *WIPP Preparation Guide for System Design Description Documents.*

The format for documents that are from a previously certified program DO **NOT** have to follow Table 1. The documents may be used in their current format as long as they are modified to reference CCP quality procedures for quality program activities such as preparation of Nonconformance Reports (NCRs) and processing and control of records. The extent of modification will be sufficient to ensure that no quality documents from the previously certified program are required in order to perform the activities described in the documents, and that all quality program activities in the procedure are linked to CCP quality procedures.

2.3.1 CCP documents will include a unique document number. For example, CCP Project Office (PO) documents are designated as CCP-PO-XXX. Health and Safety Plans (HSP) are designated as CCP-HSP-XXX. QA procedures (i.e., Quality Procedures [QP]) are designated as CCP-QP-XXX. Technical Procedures (TP) are designated as CCP-TP-XXX. CM documents are designated as CCP-CM-XXX, and new AK documents are designated as

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CCP-AK-Site-XXX, where “site” indicates the associated Host site (e.g., Idaho National Laboratory [INL], Savannah River Site [SRS], Los Alamos National Laboratory [LANL]). Process Knowledge (PK) documents are designated as CCP-PK-Site-XXX. The “XXX” is a unique sequential identifier. CCP-RC-site-5x1 – Radiological Characterization Technical Report, CCP-CP-site-5x2 – Certification Plan, CCP-EP-site-5x3 – QA Equivalency Plan, CCP-SA-site-5x5 – Sampling Analysis Plan, CCP-CN-site-5x6 – Confirmatory testing, CCP-CR-site-5x7 – Corroborating data. Procedures use the subsections/format shown in Table 1. Additional subsections may be included for procedure clarification and readability.
Attachment 1, Technical Procedure Writer’s Guide, is provided as a guide for calibration, maintenance, and operating procedures, and provides an example of a technical procedure in
Appendix 1, Sample Procedure.

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Table 1. Procedure Format (Example)

CCP-XX-XXX, Rev. X **CCP Document Title**	**Effective Date: xx/xx/20XX** **Page X of X**

COVER SHEET

RECORD OF REVISION

TABLE OF CONTENTS

1.0 PURPOSE

The purpose section explains why the document was written (e.g., to establish or describe a process).

1.1 Scope

The scope describes what activities or processes are included and/or addressed in the procedure.

2.0 REQUIREMENTS

Project upper-tier document requirements (baseline and referenced) are referenced in this section, in addition to project-specific requirements, if applicable. This section defines specific terms used in the procedure, when appropriate. This section defines training requirements. This section may also identify software used in fulfilling requirements of a procedure. For TPs, this section also includes the equipment list, precautions and limitations, and prerequisite actions, as necessary.

3.0 RESPONSIBILITIES

The responsibilities section identifies specific responsibilities for personnel of facilities/organizations performing functions under the procedure.

4.0 PROCEDURE

This section identifies the steps to be completed in performing the procedure. Except for TP documents, this section may be plans, interface requirements, and not action steps per se.

5.0 RECORDS

Records generated, as a function of performing the procedure, are identified as lifetime, nonpermanent, or non-QA records.

Attachments (as needed)

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2.3.2 The Document Writer provides a cover sheet for procedures that includes an authorization for use line. The Document Writer also provides a header that is placed on the individual pages, excluding the cover page of a document, which includes the following information:

- Unique number identifier
- Current revision number
- CCP Document Title
- Effective date
- Page number

2.3.3 Implementing QPs, TPs, and CM procedures include the following information as appropriate to the work to be performed:

[A] Responsibilities and interfaces of the organizations affected by the document.

[B] Technical, regulatory, QA, or other project requirements.

[C] Sequential description of the work to be performed, including any allowance for out-of-sequence processing.

[D] Quantitative or qualitative acceptance criteria sufficient for determining that activities were satisfactorily accomplished.

[E] Prerequisites, limits, precautions, process parameters, and environmental conditions.

[F] Special qualification and training requirements or reference to special qualification and training requirements.

[G] Methods for demonstrating that the work was performed as required (such as provisions for recording inspection and test results, checklists, or sign-off blocks).

[H] Identification and classification of QA records generated by the implementing procedure.

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2.4 Document Distribution and Control

NOTE

Document preparation, issuance, and changes that specify requirements or prescribe actions affecting quality are controlled by CCP Document Services to ensure current and correct documents are used and referenced.

2.4.1 Controlled documents are distributed and used in accordance with the following criteria:

[A] With the exception of AK and PK documents, controlled documents are available electronically to CCP personnel for use via the common shared area (secure file transfer protocol [sftp] site). All controlled documents are available through the electronic document control system (Q&MIS®).

[B] Effective dates are established and identified on the approved documents.

[C] Obsolete, void, or superseded documents are removed from the applicable shared areas and replaced, when applicable, with revised documents on the effective date of change.

[D] Controls are established and maintained to identify the current status or revision of controlled documents.

[E] Documents on the sftp site and in Q&MIS® cannot be altered without appropriate approval.

2.5 Additional Plan-Specific Requirements

2.5.1 The review of CCP-PO-001 includes review for technical adequacy, completeness, correctness, and the inclusion of and compliance with the requirements established by the WAP.

2.5.2 The review of CCP-PO-002 includes review for technical adequacy, completeness, correctness, and the inclusion of and compliance with the requirements established by the WAC.

2.5.3 The review of CCP-PO-003, CCP-PO-401, and CCP-PO-505 includes review for technical adequacy, completeness, correctness, and the inclusion of and compliance with the requirements established by the *CH-TRAMPAC*, *CCP CH-TRAMPAC*, and the *CCP RH-TRAMPAC*.

2.5.4 The review of CCP-PO-016 includes review for technical adequacy, completeness, correctness, and the inclusion of and compliance with the requirements established by the QAPP.

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3.0 RESPONSIBILITIES

NOTE

Reviewers of implementing procedures shall review document change proposals for compliance with the following driver documents, as applicable:

- CCP-PO-001
- CCP-PO-002
- CCP-PO-003 or CCP-PO-505
- CCP-PO-016
- CCP-PO-401
- DOE/WIPP-02-3214
- DOE/CBFO-94-1012

3.1 All CCP Personnel

NOTE

The revision of the document that is current at the beginning of the shift shall be used throughout the shift unless a STOP WORK order is issued.

3.1.1 Confirms at the beginning of each shift that the current revision of the document is being used by checking the sftp site or contacting CCP Document Services.

3.1.2 Reports any obsolete or superseded information to the SPM.

3.1.3 Proposes creation of a new document or changes to an existing CCP document to the SPM, as needed.

NOTE

The Document Originator can be anyone who wants to develop a new document or revise/delete an existing document.

3.2 Document Originator

3.2.1 Proposes creation of a new document or changes to an existing CCP document to the SPM.

3.2.2 Researches regulatory, administrative, and operational requirements to justify the proposal.

3.2.3 Performs initial walkthrough of the proposed change or new document to verify functionality with the responsible reviewer prior to submittal to the SPM.

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3.2.4 Drafts new documents and document revisions in conjunction with the Document Writer.

3.2.5 In conjunction with the SPM or the Technical Reviewer, ensures that reviewer comments are resolved with the responsible reviewer and determines if the document requires re-review by assigned reviewers.

3.2.6 Provides technical comments/information to the Document Writer when revising documents.

3.2.7 Reviews and verifies document for adequacy, correctness, and technical content.

3.2.8 Ensures document complies with driver documents, as applicable.

3.3 Technical Reviewer

3.3.1 Provides technical comments to the Document Writer.

3.3.2 Reviews and verifies document for adequacy, correctness, and technical content.

3.3.3 Ensures document complies with driver documents, as applicable.

3.4 Subcontract Technical Representative (STR)

3.4.1 Reviews all changes to applicable documents (defined in the Host site-specific interface document) prior to implementation.

3.4.2 Provides comments to the Document Writer.

3.5 Facility Safety Representative (FSR)

3.5.1 Reviews all changes to applicable documents (defined in the Host site-specific interface document) prior to implementation, to maintain the facility within the safe operating boundaries.

3.5.2 Provides comments to the Document Writer.

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3.6 Validator

3.6.1 Verifies and validates technical operating procedures by using step-by-step walkthroughs or similar methods.

3.6.2 Ensures the document's instructions are clear, correct, and concise.

3.6.3 Provides comments to the Document Writer.

3.7 Site Project Manager (SPM)

NOTE

SPM approval to create or revise a CCP document, and assignment of designated reviewers, is documented by approval of the document by the SPM.

3.7.1 Concurs with the need to write new document or make changes to an existing CCP document prior to development.

3.7.2 Determines and assigns the appropriate technical reviewers to provide review for the document.

3.7.3 Provides permission to the Document Writer for concurrent and/or expedited review.

3.7.4 Reviews document for accuracy of content.

3.7.5 Verifies compliance with driver documents, as applicable.

3.7.6 Reviews all changes to all CCP documents to evaluate whether those changes could positively or negatively impact Data Quality Objectives (DQOs) for the purpose of reporting those changes to DOE/CBFO.

3.7.7 Approves all CCP documents.

3.7.8 Provides comments to the Document Writer.

3.7.9 Concurs with the resolution of any DOE/CBFO comments.

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3.8 CCP Quality Assurance (QA)

3.8.1 Provides QA oversight for the preparation, review, and approval process and reviews DOE/WIPP 94-1012, CCP-PO-001, CCP-PO-002, CCP-PO-016, CCP-PO-003, CCP-PO-401, or CCP-PO-505 for requirements compliance.

3.8.2 Provides comments to the Document Writer.

3.8.3 Approves all CCP documents.

3.9 Document Writer

3.9.1 Coordinates preparation, review, approval, and issuance of controlled documents.

3.9.2 Coordinates and tracks document activity.

3.9.3 Assigns new document numbers and titles.

3.9.4 Prepares cover sheet, as necessary.

3.9.5 Performs editing on draft document prior to review.

3.9.6 Distributes the document through Q&MIS® to the review/approval personnel.

3.9.7 Forwards review comments to the document originator for comment resolution and disposition.

3.9.8 Updates the sftp site and Q&MIS®, and checks that these document locations are current.

3.9.9 Maintains the electronic and hard copy approvals generated by this procedure for each document processed.

3.10 Review and approval of CCP Documents

NOTE

Pertinent background information or data shall be made available by the organization requesting the review if the information is not readily available to the reviewer.

NOTE

CCP documents are developed for activities that affect the quality of the waste characterization and certification process and are reviewed before approval by qualified and independent individuals. This review and approval process is accomplished before implementation of CCP activities.

Reviews will be performed by individuals, other than the document originator, who are technically competent in the subject area being reviewed.

3.10.1 All CCP documents are, at a minimum, reviewed and approved by the technical reviewer, CCP QA, and the SPM, except for minor changes as explained in Section 4.5.

3.10.2 The SPM may assign other personnel to review documents and will inform CCP Document Services of other reviewers.

3.10.3 Host site STRs and FSRs will review documents as designated in their respective Host site-specific interface document.

3.10.4 In addition to the requirements above, CCP-PO-001, CCP-PO-002, CCP-PO-003, CCP-PO-006, CCP-PO-016, CCP-PO-401, CCP-PO-505, and CCP-QP-001 are also reviewed and approved by CCP Management and DOE/CBFO as follows:

[A] The SPM, CCP QA, CCP Manager, and DOE/CBFO Manager reviews and approves CCP-PO-006. The DOE/CBFO Manager signs the cover sheet.

[B] The SPM, CCP QA, CCP Manager, DOE/CBFO QA Manager, and DOE/CBFO Office Director, Office of National TRU Program, reviews and approves CCP-PO-001, CCP-PO-002, CCP-PO-003, CCP-PO-401, CCP-PO-016, and signs the cover sheet.

[C] The SPM, CCP QA, RH Manager, DOE/CBFO QA Manager, and DOE/CBFO Office Director, Office of National TRU Program, reviews and approves CCP-PO-505 and signs the cover sheet.

[D] The SPM, CCP QA, and DOE/CBFO QA Manager reviews and approves CCP-QP-001, and documents approval within Q&MIS®, or via email.

3.10.5 The documents listed in step 3.10.4 are forwarded to DOE/CBFO via e-mail with a full justification of changes and changes that could impact data quality or performance criteria as defined in CCP-PO-001 and CCP-PO-002 in the text of the e-mail at: site.documents@wipp.ws.

3.10.6 All proposed new documents and revisions to documents that could impact data quality or performance criteria as defined in CCP-PO-001 and CCP-PO-002 must be submitted to DOE/CBFO via e-mail with a full justification of changes in the text of the e-mail. All changes that could impact data quality or performance criteria as defined in CCP-PO-001 and CCP-PO-002 must be listed and described in the text of the e-mail. Document submittal e-mails are provided to DOE/CBFO via the DOE/CBFO e-mail site at: site.documents@wipp.ws.

4.0 PROCEDURE

NOTE

Upon resolution of comments, the Document Originator will determine if the nature and extent of the changes warrants a re-review of the draft document.

NOTE

An interactive, concurrent, expedited, or non-sequential review may be performed in lieu of a sequential review, with permission from the SPM.

4.1 Processing Documents

NOTE

The Document Originator can be anyone who wants to develop a new document or revise/delete an existing document.

Document Originator

4.1.1 Develop proposed changes, with a justification for the change, and a summary of the change for the Record of Revision.

4.1.2 Perform an initial walkthrough of the document to verify functionality.

4.1.3 Submit proposed changes to CCP Document Services.

Document Writer

4.1.4 Forward proposed changes to the SPM.

SPM

NOTE

Changes to documents, other than those defined as editorial changes or minor changes, shall be reviewed and approved by the same functional organizations that performed the original review and approval, unless other organizations are specifically designated by the SPM.

NOTE

SPM approval to create or revise a CCP document, and assignment of designated reviewers, is documented by approval of the document by the SPM.

4.1.5 Concur with or deny the proposal to develop a new document or changes to existing documents.

4.1.6 Determine the organizations that are affected and/or the organizations that have responsibilities as a result of implementing the document.

4.1.7 Identify/designate the validator, if applicable, and other document reviewers, ensuring compliance with the applicable Host site-specific interface documents.

4.1.8 Inform the Document Writer of the validator, if applicable, and other reviewers.

Document Writer

4.1.9 **IF** new document,
THEN assign a document number to track the draft preparation, review comments, comment resolution, final document preparation, and distribution.

4.1.10 Format and edit draft document, **AND** make an entry in the Record of Revision briefly describing the purpose of the revision or new document.

4.1.11 **IF** the revision is for a minor change as defined in Section 4.5,
THEN confirm the words “Minor Change” appear in the Record of Revision.

4.1.12 Distribute the draft document for review through Q&MIS® to the reviewers, as designated by the SPM.

4.1.13 Place an Adobe® Portable Document File (pdf) copy of the draft document on the sftp site in the Draft Documents folder, via a standard windows-based operation, for viewing by external reviewers.

Technical Reviewers

4.1.14 Perform the review using the criteria established in Section 3.3.

4.1.15 Transmit comments to the Document Writer via e-mail, within Q&MIS®, or hard copy (e.g., fax copy, hand written copy).

Document Writer

4.1.16 Forward comments to the Document Originator for resolution.

4.1.17 Upon resolution of comments from the Document Originator, incorporate comments, **AND** distribute draft document for review through Q&MIS®.

4.1.18 Place a copy of the draft document on the sftp site in the Draft Documents folder, via a standard windows-based operation, for viewing by external reviewers.

NOTE

Validation reviews will be performed by individuals other than the Document Originator. The Validator shall be technically competent in the subject area being validated.

Validation is required for all new technical operating procedures. The SPM will determine if validation is required to revisions of existing technical operating procedures. Validation must be performed by using step-by-step walkthroughs or similar methods.

Validator (if applicable)

NOTE

Validation of technical operating procedures is to be performed by a two-person team. One person reads the operating steps aloud while the other person verifies that they can be performed just as written.

4.1.19 **IF** the document requires validation per SPM direction, **THEN** perform the following:

[A] Perform the document exactly as written using step-by-step walkthroughs or similar methods.

[B] Perform the review using the criteria established in Section 3.6.

[C] Transmit comments to the Document Writer via email, within Q&MIS®, or hard copy (e.g., fax copy, hand written copy).

Document Writer

4.1.20 Forward comments to the Document Originator for resolution.

4.1.21 Upon resolution of comments from the Document Originator, incorporate comments, **AND** distribute draft document for review through Q&MIS®.

4.1.22 Place a copy of the draft document on the sftp site in the Draft Documents Folder, via a standard windows-based operation, for viewing by external reviewers.

SPM/CCP QA Review

4.1.23 Perform the review using the criteria established in Sections 3.7 and 3.8.

4.1.24 Transmit comments to the Document Writer via e-mail, within Q&MIS®, or hard copy (e.g., fax copy, hand written copy).

Document Writer

4.1.25 Forward comments to the Document Originator for resolution.

4.1.26 Upon resolution of comments from the Document Originator, incorporate comments, **AND** distribute draft document for review through Q&MIS®.

4.1.27 Place a copy of the draft document on the sftp site in the Draft Documents Folder, via a standard windows-based operation, for viewing by external reviewers.

FSR and/or STR (if applicable)

4.1.28 **IF** the document requires review per the Host site-specific interface document,
THEN perform the following:

[A] Review the document.

[B] FSR, review the document to ensure the facility is maintained within safe operating boundaries, **AND** is in compliance with site authorization basis and the Host site-specific interface document.

[C] Transmit comments to the Document Writer via email, within Q&MIS®, or hard copy (e.g., fax copy, hand written copy).

Document Writer

4.1.29 Forward comments to the Document Originator for resolution.

4.1.30 Upon resolution of the comments by the Document Originator, incorporate comments, **AND** distribute draft document for review through Q&MIS®.

4.1.31 Place a copy of the draft document on the sftp site in the Draft Documents Folder, via a standard windows-based operation, for viewing by external reviewers.

SPM

4.1.32 **IF** the new document or changes to the existing document could impact data quality or performance criteria as defined in CCP-PO-001 or CCP-PO-002,
THEN provide the Document Writer, via e-mail or Q&MIS®, a full justification for document changes and any changes that could impact data quality or performance criteria as defined in CCP-PO-001 and CCP-PO-002, **AND** direct the Document Writer to send the document to DOE/CBFO within five days of project level review.

Document Writer

4.1.33 **IF** directed by the SPM,
THEN submit document to DOE/CBFO for review/approval with a full justification for document changes and any changes that could impact data quality or performance criteria as defined in CCP-PO-001 and CCP-PO-002 via e-mail at: site.documents@wipp.ws.

NOTE

DOE/CBFO comments are formally documented on a DOE/CBFO Document Review Record (DRR) which is transmitted to CCP Document Services via e-mail from DOE/CBFO.

4.1.34 **IF** DOE/CBFO provides comments,
THEN forward comments to the SPM for resolution.

SPM

4.1.35 Resolves DOE/CBFO comments, **AND** transmits the dispositioned DRR to the Document Writer.

Document Writer

4.1.36 Incorporate changes provided by the SPM or designee, **AND** transmit the DRR and revised document to DOE/CBFO via e-mail at site.documents@wipp.ws, **OR** make arrangements for an interactive review as directed by the SPM and/or DOE/CBFO.

NOTE

Finalizing a document includes, but is not limited to, verifying correct format, spelling, and references.

4.1.37 Upon DOE/CBFO approval, finalize document.

4.1.38 Perform the following to the document:

[A] Remove all Draft indicators on the cover page and in document header(s), **AND** mark as Controlled Copy.

[B] On the cover page, insert the effective date and the name of the person who approved the procedure.

[C] Place effective date in document header(s).

[D] Place effective date in the Record of Revision.

4.1.39 Issue the controlled copy of the document through Q&MIS®, with read-only access to users.

4.1.40 Perform the following activities:

[A] Place a pdf copy of the approved document on the sftp site in the Controlled Documents folder, via a standard windows-based operation, for viewing by external users.

[B] Delete the draft document from the Draft Documents folder on the sftp site.

4.2 Document Use

CCP Personnel

NOTE

Approved documents must be used to ensure that tasks are performed in a consistent manner that results in achieving the quality required.

At the beginning of each shift, CCP personnel will confirm the current revision of the document is being used. This revision of the document will be used throughout the shift unless a STOP WORK order is issued.

4.2.1 Check that the current revision of an approved document is being used by performing one of the following activities:

NOTE

Any hard copies of documents kept at facilities are considered to be working copies requiring verification that they are **NOT** out-of-date prior to use.
If the sftp site is unavailable, Document Services may be telephoned to determine which revision is current.

[A] Verify that the existing working copy is current by comparing the revision number of the working copy to the revision number of the controlled copy of the document on the sftp site in the Controlled Documents folder,

OR

[B] Print a new working copy of the document on the day of use from the sftp site.

4.3 Process Steps Specific to CCP-PO-001

4.3.1 The SPM and CCP QA ensures CCP-PO-001 meets the requirements listed in Section 2.2 of this procedure and includes:

[A] The qualitative or quantitative criteria for determining whether the CCP activities are being satisfactorily performed.

[B] The identity of the CCP organization(s) and positions responsible for the implementation of CCP-PO-001.

[C] References to CCP-specific documentation that details how each of the required elements of the characterization project are performed.

[D] A description of the organization, format, content, and designation of the document.

[E] An approval and date page indicating the document has been reviewed and approved.

4.4 Canceling a Document

<u>CCP Personnel</u>

4.4.1 Notify the SPM and Document Writer that a document needs to be cancelled.

Document Writer

4.4.2 Obtain approval for document cancellation from the SPM.

4.4.3 Upon receiving approval from the SPM, remove the document from use as follows:

[A] Remove all "Controlled Copy" indicators on the cover page and in document header(s), **AND** mark as "OBSOLETE."

[B] Make the document obsolete in Q&MIS®.

[C] Remove the document from the sftp site Controlled Documents folder.

4.4.4 Notify CCP Training and CCP Records of the document cancellation via email.

NOTE

The SPM decides if notification to other personnel, such as Document Originator, CCP QA, etc., is required.

4.4.5 **IF** directed by the SPM,
THEN notify other personnel of the document cancellation.

4.5 Minor Changes to CCP Documents

4.5.1 Editorial or minor changes may be made to all CCP documents **except** CCP-PO-001, CCP-PO-002, CCP-PO-003, CCP-PO-016, CCP-PO-401, CCP-PO-505, and CCP-QP-001 without the same level of review and approval as the original document. The following items are considered editorial or minor changes:

[A] Correcting grammar or spelling (the meaning has not changed).

[B] Renumbering sections or attachments.

[C] Updating organization titles.

[D] Changes to non-quality affecting schedules.

[E] Revising or reformatting forms, providing the original intent of the form has not been altered.

[F] Attachments marked "Example," "Sample," or exhibits that are clearly intended to be representative only.

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4.5.2 A change in an organizational title accompanied by a change in responsibilities is not considered an editorial change.

4.5.3 Minor changes to the text shall be clearly indicated in the document.

4.5.4 All minor Host site-specific changes shall be evaluated and approved by the SPM and CCP QA before implementation.

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5.0 RECORDS

5.1 Records generated during the performance of this procedure are maintained as QA records in accordance with CCP-QP-008, *CCP Records Management*. The records are the following:

5.1.1 <u>QA/Nonpermanent</u>

[A] Document record packages (include as applicable but are not limited to the following):

[A.1] Documentation that demonstrates approval by designated individuals.

[A.2] Comments and comment resolutions (include attachments, DRRs, emails, letters, etc.), as applicable.

[A.3] Document revision request (i.e., initial markup).

[A.4] DOE/CBFO submittal email within five days of project level review.

Attachment 1 – Technical Procedure Writer's Guide

1.0 INTRODUCTION

The purpose of this writer's guide is to establish the style to be used in writing technical procedures. A technical procedure is required when a defined task or activity is to be performed that meets one of the following criteria: (1) provides specific direction for operating equipment and/or systems included in the CM process, and (2) provides specific direction for physical activities that require repeatability and documented results. For example:

- Environmental sampling operations
- Hazardous waste packaging/handling
- Maintenance of equipment

Technical Procedures - prescribe precisely how to accomplish the various technical tasks associated with startup, testing, operation, and maintenance of CCP equipment and systems. Technical procedures specify fixed tasks and define activities in a way that ensures operations are safe, efficient, and practiced within the appropriate margins of safety.

NOTE

The basic steps for developing a procedure can be found in DOE-STD-1029-92, *DOE Standard Writer's Guide for Technical Procedures*.

NOTE

A sample CCP procedure (Appendix 1) has been added to this guide to provide a visual sample.

NOTE

This guide is intended to be used for assistance in procedure development and formatting.

2.0 FORMAT

2.1 Procedure Titles

Write procedure titles that are short, concise, clear, and descriptive of the system, equipment, process, or activity. Avoid using acronyms in procedure titles.

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2.2 Section Headings

Break the text of the procedure into sections by grouping related action steps or related functions. Headings perform the following functions:

- Help users locate information in the procedure.
- Break up long series of actions into manageable segments.
- Track progress through the procedure, especially when branching to other sections.
- Give each major activity in the main body of the procedure a unique and descriptive heading.

Major sections have all letters uppercase (e.g., INTRODUCTION, PERFORMANCE).

Secondary sections are initial caps (e.g., Develop Schedule). Secondary sections organize action steps.

2.3 Letter Font and Style

The font and style to be used in the body of the procedure is normally Arial 12.

2.4 Page Margins

Portrait-oriented page margins are normally as follows:

- 1.0 inch top margin
- 1.0 inch bottom margin
- 1.0 inch left margin
- 1.0 inch right margin

Landscape-oriented page margins are normally as follows:

- 1.0 inch top margin
- 0.5 inch bottom margin
- 0.5 inch left margin
- 0.5 inch right margin

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2.5 Tab Settings

Tab Settings are normally as follows:

1.0 inch 1.5 inch 2.0 inch 2.5 inch 3.0 inch 3.5 inch 4.0 inch

2.6 Step Numbering

Step numbering is normally as follows:

1.0 Primary section or first-level action step

1.1 Secondary section or second-level action step

1.1.1 Third-level action step

[A] Fourth-level action step

2.7 Emphasis

Emphasize information that, if overlooked or misinterpreted, could result in user error. Use upper case and/or bolding to emphasize important information, unless directed otherwise in this document (e.g., STOP WORK, GO TO, **NOT**, **IF**, **THEN**, **OR**, and **AND**).

2.8 Title Page

The title page is the first page of a procedure and contains the following information about the procedure:

- Type of procedure
- Document number
- Revision number
- Title
- Effective date
- Approved for use line

2.9 Second Page Header

A two or three-line header will be printed on the second page of a procedure and all subsequent pages, containing the following information:

- (Flush left/first row) procedure number, revision number and (right justified) effective date.

- (Flush left/second row) procedure title and (right justified) page numbering (e.g., Page 1 of 1).

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2.10 Record of Revision Page

The Record of Revision page is the second page of a procedure. The table on the page contains a condensed history of the procedure. Data in the table normally are revision number, date of revision, and a short description of what the revision entailed and why the revision was required. If the revision is for a minor change, then the words, “Minor Change” must appear in the Record of Revision.

2.11 Table of Contents

The Table of Contents helps users locate the portions of the procedure they need for a specific operation. The use of a Table of Contents should be done on a graded approach based on the following criteria:

- The number of subsections in the performance section that can be performed independently
- The length of the procedure

Required entries in the Table of Contents are:

- Section headings
- Subsection headings in the Performance Section
- Attachments, if applicable
- Tables, if applicable
- Figures, if applicable
- Appendixes, if applicable

2.12 Grammar

The Gregg Reference Manual is the standard to be used for capitalization, punctuation, and hyphenation (do not use hyphens to break words at the end of a line). Spell out acronyms, abbreviations, symbols, units, and terms not found in Webster's Dictionary or not normally used by the action performer during first usage in the performance section of the procedure.

2.13 Attachment Format

Locate the attachment number and title one line below the page header on the left margin.

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Place the attachment title on the same line as the attachment number separated by a space, a long hyphen, and a space (e.g., Attachment 1 – Electronic Symbols).

Locate the attachment page number on the first line of the page, flush right to the margin with the word "Page" followed by the page number of the attachment (not the procedure page number) and the total number of pages of the attachment (e.g., Page 1 of 1).

2.14 Warnings, Cautions, and Notes

NOTE
Action statements SHOULD **NOT** be placed in Warnings, Cautions, or Notes.

WARNINGS attract attention to specific personnel hazards and contain information that is essential to safe performance. Warnings may include conditions, design limitations, practices, and procedures to be complied with to avoid loss of life, personal injury, or health hazards.

Outline warning statements in a single thick-lined box (single row, single column table). Extend the warning box from left margin to right margin.

Leave one blank line above and below the warning box.

Boldface, capitalize, and center the word “warning” inside the box above the text.

Separate the word “warning” from the warning text with one blank line.

Left indent the text of the warning.

Place warnings immediately before and on the same page as the related step (regardless of page length).

Place warnings prior to cautions and notes when a step has both warnings and cautions or notes.

Warning example:

WARNING

DO **NOT** stand between the container and the High Efficiency Particulate Air (HEPA) inlet when removing drum filter.

CAUTIONS attract attention to specific equipment or environmental hazards.

Outline caution statements in a double-lined box (single row, single column table). Extend the caution box from left to right margin.

Boldface, capitalize, and center the word “caution” inside the box above the text.

Separate the word “caution” from the caution text with one blank line.

Left indent the text of the caution.

Place cautions immediately before and on the same page as the related step (regardless of page length).

Place cautions prior to notes when a step has both cautions and notes.

Leave one blank line above and below the caution box.

Caution example:

CAUTION

The DSA1000 units and detectors must warm up and stabilize for at least one hour after the power is applied and HV is turned on prior to drum examination and data acquisition.

NOTES call attention to important supplemental information. The information may be a reminder of preparatory information needed to perform the activities of a step.

Outline notes in a single-lined box (single row, single column table) with no right or left lines. Extend the box from left to right margin. Boldface, capitalize, and center the word “note” inside the box above the text. Indent the text of the note.

Place the note either before or after the applicable step, depending on when the user needs the information.

Note example:

NOTE

A background check is performed at least once per day at the beginning of the operational day prior to assaying.

2.15 Figures and Tables

Figures and Tables may be used in the body of the procedure at the applicable step, or may be grouped in an attachment. The determination for use is based on complexity of the procedure or to increase user friendliness. Number and title a figure/table as follows:

- Use initial caps for the figure/table number and title.
- Left justify the figure/table number and title on a line or lines as needed above the top of the figure/table.
- Single space between the last line of the title and the top line of the figure/table.
- Separate the word “Figure/Table” and the title of the figure/table with a period at the end of the figure number followed by two spaces (e.g., Figure 1. Designated Parking Areas).

3.0 WRITING ACTION STEPS

NOTE

Action steps in CCP procedures use imperative sentences (commands) instead of declarative sentences (for example, "Manager, approve completed work order" or "Provide approved storage for classified documents").

3.1 Standard Action Steps

The basic element of an action step is an imperative sentence, a command to perform a specific action. An action step answers the question, "What is to be done?" Write each action step to direct the user to perform a single action.

Start the step with a singular present-tense action verb.

Describe the direct object of the verb.
Initially refer to instruments and components using both the equipment name and number. After the initial reference, write equipment names exactly as the equipment is labeled.

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If the equipment is not labeled within the facility, use equipment nomenclature precisely as it appears in the documentation.

Complete the step with supportive information about the verb and the direct object. Supportive information includes further description of the object or the recipient of the object.

Write steps using words that are easily understood by the intended users.

Break one subsection into two or more subsections to simplify the step structure if necessary. Use main steps to allow users to quickly comprehend the purpose of the step. Use substeps to provide specific details for performance. Both main steps and substeps use the same basic format.

If someone other than the cognizant user is responsible for performing a step, identify the person (by position) to perform the step.

Include articles (a, an, the) when referring to a general item; omit articles when referring to specific items (for example, change "Open <u>the</u> door," to "Open door SB-9").

Present action steps, including associated action substeps and lists, with a minimum of interruption (for example, page breaks).

3.2 Writing Conditional Action Steps

Two types of conditional steps are generally needed in a procedure:

- A step where the action depends on an unexpected but possible condition (if clause).
- A step where the action depends on an expected condition (when clause).

Describe the condition first (**IF** or **WHEN** clause) and then the action to be taken. The **IF** or **WHEN** clause is followed by a comma. Conditional action steps that are not critical are written as follows:

4.1 If stock tank is full, close valve.

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Conditional action steps that are critical are written with the action introduced with the word **THEN** on the next line emphasized. Critical action steps are written as follows:

4.1 **IF** RAD tank is full,
THEN close valve.

3.3 Writing Logic Steps

When multiple conditions are required to be evaluated, these are considered logic steps. The logic terms **AND** and **OR** are used in conjunction with a conditional step to indicate a choice needs to be made.

If two conditions are required, and both of these conditions must be met, place the logic term **AND** between the conditions. Begin a new line with **THEN** followed by the action.

If two conditions are involved, and one of the conditions must be met before the action is taken, place the logic term **OR** between the conditions. Begin a new line with **THEN** followed by the action.

If three or more conditions are described, use a list format as follows:

4.1 **IF** Rad tank meets TWO of the following conditions:

- 3/4 full
- Alarming
- Isolated

THEN perform, ONE of the following:

- Close Valve A
- Close Valve B
- Secure Pump PMP-1

Avoid using the logic term **AND** with the logic term **OR** on the same line of a conditional statement. Write the conditional statement using only one logic term on a line. Start a new line for each additional logic term used.

4.1 **IF** Rad tank is 3/4 full **AND** isolated,
OR alarming,
THEN open Valve A.

Use only **AND** and **OR** to join conditions that include both a subject and a predicate. If two subjects apply to the same predicate (e.g., "**IF** temperature and pressure are stable, ... ") or one subject takes two predicates (e.g., "**IF** level is stable or falling, ... ") use the unemphasized conjunctions and or rather than the emphasized logic terms.

Avoid using **NOT** if a single word can be used and the condition can be stated in a positive manner.

3.4 Non-sequential Action Steps

Identify that a series of steps may be performed non-sequentially by placing a note before the sequence of steps that can be performed non-sequentially, or bullets may also be used to indicate non-sequential steps.

3.5 Alternative Action Steps

Alternative action steps are used when it is beneficial for users to be provided with more than one option. It is important to ensure that only one alternative is performed.

Present alternative actions as items in a list within a single step.

Use the word "one" to introduce the list of alternatives (e.g., "Perform ONE of the following actions").

3.6 Continuous Action Steps

Continuous action steps are conditional steps where the conditions they describe must be monitored throughout a procedure or a portion of a procedure. For example, a user may need to monitor a gauge and take a specific action if the gauge, at any point during the procedure, indicates a reading above or below a specific level.

Place continuous action steps in the procedure at the point at which they first apply. Repeat the steps periodically, as appropriate, in the body of the procedure.

Format continuous steps as conditional steps and state the portion of the procedure during which they are applicable.

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3.7 Repeated Action Steps

Repeated action steps are simple steps that must be performed more than once during the execution of a procedure.

If a step must be repeated an indefinite number of times to achieve an objective, specify that the step is to be repeated until the expected results are achieved.

If a large group of repetitive actions is required and becomes cumbersome, address the actions in steps that reference an attachment (an example of a large group of repetitive actions is a series of valve alignments).

Notify the performer when repeated action steps are to be discontinued.

3.8 Action Steps Containing Verifications

Verification of steps provides assurance that a required condition exists. If the condition does not exist, the user takes appropriate action to obtain the required condition before proceeding.

Specify the type of verification, who is to verify, how to verify, and when to verify the step.

3.9 Action Steps to Branch or Reference Elsewhere

Referencing and branching increase the potential for error, with attendant safety and administrative consequences. Therefore, branching and referencing are highly discouraged. Use referencing and branching only when it is necessary to direct the user to information that is vital to the performance of the activity and when it is not appropriate to incorporate that information into the base procedure.

Branching routes the procedure user to other subsections within the procedure or to other procedures when the user does not return to the original position.

Referencing routes the procedure user to other subsections within the procedure or to other procedures and then back to the original position in the base procedure.

Evaluate the following criteria to determine if referencing or branching is appropriate:

- Can steps be readily incorporated rather than referenced?

- Will branching and referencing reduce user comprehension and ease of use?

- Will users be directed to small isolated subsections, rather than whole procedures or attachments?

- Will branching and referencing cause users to bypass prerequisites that affect the section to which they are being directed?

- Will branching and referencing cause users to bypass precautions and limitations that affect the section to which they are being directed?

If the answer to all of the above questions is NO, referencing or branching may be appropriate. If referencing or branching is appropriate, use the following methods:

- Indicate a branch step by using the words “GO TO" as applicable.

- Specify the location where the user is to go. If the user is being sent to another procedure, identify the procedure number and title. If the user is being sent to another location in the base procedure, identify the specific section/step in the procedure.

- Indicate referencing, by using the terms “GO TO” and “RETURN TO” in the same step to indicate the reentry point into the base procedure.

Ensure that a reference or branch directs the user to all material needed as a prerequisite to the identified material. For example, ensure that the user does not bypass an applicable caution or prerequisite step.

Emphasize “GO TO” and “RETURN TO” in branching or referencing steps.

3.10 Action Steps with Acceptance Criteria

Acceptance criteria provides a basis for determining the success or failure of an activity. Acceptance criteria may be qualitative (specify a given event that does or does not occur) or quantitative (specify a value or value range).

Determine where specific acceptance criteria are to be presented in the procedure; either or both of the following methods can be used.

State the location of acceptance criteria, whether located at individual action steps (used when criteria are satisfied at the time of performance), or located in data sheets or other procedures. When acceptance criteria

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are located in other procedures, link procedures together using referencing techniques if the information cannot be included in the procedure.

Provide a summary of the acceptance criteria in a table, or a list as an attachment.

Include instructions for notifications to be made or actions to be taken immediately by the user in the event that specified acceptance criteria are not met using the standard notification step stated earlier. Place these instructions or actions in the body of the procedure. Ensure that these actions are consistent with administrative instructions.

Use acceptance criteria that consist of nominal values, and allowable ranges.

4.0 SECTIONS

4.1 Purpose

Address the purpose of the procedure. The purpose provides a clear description why the document was written (e.g., to describe the goals to be achieved by performing the procedure).

4.1.1 Scope

The scope describes what activities or processes are included in the procedure. The scope also discusses the limitations of the procedure or what the procedure does not cover.

4.2 Requirements

One subsection of the Requirements Section defines reference documents. Other subsections define, as appropriate, specific terms used in the procedures (definitions), training requirements, equipments list, precautions and limitations, and prerequisite actions.

4.2.1 References

There are two types of reference documents:

- Baseline Documents
- Referenced Documents

Baseline Documents is a list of specific documents used to develop and maintain the procedure.

Referenced Documents is a list of documents called out in the body of the procedure.

Group Baseline Documents by originating organization (i.e., *Code of Federal Regulations* [CFR], DOE Orders) in the reference section, to allow easy location of materials.

4.2.2 Training Requirements

This subsection lists all special training required for personnel to perform the procedure.

4.2.3 Equipment List

This subsection lists all equipment to be used during the performance of a procedure that is not ordinary craft tools, including special software. The following is a guidance to be used when listing tools:

- Identify specific equipment necessary to perform a procedure.
- Specify alternative tools and equipment.
- If the procedure has a generic application, do not include instrument-specific information (e.g., serial number or calibration date). This information is included in application-specific procedures.
- Provide clear specifications for defining test equipment parameters applicable to the procedure. Specifications include ranges, accuracies, and compliance with calibration standards.
- Ensure that range and accuracy of measuring equipment is consistent with the expected values to be measured.

The Equipment List section may be divided into subsections listing the following:

- Measuring and Test Equipment - Calibrated tools and equipment required to perform or verify performance of the procedure.
- Special Test Equipment - Items not commonly used that are required for the procedure.

4.2.4 Precautions and Limitations

The precautions and limitations subsection delineates information that affects the entire procedure, or that occur at multiple points in the procedure. Failure to include precautions and limitations within the procedure can cause severe injury to, or the death of personnel, serious damage to equipment, and/or invalidation of the parameters required of the procedure.

Precautions alert procedure users to actions and conditions that represent potential hazards to personnel, possible damage to equipment, or establish abnormal conditions. Identify and address potential hazards such as the following:

- Radiation or contamination
- High temperature or high pressure fluids
- Hazardous substances
- Electrical shocks
- Excessive noise levels
- Confined space hazards
- Falls
- Moving equipment or parts of equipment
- Fire hazards

Limitations define boundaries that are not to be exceeded. Identify special qualification and training requirements as a limitation of performance of the procedure. Limitations may also state system or equipment capacities or conditions.

Do not present user actions in the Precautions and Limitations Section.

Avoid generic precautions that are part of a job description or inherent in the task.

4.2.5 Prerequisite Actions

The prerequisite actions subsection identifies actions that must be completed by the user and/or requirements that must be met before the user continues with the procedure.

4.2.6 Definitions

The definitions subsection list definitions of special terms used in the procedure.

4.3 Responsibilities

Identify specific responsibilities for personnel performing the procedure.

4.4 Procedure

The performance section contains the action steps that prescribe the principal tasks and sub-tasks.

Organize activities in the order of performance. Divide the Performance Section into subsections that logically group all related activities. Use titles for each subsection that reflect the activity rather than a generic title (e.g., Removing the Actuator rather than Actuator).

4.5 Records

Identify records generated by the procedure. Classify the records as lifetime, nonpermanent, or non-QA records as applicable.

4.6 Attachments

Provide attachments when the material and function of the procedure requires them. Attachments are part of the procedure. Examples of items that may be placed in an attachment are data sheets, tables, figures, graphs, and checklists.

Reference attachments within the text of the procedure.

- Include information in attachments that is more conveniently located outside the main body of a procedure.

If the form (report) is generated by software (e.g., NDA2000), the report generated will be labeled in the actual attachment as follows:

- Attachment 1 – QA Last Results Report (Example)

A picture (or example) of the form will be placed in the procedure.

When the form is generated by software (e.g., NDA2000), within the body of the procedure, call out the first use as in the following example:

Example: 1.1 Print the QA Last Results Report (see Attachment 1, QA Last Results Report for an example), **AND** print name, sign, and date the QA Last Results Report.

Then, as you refer to the form within the text of the procedure (after first callout), use the title (e.g., QA Last Results Report).

When the form is generated by software, use the title of the form as in the following example:

Example: 5.0 RECORDS

5.1 Records generated during the performance of this procedure are maintained as Quality Assurance (QA) records in accordance with CCP-QP-008, *CCP Records Management.* The records are the following:

5.1.1 <u>QA/Lifetime</u>

[A] QA Last Results Report(s)

[B] NDA Radioassay Data Sheet(s)

Completed forms based on forms that are labeled as examples in CCP documents must contain all the information in the example, preferably in the order listed in the example, and must contain header information identifying the document number, revision, title, and effective date so that the form is traceable back to the governing document on which it is based. Additional information may be included in forms that are designated as examples.

If the form is a fillable form (e.g., TP-001 forms), the word “example” will not be added to the attachment name. The actual form is created in the procedure so that it can be completed either by the user printing and completing by hand or electronically by accessing the posted form on the sftp site in the Forms Folder. The form is posted on the sftp site by Document Services.

In this case, within the body of the procedure, call out the first use as in the following example:

Example: 1.1 Enter the BDR number on Attachment 1, Independent Technical Reviewer Checklist.

Then as you refer to the form, within the text of the procedure (after first callout), use Attachment and # (e.g., Attachment 1). Refer to the fillable form as in the following example:

Example: 5.0 RECORDS

5.1 Records generated during the performance of this procedure are maintained as Quality Assurance (QA) records in accordance with CCP-QP-008, *CCP Records Management.* The records are the following:

5.1.1 <u>QA/Lifetime</u>

[A] Attachment 1 [Title]

[B] Attachment 2 [Title]

[C] Attachment 3 [Title]

[D] NDA Radioassay Data Sheet

4.7 Figures and Tables

Reference figures and tables within the text of the procedure. Call out the first use of the figure or table in the following example:

Example: 1.1 As a minimum, technical procedures will contain the sections shown in Table 1, Procedure Format.

Then as you refer to the figure/table, within the text of the procedure (after first callout), use Figure/Table and # (e.g., Table 1). Refer to the following example:

Example: 1.2 The format for configuration management (CM) procedures will contain, as a minimum, the sections shown in Table 1 (not necessarily in the order shown in Table 1, but the sections must be included somewhere in each document).

Appendix 1. Sample Procedure

CCP-TP-XXX

Revision X

CCP
Title

EFFECTIVE DATE: _____

_____
PRINTED NAME

APPROVED FOR USE

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RECORD OF REVISION

Revision Number	Date Approved	Description of Revision
0	mm/dd/yyyy	Initial issue.
1	mm/dd/yyyy	Revised to rewrite Section 4.1 due to changes in requirements.

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1.0 PURPOSE

This procedure provides the required instructions for opening radiologically clean TRUPACT-IIs at the Waste Isolation Pilot Plant (WIPP).

1.1 Scope

This procedure applies to opening radiologically clean TRUPACT-IIs at the WIPP only.

2.0 REQUIREMENTS

2.1 References

Baseline Documents

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

Referenced Documents

- CCP-QP-002, *CCP Training and Qualification Plan*

2.2 Training Requirements

2.2.1 Personnel performing this procedure will be trained and qualified in accordance with CCP-QP-002, *CCP Training and Qualification Plan* prior to performing this procedure.

2.3 Equipment List

2.3.1 Crane Load Cell

SAMPLE

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2.4 Precautions and Limitations

2.4.1 Workers who will be working in a radiation area must have read and signed that they understand the applicable Radiological Work Permit (RWP).

2.5 Prerequisite Actions

2.5.1 Verify the Waste Handling Building Exhaust Filtration System is operating.

2.5.2 Verify that the TRUPACT-II is radiologically clean by reviewing receipt report.

2.6 Definitions

2.6.1 None

3.0 RESPONSIBILITIES

3.1 Nondestructive Assay (NDA) Operator

3.1.1 Performs routine startup, normal operations, and shutdown of the system.

3.1.2 Notifies the NDA Lead Operator (LO) of abnormal or nonconforming conditions.

SAMPLE

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4.0 PROCEDURE

4.1 Outer Containment Vessel (OCV) Upper Assembly Removal

4.1.1 Prepare the TRUPACT-II Outer Containment Vessel (OCV) Lid for removal by removing the following:

- Lift Pocket Covers
- Locking Ring Bolts (six)
- Outer Containment Assembly (OCA) Test Port Access Plug
- OCV Vent Port Access Plug
- OCV Vent Port Cover

4.1.2 Install the following in the OCV:

- Vent Port Tool
- T-Handles

4.1.3 Retrieve the Vent Port Plug into the Vent Port Tool.

4.1.4 **IF** the Locking Ring will **NOT** rotate,
THEN perform the following:

[A] Verify the Vacuum Valve is in OFF position.

[B] Connect the Vacuum Line to the Vent Port Tool.

[C] Start the Vent Hood Fan.

[D] Start the Vacuum Pump.

[E] Place the Vacuum Valve in VACUUM position.

[F] Rotate the OCV Locking Ring to the UNLOCKED position.

[G] Place the Vacuum Valve in OFF position.

[H] Stop the Vacuum Pump.

[I] Stop the Vent Hood Fan.

[J] Disconnect the Vacuum Line from the Vent Port Tool.

SAMPLE

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4.1.5 **IF** the Locking Ring will rotate,
THEN rotate the Locking Ring to the UNLOCK position.

4.1.6 Remove the T-Handles from the OCV Locking Ring.

4.1.7 Break vacuum on the OCV.

4.1.8 Connect the Adjustable Center of Gravity Lift Fixture (ACGLF) to the OCV Lid.

WARNING

Personnel may be injured if the TRUPACT-II OCV Lid begins to swing due to excessive misalignment.

CAUTION

Exceeding a crane load cell indication of 8,000 pounds may damage the TRUPACT-II OCV Lid lift points.

NOTE

Force may be applied to either side of the OCV lid by rotating the ACGLF counterweights to help prevent binding.

4.1.9 Release the ACGLF.

4.1.10 Remove the Vent Port Tool.

4.2 Inner Containment Vessel (ICV) Lid Removal

4.2.1 Prepare the TRUPACT-II Inner Containment Vessel (ICV) Lid for removal by removing the following:

- Locking Ring bolts (three)
- ICV Vent Port Cover

4.2.2 Install the following in the ICV:

- Vent Port Tool
- T-Handles

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4.2.3 Verify the Vacuum Valve is in OFF position.

4.2.4 Retrieve the Vent Port Inner Plug into the Vent Port Tool.

4.2.5 Connect the Vacuum Line to the Vent Port Tool.

4.2.6 Start the Vent Hood Fan.

4.2.7 Start the Vacuum Pump.

4.2.8 Place the Vacuum Valve in VACUUM position.

4.2.9 Rotate the ICV Locking Ring to the UNLOCKED position.

4.2.10 Place the Vacuum Valve in OFF position.

4.2.11 STOP the Vacuum Pump.

4.2.12 STOP the Vent Hood Fan.

4.2.13 Disconnect the Vacuum Line from the Vent Port Tool.

4.2.14 Perform the following:

- Break ICV vacuum
- Remove Vent Port Tool
- T-Handles

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4.2.15 Connect the ACGLF to the ICV Lid.

CAUTION

Exceeding a crane load cell indication of 5000 pounds may damage the TRUPACT-II ICV Lid lift points.

NOTE

Force may be applied to either side of the ICV lid by rotating the ACGLF counterweights to help prevent binding.

4.2.16 Remove the ICV Lid.

4.2.17 Place the ICV Lid on the storage stand.

4.2.18 Release the ACGLF.

5.0 RECORDS

5.1 Records generated during the performance of this procedure are maintained as Quality Assurance (QA) records in accordance with CCP-QP-008, *CCP Records Management*. The records are the following:

5.1.1 <u>QA Nonpermanent</u>

[A] Attachment 1, Sign-Off Sheet

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Attachment 1 – Sign-Off Sheet

Step No.	Action	Initial
4.1.7	Break vacuum on the OCV.	

Printed Name	Signature	Date	Initials

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Attachment 2 – Verb Usage

This list is not all inclusive. It contains the verbs generally used by the CCP.

Actuate	To put into action or use. When possible, use "START."
Adjust	Alter (parts of a device) for proper functioning.
Align	Arrange components into a desired condition.
Assess	Make a judgment as to the status or extent of change.
Attempt	To make an effort to do.
Bleed	Cause to escape from a system or container in a regulated manner.
Block	To prohibit an automatic action or motion, to isolate a system.
Bypass	Circumvent some operational mode of a system or component.
Calculate	Perform a mathematical process to produce a value.
Calibrate	The set of operations which establish, under specified conditions, the relationship between values indicated by a measuring instrument or measuring system, and the corresponding standard or known values derived from the standard.
Call-up	Summon information.
Certify	To attest as being true or to represent as meeting a standard.
Charge	Add fluid, gas, or energy.
Check	Inspect for satisfactory condition, if condition is not satisfactory, report the condition to the immediate responsible management.
Close	Mechanically: to change the position of a mechanical device so that physical access of fluid or gas flow is prevented. Electrically: to position a circuit breaker or relay so that electrical current flow is permitted.
Collect	Cause the assembly of something in a fixed location or container.
Comply	Follow a requirement.
Confirm	Assure that an action or task has been performed/completed.

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Attachment 2 – Verb Usage (Continued)

Connect	Fasten or join together.
Cool	Lower the temperature of equipment or an environment.
Creep	A very slow, usually continuous time-dependent movement.
Cycle	Cause repetition of an action or activity, change of a valve from one position to another, then back.
Decrease	DO NOT use. Use lower.
De-energize	To disconnect equipment from its electrical power supply.
Depressurize	DO NOT use. Use lower the pressure.
Dilute	Reduce in concentration.
Dispatch	Send by a predefined method.
Don	To put on.
Drain	Remove liquid from an enclosure or part of an enclosure to a predetermined level.
Drive	Move equipment to a prescribed position.
Emplace	To put into position.
Energize	To apply energy (electrical, pneumatic).
Ensure	Confirm that an activity or condition has occurred in conformance with specified requirements (by action if necessary).
Equalize	Make a value or parameter the same as that of another.
Evaluate	Assess a condition based on observation, experience, or external input.
Execute	Perform an instruction or step.
Feed	Add fluid or gas to a system or equipment.
Fill	Add fluid, gas, or a material to a system, equipment, or container to a prescribed point.
Ground	Provide an electrical path to a system at zero potential.

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Attachment 2 – Verb Usage (Continued)

Hold	A continued action that maintains a device or a spring returned switch in a required position.
Increase	DO NOT use. Use raise.
Initiate	Begin or start an activity.
Inspect	Evaluate for comparison with a pre-defined limit or standard.
Isolate	Mechanically: to change the position of a valve so that physical access of fluid or gas flow is prevented. Electrically: to remove or open an electrical circuit breaker so that passage of electrical current is not permitted.
Jog	A momentary start/stop action of a motor (to check rotation).
Land	The re-connection of electrical leads temporarily disconnected for maintenance, tests, or calibration purposes.
Latch	To make fast.
Lift	To temporarily disconnect electrical leads for maintenance, tests, or calibration purposes.
Limit	Restrict or impose bounds.
Load	The amount of torque being supplied or the electrical current that a component is using.
Lock	Securely fasten.
Lower	To decrease (e.g., elevation, pressure, temperature, voltage).
Maintain	Continue an action or condition without interruption.
Notify	Inform a specified person.
Open	Mechanically: to change the position of a mechanical device (valve) so that physical access of fluid or gas flow is permitted. Electrically: to position an electrical circuit breaker so that electrical current flow is prevented.
Operate	To cause to function.

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Attachment 2 – Verb Usage (Continued)

Overpack	To repackage a Waste Container into a larger package.
Override	To bypass a normal function and allow operation in a condition other than normal.
Pack	Fill with packing material; usually applies to lubricate and seal.
Perform	Carry out an action or series of procedure steps as written.
Position	To "place" a component in a specified condition.
Pressurize	DO NOT use. Use raise.
Press	Inward motion of a push button.
Rack-in	Physically connecting an electrical circuit breaker to its associated power source.
Rack-out	Physically disconnecting an electrical circuit breaker from its associated power source.
Rack-to-test	Physical placement of an electrical circuit breaker so that control functions are operable while the supply and load sides are disconnected.
Raise	To increase (e.g., elevation, pressure, temperature, voltage).
Recirculate	Cause repetitive motion of a fluid or gas in a system.
Reduce	DO NOT use. Use lower.
Regenerate	Restore towards original properties or capabilities.
Reset	Placement of an automatic system or component to its normal condition or pre-action state.
Retract	Withdraw or take back.
Sample	A representative portion taken for examination.
Secure	Take appropriate actions to remove from service or to prevent a return to service.
Set	Adjust as necessary to obtain a specified value (set Diesel Generator loading to 300 Kv).
Shut	DO NOT use. Use close.

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Attachment 2 – Verb Usage (Continued)

Shut down	Terminate operation or remove from service.
Start	Initiate equipment operation or begin a process.
Stop	Discontinue.
Terminate	Form an end connection.
Throttle	Physical adjustment of a valve to obtain a specified position or flow rate.
Torque	The measurement of a turning or twisting force that produces tension.
Transfer	Movement of a fluid, gas, or electrical current from one source to another.
Trip	An automatic or manual operation which removes an electrical breaker or device from service.
Vent	Removal of a liquid or gas to allow system filling, draining, or equalization.
Verify	Check that the required condition exists. If the condition does not exist, take appropriate action to obtain the required condition before proceeding.

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CCP-QP-014

Revision 6

CCP Quality Assurance Trend Analysis and Reporting

EFFECTIVE DATE: 08/06/2013

Mike Ramirez

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RECORD OF REVISION

Revision Number	Date Approved	Description of Revision
0	03/18/2004	Initial Revision.
1	05/23/2006	Revised to delete requirement to assess implementation of trending program every 6 months.
2	11/16/2006	Revised to implement the Waste Isolation Pilot Plant Hazardous Waste Facility Permit requirements resulting from the Section 311/Remote-Handled (RH) Permit Modification Request (PMR).
3	10/15/2007	Revised to be Central Characterization Project (CCP) specific and describe actual practice of performing and reporting adverse trends. The change was a recommendation of the U.S. Department of Energy (DOE) Carlsbad Field Office (CBFO).
4	02/28/2011	Revised to improve flow and more closely align with upper tier drivers.
5	01/05/2012	General revision.
6	08/06/2013	Revised to incorporate the Nuclear Waste Partnership (NWP) transition changes and other Quality Assurance (QA) changes.

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1.0 PURPOSE

This procedure outlines the steps for trending, and establishes the process and responsibilities for identifying, evaluating, and reporting trends in documents for Nuclear Waste Partnership, LLC (NWP) Central Characterization Program (CCP).

1.1 Scope

This procedure is used when trending internal documents such as Nonconformance Reports (NCRs), Corrective Action Reports (CARs), assessment reports, and external documents, including conditions adverse to quality identified in audits and surveillances.

1.2 Definitions

Adverse Trend	A trend showing lack of compliance, or potential lack of compliance, to quality assurance (QA) requirements.
Data Sources	Internal deficiency documentation (NCRs, CARs, WIPP Forms, Corrected During the Assessment, management assessments) and external deficiency documentation (conditions adverse to quality identified in audits, surveillances, or other assessments).
Positive Trend	A trend showing compliance, or improved compliance, to QA requirements.
Trend	A general inclination or course showing a statistically detectable change over time in compliance with QA requirements, or by comparison with previous report periods.
Trend Analysis	Monitoring and evaluating performance indicators over time to identify trends. An evaluation of the statistical significance of identified changes and trends may also be included.

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2.0 REQUIREMENTS

2.1 References

Baseline Documents

- WP 13-1, *Nuclear Waste Partnership LLC, Quality Assurance Program Description*
- CCP-PO-002, *CCP Transuranic Waste Certification Plan*
- CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control*
- WP 15-RA.01, *Nuclear Safety and Worker Safety and Health Compliance Program*

Referenced Documents

- CCP-QP-008, *CCP Records Management*
- CCP-QP-029, *CCP Corrective Action Management*

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3.0 RESPONSIBILITIES

3.1 Site Quality Assurance (QA) Engineer

3.1.1 Carries out the following no less frequently than semiannually:

[A] Identifies potential trends.

[B] Obtains Site Project Manager (SPM)/Subject Matter Expert (SME) input to identify potential trends.

[C] Prepares and forwards Semiannual Trend Reports to Assurance Programs Manager, following the format in Attachment 2, Example Semiannual Trend Report Format, as guidance.

[D] Documents identified adverse trends by initiating CARs according to CCP-QP-029, *CCP Corrective Action Management*.

[E] Documents Quality Initiatives or Lessons Learned or sends emails about positive trends to organization(s) or personnel who might benefit.

3.2 Assurance Programs Manager

3.2.1 Carries out the following:

[A] Ensures sufficient QA resources are allocated to conduct trending.

[B] Ensures trending is conducted and Semiannual Trend Reports are prepared in accordance with this procedure.

[C] Reviews, approves, and issues Semiannual Trend Reports.

[D] Ensures distribution of Semiannual Trend Reports to affected organization(s) and the Compliance Coordinator as well as applicable oversight organizations.

[E] Ensures adverse trends identified in accordance with this procedure are documented in accordance with procedure CCP-QP-029.

[F] Ensures positive trends identified in accordance with this procedure are documented as Lessons Learned, Quality Initiatives, or emails to the organization(s) that might benefit.

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3.3 SPM/SME

3.3.1 Provides input to assist in evaluating trends as necessary.

3.4 CCP Management

Ensures appropriate corrective action is initiated and completed when adverse trends are identified.

4.0 PROCEDURE

4.1 Reviewing Documents for Trends

QA Engineer

4.1.1 Review documents, including CARs, NCRs, Surveillance Reports, Audit Reports, and Management Assessment Reports, comparing assigned trend codes, when applicable. If there were no assigned trend codes, or a non-CCP code was applied, assign trend codes according to Attachment 1, Trend Codes.

4.1.2 Analyze collected data, using any one or more of the following methods:

- Tally numbers of codes from the current report period and compare with previous report periods
- Identify organization(s) with a number of deficiencies (i.e., Certification; real-time radiography (RTR); nondestructive assay (NDA); nondestructive examination; Records; QA; etc.)
- If useful in identifying trends, identify elements of the QA Program with the deficiencies (i.e., measuring and test equipment, inspection, testing, training, procedures, document control, procurement control, special processes, etc.).

4.1.3 Consult with applicable SPM/SME.

4.2 Identifying Trends

4.2.1 When an adverse trend is identified, initiate a CAR according to CCP-QP-029.

4.2.2 When a positive trend is identified, initiate Lessons Learned, Quality Initiative, or email, if useful to other sites or organization(s).

4.3 Creating the Trend Report

4.3.1 Create the Semiannual Trend Report, using the trend report format example shown in Attachment 2 as guidance.

4.3.2 Forward the report to the Assurance Programs Manager.

Assurance Programs Manager

4.3.3 Review the Semiannual Trend Report from each site, and, if acceptable, obtain the QA Engineer's signature and date, and add

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Assurance Programs Manager signature and date. If unacceptable, return to the QA Engineer for correction.

4.3.4 Issue the Semiannual Trend Report to responsible management and at least:

- National TRU Program Certification
- SPMs
- Price-Anderson Amendments Act (PAAA) Compliance Coordinator

4.3.5 Ensure approved Semiannual Trend Reports are forwarded to Records in accordance with CCP-QP-008, *CCP Records Management*.

CCP Management

4.3.6 Review the Semiannual Trend Reports for identified adverse trends when applicable.

4.3.7 Ensure corrective action is developed and implemented in response to CARs initiated as a result of identified adverse trends.

4.3.8 Ensure Lessons Learned and Quality Initiatives, when approved for issue, are distributed to the appropriate staff.

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5.0 RECORDS

5.1 QA record created as a result of implementing this procedure is maintained, controlled, and forwarded to Records in accordance with CCP-QP-008.

5.1.1 <u>QA/Nonpermanent</u>

[A] Approved CCP Semiannual Trend Reports

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Attachment 1 – Trend Codes

Trend Codes (To be assigned to nonconforming items or Conditions Adverse to Quality):

Trend Codes	Descriptions	Definitions and Examples
A*	Personnel Error and Failure to Follow Procedure	Personnel wrongly entered data or transposed figures or letters; inattention to detail; lack of understanding; use of superseded or incorrect version of specifying document; used procedure, but before required approval(s); required review missed problem(s); failed to follow procedure(s); deliberate violation.
C	Engineering Deficiency	Inadequate or erroneous engineering design, design input, or design output.
D	Procedure Less Than Adequate	Procedure erred or was vague in specifying requirements; failure to revise procedure when work processes change; no procedure to control QA work.
E	Software Deficiency	Software error resulted in deficient data; unqualified software used to obtain QA data; failure to initiate software qualification process; failure to verify software following software or operating system upgrade.
F	Vendor Deficiency	Deficiencies related to a vendor (i.e., procured item including hardware does not meet a requirement prescribed in the purchase order); wrong or less than adequate vendor documentation.
H	Material or Equipment Control Deficiency	Failure of material, equipment, or items because of damage, failure of a component, inadequate maintenance, etc.

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Attachment 1 – Trend Codes (Continued)

Trend Codes (To be assigned to nonconforming items or Conditions Adverse to Quality):

Trend Codes	Descriptions	Definitions and Examples
I	Calibration Deficiency	Calibration was inadequate, resulting in nonconforming or indeterminate data; use of out-of-calibration M&TE.
J	Inadequate Documentation	Record is nonconforming: does not include required data; required data are incorrect; record(s) improperly stored.
K	WAP/WAC Deficiency	Noncompliance with a WAP or WAC requirement **(Exempt from trending)**.
L	Acceptable Knowledge Deficiency	Possible changes to the AK of a waste stream (e.g., assignment of waste container to wrong waste stream; identification (ID) of unanticipated waste material parameters in a waste container) **(Exempt from trending)**.
M	Inadequate Communication	Personnel were given ambiguous or incorrect information or instructions to do their work; inadequate or lack of planning.
O	Ineffective Control of Corrective Action	Actions intended to correct deficiencies or preclude recurrence proved ineffective; identification of nonconforming item(s) less than adequate.
P	Inadequate Training	Condition Adverse to Quality resulted from lack of or inadequate indoctrination, training, or qualification; work done before indoctrination, training, or qualification or after qualification expired.

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Attachment 1 – Trend Codes (Continued)

Trend Codes (To be assigned to nonconforming items or Conditions Adverse to Quality):

Trend Codes	Descriptions	Definitions and Examples
Q	Deficiency Caused by Others	The deficiency was caused by non-NWP personnel working to non-NWP QA program or none at all.
R	Control of Electronic Data Less Than Adequate	Inadequate security access control; inadequate protection of data; failure to backup data; inadequate traceability of data; failure to verify transferred data.

* Former Trend Code B was combined with A.

Attachment 2 – Example Semiannual Trend Report Format

CENTRAL CHARACTERIZATION PROGRAM

SAVANNAH RIVER SITE

SEMIANNUAL TREND REPORT
For

July 1 through December 31, 2011

Prepared by: **QA Engineer**	printed name	signature	date
Approved by: **Assurance Programs Manager**	printed name	signature	date

Attachment 2 – Example Semiannual Trend Report Format (Continued)

SEMIANNUAL TREND REPORT

INTRODUCTION

In accordance with procedure CCP-QP-014, revision [x], data was collected and analyzed to identify trends.

TRENDING DOCUMENTS

Nonconformance Reports. There were 420 NCRs issued by CCP at the [Host site]. Of these NCRs, 407 were initiated as a result of normal waste characterization, do not reveal any information regarding implementation of the QA Program, and are exempt from trending. The remaining 13 NCRs are evaluated later in this report.

CCP Corrective Action Reports. There were nine CARs issued by CCP, none of which represented a Significant Condition Adverse to Quality.

Carlsbad Field Office (CBFO) Corrective Action Reports. There was one CBFO CAR issued, which did not represent a Significant Condition Adverse to Quality. This CAR was reevaluated as CCP Trend Code 'A.'

Internal Surveillances. There were five surveillances conducted by CCP. There were three conditions identified that were corrected during the surveillance (CDS).

External Surveillances. There were nine external surveillances conducted by the Host site. There were no program deficiencies identified.

Audits. There was one CBFO audit, no. A-xx-yy, that resulted in one CBFO CAR, no. 11-yyy.

Management Assessments. There was one management assessment, no. MA-CCP-xxxx-11, that resulted in no QA deficiencies.

The above documents were analyzed as described below under Evaluation, and the results are included in the Conclusion.

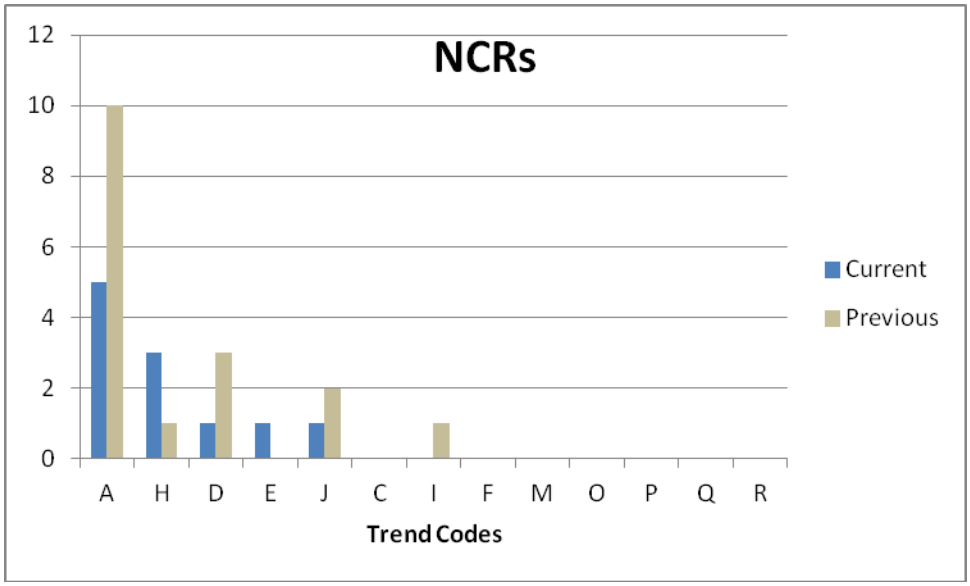
Attachment 2 – Example Semiannual Trend Report Format (Continued)

Semiannual Trend Report Page 3 of 5
Savannah River Site July through December 2011

EVALUATION

NCRs:

The 13 NCRs initiated this report period are distinguished in the chart and table below by their assigned deficiency codes:



(The above Pareto chart is an example that is not required to be included.)

NCRs:

	Trend Codes:															
Time Period:	**A**	**C**	**D**	**E**	**F**	**H**	**I**	**J**	**K**	**L**	**M**	**O**	**P**	**Q**	**R**	**total**
current period	5	0	1	1	0	3	0	1	*	*	0	0	0	0	0	**11**
previous period	10	0	3	0	0	1	1	2	*	*	0	0	0	0	0	**17**

***Trend Codes K and L are exempt from trending.

Trend Code Specifics:

Of the 11 NCRs this period:

There were five 'A' Trend Codes (NCR nos. -2159, -2160), Miscalculation, and (NCR no. -2240), Isotope included, but half-life < 20 yrs; (NCR no. -2173), Operator did not complete 100% scan; (NCR no. -2684), weight for WMP absorbent was documented as "other metals."

Attachment 2 – Example Semiannual Trend Report Format (Continued)

Semiannual Trend Report Page 4 of 5
Savannah River Site July through December 2011

There was one 'D' Trend Code (NCRs no. -2160): Procedure less than adequate.

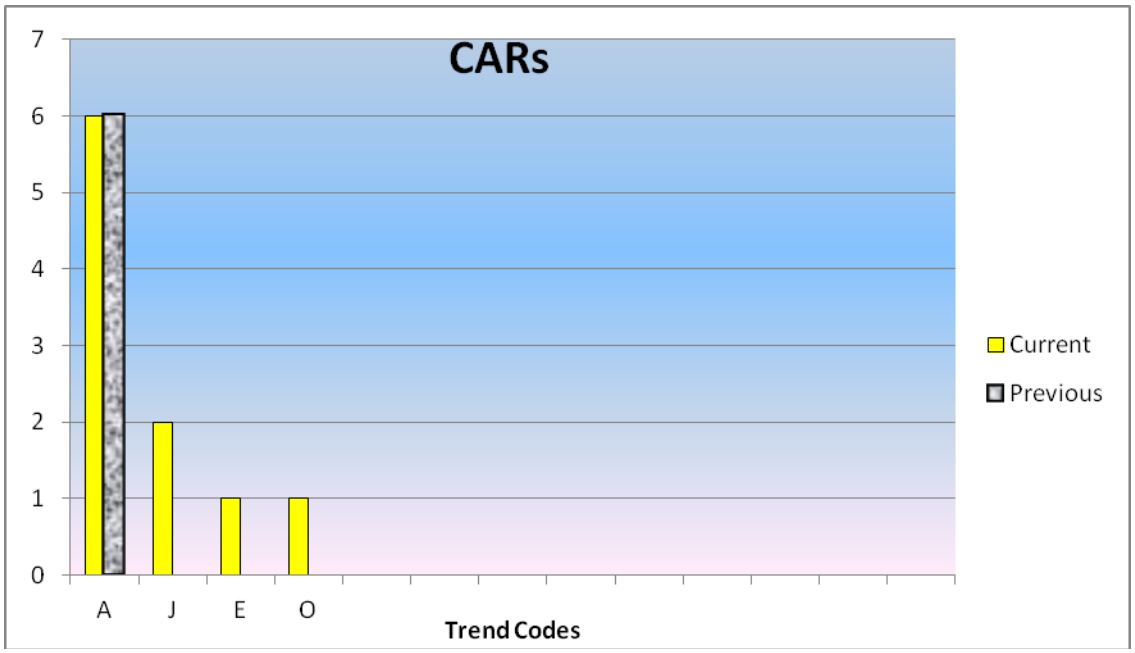
There were three 'H' Trend Code (NCR no. -0402, -2743, -2892): Equipment failed in service.

There was one 'J' Trend Code (NCR nos. -2702): QA Record does not include required data.

These numbers are not sufficiently different from the last report period to permit identification of a trend.

CARs:

The 10 CARs initiated this report period are distinguished in the table and chart below by their assigned trend code. Included with these CARs is one CBFO CAR, reassigned CCP trend code 'A':



(The above Pareto chart is an example that is not required to be included.)

CARs:

	Trend Codes:															
Time Period:	**A**	**C**	**D**	**E**	**F**	**H**	**I**	**J**	**K**	**L**	**M**	**O**	**P**	**Q**	**R**	**total**
current period	6	0	0	1	0	0	0	2	*	*	0	1	0	0	0	**10**
previous period	6	0	0	0	0	0	0	0	*	*	0	0	0	0	0	**6**

*Trend Codes K and L are exempt from trending.

Attachment 2 – Example Semiannual Trend Report Format (Continued)

Semiannual Trend Report Page 5 of 5
Savannah River Site July through December 2011

Trend Code Specifics:

There were 6 'A' CARs: One CBFO CAR (no. 11-026): ITR checklist was incomplete; 2 CARs (nos. -0001, -0003): no organic matrix waste was documented; 3 CARs (nos. -0004, -0008, & -0009): weight of rigid liner was combined with net weight of waste.

There was 1 'E' CAR (no. -0007): Software deficiency resulted in less than adequate data.

There were two 'J' CARs (nos. -0002, -0005): QA Record does not include required data.

There was one Trend Code 'O' CAR (no. -0006): Less than adequate actions intended to correct deficiencies.

None of these CARs was identified as a Significant Condition Adverse to Quality.

The 10 CARs initiated this report period are nearly twice as many as in the previous period, and therefore need to be monitored in the next period to determine whether they represent a trend.

CDA/CDS:

There were three CDSs identified. No trend is identifiable.

CONCLUSION

Status of previous trends: A potentially adverse trend was documented in the previous report. This report period the QA Engineer conducted two surveillances on the same subject that resulted in the documentation of no deficiencies. The data this report period show decreased incidents of the same deficiency; therefore, additional monitoring of this subject may be reduced to normal.

Identification of new trends: The data do not show any identifiable new trends; however, a potentially adverse trend was noted in the number of CARs; this potential trend requires additional monitoring by the QA Engineer to ensure it remains under control.

The data show CCP management self-identified conditions adverse to quality and documented and dispositioned them in accordance with the QA Program.

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CCP-QP-015

Revision 12

CCP
Procurement

EFFECTIVE DATE: 01/31/2013

Mike Ramirez

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RECORD OF REVISION

Revision Number	Date Approved	Description of Revision
5	06/07/2002	Numerous changes throughout procedure to reflect current procurement process.
6	03/04/2004	Numerous changes throughout procedure to reflect the current procurement process.
7	08/23/2004	Changes made in response to WTS QA Internal Audit 104-09 - added steps 2.2.10 [C], 3.1.5, Note before 4.11, and step 4.11. Added reference section to document. Reworded step 3.6.1.
8	10/07/2004	Changes made in response to Nevada Test Site Recertification Audit – revised step 2.2.4, deleted Section 4.5 and revised Section 5.0.
9	06/12/2006	Revised due to corrective actions from Root Cause Analysis and CAR-CCP-0001-06.
10	11/16/2006	Revised to implement the Waste Isolation Pilot Plant Hazardous Waste Facility Permit requirements resulting from the Section 311/Remote-Handled (RH) Permit Modification Request (PMR). In addition, includes some editorial and format improvements.
11	05/12/2011	Revised to move Subcontract Technical Representative (STR) from the note to Section 3 and other clarifications and other editorial changes.
12	01/31/2013	Revised in response to MA CCP 0003-12, and made other clarifications and editorial changes that were necessary.

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1.0 PURPOSE

This procedure describes the process for quality-affecting procurement activities in support of the Central Characterization Program (CCP). It encompasses applicable elements of procurement document control; quality requirement levels; and identification and control of purchased items, or services as appropriate to the CCP mission.

1.1 Scope

This procedure applies to acquisition activities (i.e., items, or services) associated with CCP's work scope and transuranic waste characterization, certification, packaging, and transportation to the Waste Isolation Pilot Plant (WIPP) for disposal. Procurement activities include, but are not limited to:

- Procurement planning, reviews, and approvals
- Supplier identification and evaluations
- Receipt of items or services
- Records

Throughout the procurement process both CCP-specific and Nuclear Waste Partnership (NWP) LLC procedures are used. These interfaces are addressed in Section 4.0 of this procedure. This procedure describes specific procurement requirements that are unique to CCP. In general, procurement actions are to be conducted using a combination of this procedure and NWP procedures. Conflicts between this procedure and NWP procedures shall be brought to the attention of CCP management for immediate resolution.

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2.0 REQUIREMENTS

2.1 References

- DOE/CBFO-94-1012, *U.S. Department of Energy Carlsbad Field Office Quality Assurance Program Document* (QAPD)
- CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*
- CCP-PO-002, *CCP Transuranic Waste Certification Plan*
- CCP-QP-001, *CCP Graded Approach*
- CCP-QP-008, *CCP Records Management*
- CCP-QP-026, *CCP Inspection Control*
- WP 13-QA1003, *Quality Assurance Receipt/Source Inspections*
- WP 13-QA3012, *Supplier Evaluation/Qualification*
- WP 15-GM.01, *NWP Project Execution Plans*
- WP 15-PC3041, *Approval/Variation Request Processing*
- WP 15-PC3042, *Credit Card Purchases*
- WP 15-PC3043, *Request for Remittance*
- WP 15-PC3044, *Quality Credit Card Purchases*
- WP 15-PC3609, *Preparation of Purchase Requisitions*
- WP 15-PC3608, *Subcontract Technical Representative Responsibilities to the referenced Documents*
- WP 15-PM3509, *Utilization and Disposal of Excess/Surplus Government Personal Property*

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2.2 General

2.2.1 This procedure implements quality assurance (QA) requirements, applicable to acquisition activities for CCP.

2.2.2 Applicable procurement requirements from the following documents are included within this procedure.

- DOE/CBFO-94-1012, *U.S. Department of Energy Carlsbad Field Office Quality Assurance Program Document* (QAPD)
- CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*
- CCP-PO-002, *CCP Transuranic Waste Certification Plan*

2.2.3 The QA requirements implemented in this procedure are those for procurement planning, documentation, and review. Under the CCP procurement process, procurement documents, including supplier-generated documents, shall be issued, revised, approved, and controlled.

2.2.4 CCP contractors working under the QA program shall use the CCP procurement process for all acquisitions that are Quality Level 0, Quality Level 1, or Quality Level 2 with inspection requirements.

2.2.5 CCP contractors shall be authorized for acquisition activities without utilizing the CCP procurement process under the following conditions only:

[A] The procurement has been graded as a Quality Level 0 without inspection requirements according to the CCP Graded Approach Process and has no quality inspection requirements. The contractor will be held responsible for verification and compliance of this step.

[B] The contractor has been evaluated, its QA program accepted by NWP QA, and the contractor has been included on the NWP Qualified Supplier List (QSL). The contractor may make purchases within the scope of work activities and procurement restrictions as detailed on the NWP QSL.

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2.2.6 CCP shall ensure that the acquisition is performed as specified, and the program shall ensure compliance with the requirements described in the NWP Prime Contract; all applicable Federal Acquisition Regulations and Department of Energy Acquisition Regulations; and established technical and QA requirements.

2.2.7 Proposals from suppliers shall be solicited, evaluated, and awarded based on conformance to specific procurement document requirements. Suppliers shall then be evaluated in accordance with the procurement document requirements using the NWP QA Supplier Evaluation Program.

2.2.8 Procurement documents shall be reviewed by personnel who have an adequate understanding of the requirements. Technical and quality changes to procurement documents shall be subject to the same degree of control as the original documents according to WIPP Procedure (WP) 15-PC3609, *Preparation of Purchase Requisitions*. Procurement document reviews shall be performed and documented prior to the document being issued to the supplier.

2.2.9 Personnel performing procurement related activities such as requisitioning, inspection, and proposal evaluations shall be qualified to the extent appropriate to their functions.

2.2.10 Certain specific procurement related functions will be performed through interfaces with NWP procurement services and QA organizations.

[A] NWP procurement services shall process purchase requisitions through their approved program using NWP personnel (Buyers, Administrative Support, etc.), procedures, forms, credit card program, procurement records, and property management.

[B] NWP QA will evaluate contracted or procured projects not related to characterization activities to determine the need to perform independent assessments.

[C] NWP QA reviews and approves procurement actions that fall outside CCP's area of expertise of compliance with Waste Analysis Plan, Waste Acceptance Criteria, and Trupact Authorized Methods Payload Control requirements.

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3.0 RESPONSIBILITIES

3.1 CCP Requisitioner

3.1.1 Satisfactorily completes the required requisitioner training.

3.1.2 Completes quality level determination in accordance with CCP-QP-001, *CCP Graded Approach*, for the specific item or service.

3.1.3 Initiates purchase requisition, identifying any attachments.

3.1.4 Identifies the required approvals, and processes purchase requisition per WP 15-PC3609.

3.1.5 Completes Qualified Supplier List Requests and submits them to NWP QA for external supplier evaluations.

3.2 Quality Assurance

3.2.1 Ensures appropriate QA requirements are applied to procurements. This includes, but is not limited to, ensuring the following:

[A] Quality level determinations have been completed.

[B] CCP personnel performing receipt inspection activities are properly trained and qualified.

3.2.2 Reviews and approves Quality Level 0, Quality Level 1, and Quality Level 2 with inspection requirements purchase requisitions or purchase requisition change notices.

3.2.3 Prepares inspection plans for material receipt, as required.

3.3 Technical Reviewers

3.3.1 Reviews procurement documents for compliance with technical and regulatory requirements.

NOTE

The CCP Equipment Engineer functions as the Project Manager and Subcontract Technical Representative (STR) for all non-consumable equipment, design, fabrication, modification, or refurbishment procurements.

3.4 CCP Equipment Engineer

3.4.1 Reviews and approves procurement documentation.

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3.5 Requisitioning Manager

3.5.1 Verifies completeness of procurement documentation.

3.5.2 Determines if additional quality or technical reviews of procurement documentation are required and routes as needed.

3.5.3 Determines if additional reviewers are required and routes as needed.

3.5.4 Determines if another level of management is required for approval of purchase requisition and routes the purchase requisition to the next level, as required.

3.5.5 Reviews and approves procurement documentation, ensuring all necessary requirements and appropriate approvals have been obtained.

3.6 NWP Procurement

3.6.1 Procures the requisitioned item or service in accordance with established NWP approved procurement policies and procedures.

3.6.2 Provides liaison between CCP personnel and vendors/suppliers.

3.6.3 Prepares required procurement records.

3.6.4 Notifies Property Management for items meeting tagging criteria.

3.7 Receipt Inspection Personnel

3.7.1 Performs and documents receipt inspections in accordance with CCP-QP-026, *CCP Inspection Control*, or WP 13-QA1003, *Quality Assurance Receipt/Source Inspections*.

3.8 Subcontract Technical Representative (STR)

3.8.1 Refer to STR responsibilities in WP 15-PC3608, *Subcontract Technical Representative Responsibilities*.

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4.0 PROCEDURE

Requisitioner

4.1 Identify the quality level of the item or service from the CCP Graded QA Database.

4.2 **IF** the item or service is not in the database,
THEN initiate a QA Grading Level Checklist in accordance with CCP-QP-001.

4.3 **IF** the item or service requires a supplier on the QSL,
THEN identify the supplier **OR** submit a QSL request in accordance with WP 13-QA3012, *Supplier Evaluation/Qualification*.

4.4 **IF** the item or service can be procured using a NWP quality credit card,
THEN place the order in accordance with WP 15-PC3044, *Quality Credit Card Purchases*.

4.5 **IF** the item or service is graded as a Quality Level 0, **AND** DOES **NOT** require receipt inspection,
THEN determine whether the item or service can be procured using a NWP procurement credit card in accordance with
WP 15-PC3042, *Credit Card Purchases*.

4.5.1 **IF** the use of the NWP procurement credit card is allowed,
THEN place the order in accordance with WP 15-PC3042.

4.5.2 **IF** it is determined that the NWP procurement credit card can **NOT** be used,
THEN determine whether the item or service can be purchased using a Request for Remittance (RFR) per WP 15-PC3043, *Request for Remittance*.

[A] **IF** it is determined that an RFR can be used,
THEN place the order in accordance with WP 15-PC3043.

4.6 Prepare purchase requisition and supporting documents in accordance with instructions described in WP 15-PC3609 or WP 15-PM3509, *Utilization and Disposal of Excess/Surplus Government Personal Property,* as applicable.

4.7 **IF** the purchase requisition is rejected during any point in the process,
THEN address the reasons **AND/OR** contact the cognizant individual for resolution **AND** resubmit procurement documentation through the procurement system.

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CCP Subcontract Technical Representative (STR)

4.8 The STR is typically the requisitioner. The STR is identified in the Purchase Requisition and specified in the subcontract or Purchase Order. Refer to STR responsibilities in WP 15-PC3608.

The STR Shall:

- Review invoices.
- Follow vendor progress.
- Resolve technical issues with the vendor.

4.9 The STR is not authorized to make any changes to the Statement of Work or any changes that impact the cost, schedule, quality, or technical requirements of the subcontract.

The STR Shall NOT

- Authorize changes to the subcontract.
- Clarify, make, or infer legal interpretations on the scope or intent of the subcontract.
- Levy or impose any task not specifically provided for in the subcontract.
- Issue directives to the subcontractor.
- Authorize the expenditure of funds.
- Offer advice or recommendations to the subcontractor that could directly or indirectly affect pending Procurement determination as to fault or negligence.

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Quality Assurance

NOTE

Means shall be provided to verify the validity of supplier certificates and the effectiveness of the certification system, such as during the performance of audits of the supplier or independent inspection or test of the items. Such verification shall be conducted by the purchaser at intervals commensurate with supplier quality performance. Refer to WP 13-QA3012.

4.10 Verify that procurement documentation package is complete.

4.10.1 **IF** the procurement documentation is **NOT** complete,
THEN document reason(s) in the comment section **AND** "reject" the purchase requisition.

4.10.2 **IF** the procurement documentation is complete,
THEN proceed to step 4.11 for completion of inspection document forms prior to approval of purchase requisition.

4.11 Using the information provided in the procurement documentation, initiate Attachment 1, CCP Receipt Inspection Verification Sheet (RIVS), of CCP-QP-026, detailing the appropriate QA requirements based on the quality level of the procurement.

4.12 Maintain the RIVS form in the QA Inspection folder located on the network until the procurement has been delivered.

4.13 **IF** the National Institute of Science and Technology (NIST) traceability is included as a requirement in the purchase requisition,
THEN ensure the receipt inspection contains a certificate of conformance/analysis with a statement that the Measuring & Test Equipment used to verify acceptability of items and services be traceable to NIST.

4.14 Prepare the inspection plan in accordance with CCP-QP-026. Determine applicable needs for source inspection, receipt inspection, and/or hold points.

4.15 Notify NWP QA in writing of projects not related to characterization activities at the time of procurement to allow NWP QA to determine the need to perform an independent assessment of those projects.

4.16 Approve the purchase requisition or purchase requisition change notice.

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CCP Reviewers

4.17 Review the procurement documentation package and requirements relating to reviewers' technical area.

4.18 **IF** the procurement documentation is **NOT** complete **OR** is incorrect, **THEN** reject the procurement.

4.19 **IF** the procurement documentation is complete, **THEN** approve purchase requisition.

NOTE

The CCP Equipment Engineer MUST review all non-consumable equipment, design, fabrication, modification, or refurbishment procurements actions. Steps 4.20 through 4.25 apply to those procurements only.

CCP Equipment Engineer

4.20 Prepare Project Execution Plan (PXP) in accordance with WP 15-GM.01, *NWP Project Execution Plans,* as applicable.

4.21 Ensure NWP QA Oversight Programs **AND** the following Site organizations and individuals, as appropriate, have provided technical input prior to approval of procurement documentation and activities:

- Industrial Hygiene
- Nuclear Safety
- Radiation Safety
- Operations
- Fire Protection Engineer
- Cognizant Engineers
- Technical Specialists

4.22 Coordinate inspection planning and source/receipt activities with NWP QA.

4.23 Document applicable organizations' and individuals' involvement via Integrated Financial Management System (IFMS) or in the form of an email, internal memo, or other written correspondence, **AND** include in procurement record file(s).

4.24 **WHEN** all technical and quality reviews are completed, **THEN** approve the purchase requisition.

4.25 Perform responsibilities of STR through the life of the subcontract, as identified in Sections 4.8 and 4.9.

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Requisitioning Manager

4.26 Perform review of procurement documentation package.

4.27 Determine the need for additional reviews for the procurement as appropriate (e.g., NWP QA, engineering, health and safety, radiation control, National Environmental Policy Act, generator site, etc.). Change Notices for Blanket Purchase Orders for calibration gases that affect the contents of any of the listed components (i.e., addition or deletion of a component gas, change in proportion of a component gas), or that adds or deletes an entire gas compound, shall be reviewed by one of the CCP Site Project Managers.

4.28 **IF** additional reviews are required,
THEN assign and route the procurement documentation package to the appropriate reviewers.

4.29 **IF** another level of management is required for approval of purchase requisition,
THEN route the purchase requisition to the next level as required.

4.30 Assist requisitioner in resolving any comments resulting from the reviews.

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5.0 RECORDS

5.1 Records generated during the performance of this procedure are maintained as QA records in accordance with CCP-QP-008, *CCP Records Management.* The records are the following:

5.1.1 <u>QA/Nonpermanent</u>

[A] Procurement File:

[A.1] Purchase Requisition(s)/Change Notice(s) (from WP 15-PC3609)

[A.2] Purchase Order(s)/Change Notice(s) (from WP 15-PC3609)

[A.3] Statement(s) of work (from WP 15-PC3609)

[A.4] Specifications/Drawings, when applicable (from WP 15-PC3609)

[A.5] Approval/Variation Requests (from WP 15-PC3041)

[A.6] General correspondence (e.g., e-mail, internal memo, IFMS, etc.).

[A.7] Q Card documentation (from WP 15-PC3044)

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CCP-QP-016

Revision 18

CCP
Control of Measuring and Testing Equipment

EFFECTIVE DATE: 06/24/2013

Mike Ramirez

PRINTED NAME

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RECORD OF REVISION

Revision Number	Date Approved	Description of Revision
4	02/25/2002	Added requirements for M&TE items controlled under the e-QA® system. Added a new Section 4.9 for entering data into the e-QA® database.
5	05/14/2002	Made changes to 4.1.4 and 4.1.7. Updated references in 2.6.1, 4.1.1 and 4.8.1.
6	05/14/2003	Change to 3.3.3 and NOTE before 4.1.2.
7	08/05/2003	Revised to address shipment of M&TE from the generator sites directly to/from suppliers of calibration services (instead of being calibrated at the WIPP site). Revised in response to CAR-SRS-0002-03, to clarify M&TE related activities performed at the project office versus those performed at the generator sites.
8	11/18/2003	Revised to address that e-QA® system is being eliminated for use by the CCP Program. Deleted Section 4.9 from procedure.
9	03/14/2005	Revised to address the concerns of Surveillance Report SUR-SRS-0003-04 and Savannah River Site Audit Report 2004-AR-26-0005, Finding #2. Addressed CBFO comments.
10	03/09/2006	Revised to correct reference in Section 2.6 and added CCP Vendor Project Manager to Responsibilities Section.
11	09/26/2006	Revised Attachment 1 to require that 'CCP' be included as part of the unique calibration identifier in response to CAR-RHANL-001-06.
12	11/16/2006	Revised to implement the Waste Isolation Pilot Plant Hazardous Waste Facility Permit requirements resulting from the Section 311/Remote-Handled (RH) Permit Modification Request (PMR). This revision includes changing SPQAO to CCP QA and TS to Lead Operator. Other editorial changes are also included.
13	03/30/2007	Revised to clarify the unique identifiers and to remove nonconformance report (NCR) requirement for out-of-calibration equipment.

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RECORD OF REVISION

Revision Number	Date Approved	Description of Revision
14	02/07/2008	Revised to address the assignment of responsibilities, disconnects between the Quality Credit Card process and Central Characterization Project (CCP)-driven requirements, and proper usage of “out-of-calibration” versus “out-of-tolerance” terminology in response to Corrective Action Report (CAR), CAR-CCP-0006-07.
15	05/18/2010	Revised to clarify responsibilities for providing calibration documentation to the measuring and test equipment (M&TE) Custodian.
16	01/05/2012	Revised to clarify the scope of Central Characterization Project’s (CCP’s) measuring and test equipment (M&TE) program and the responsibilities associated with Host site provided M&TE.
17	10/23/2012	Revised to clearly flow down items from the *Quality Assurance Program Document* (QAPD) as described in MA-CCP-0003-12, to incorporate Corrective Action Plan (CAP) items from CAR-LANL-0003-12 and to improve clarity.
18	06/24/2013	Revised to clarify actions of each entity defined in this procedure. Incorporate Corrective Action Plan (CAP) items from CAR-CCP-001-13-0. Added Section 4.9 for process of shipping M&TE to calibration lab.

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1.0 PURPOSE

This procedure implements the requirements and processes for properly controlling and maintaining measuring and test equipment (M&TE).

1.1 Scope

This procedure describes the processes to ensure equipment used for measuring and testing are properly controlled, calibrated, and maintained.

This procedure is applicable to M&TE that is used by the Central Characterization Program (CCP). This includes M&TE procured and controlled by CCP as well as Host site provided M&TE that is controlled under the Host site M&TE program.

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2.0 REQUIREMENTS

2.1 References

Baseline Documents

- CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*
- CCP-PO-002, *CCP Transuranic Waste Certification Plan*
- WP 13-1 *NWP QA Program Description*

Referenced Documents

- CCP-QP-008, *CCP Records Management*
- WP 15-PC3044, *Quality Credit Card Purchases*
- WP 15-PM3525, *Preparation and Processing of Shipping Authorizations*
- EA 15-PM3525-1-0, *Shipping Authorization*

2.2 Training Requirements

2.2.1 None.

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3.0 RESPONSIBILITIES

3.1 CCP M&TE User

3.1.1 Verifies M&TE is on the current approved M&TE list on secure file transfer protocol (SFTP) web site (searchable by equipment number) and checks current cal sticker with information on approved list for accuracy.

3.1.2 Handles M&TE in a manner that will not adversely affect its accuracy to ensure M&TE integrity.

3.1.3 Promptly reports any M&TE conditions that could invalidate measurements to the Vendor Project Manager (VPM)/designee.

3.1.4 Coordinates equipment location, recall, and calibration with the VPM/Designee.

3.2 CCP M&TE Custodian

3.2.1 Maintains a database that includes a recall system to track and control M&TE needed to support CCP characterization and packaging activities.

3.2.2 Responsible for overall CCP M&TE program administration.

3.2.3 Submit all records identified in Section 5.1.1 [B] to CCP Records in accordance with CCP-QP-008.

3.3 Cognizant Engineer

3.3.1 Provides technical support of M&TE program including recommendations on calibration intervals, set-points, tolerances, exemptions, and extensions.

3.4 CCP Vendor Project Manager (VPM) or Designee

3.4.1 Primary interface with Host site for CCP use of Host site provided M&TE.

3.4.2 Interfaces with the M&TE Custodian for calibration and maintenance activities, forwards copies of Host site provided calibration records to the M&TE Custodian, and ensures M&TE database reflects M&TE used.

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3.4.3 Ensures M&TE is used for CCP operations in compliance with this procedure and other applicable requirements, including:

[A] Only M&TE approved for CCP use is used for CCP operations.

[B] Host site M&TE documentation is transmitted to the CCP M&TE Custodian.

3.4.4 Performs and documents M&TE evaluations as required by this procedure.

3.5 Host Site

3.5.1 See the applicable Host site Interface Agreement (they provide documents required by the interface agreement and this procedure).

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4.0 PROCEDURE FOR CCP OWNED M&TE

NOTE

Section 4.0 pertains to CCP controlled M&TE. Section 4.12 applies to Host site owned M&TE used in CCP's program. Sections in this procedure may be performed in any order as necessary.

4.1 Procurement of M&TE

VPM or Designee

NOTE

If equipment is not procured as QL1 or equivalent, the M&TE will need to be calibrated before use.

4.1.1 Initiate request for needed equipment, **AND** procure the equipment in accordance with applicable procedures. The procurement request should address the following:

[A] The required function ranges and tolerance in the procurement specifications.

[B] The appropriate documentation including operation and maintenance manuals.

[C] Adequate provisions for packaging, handling, storage and shipping requirements.

CCP M&TE Custodian

NOTE

Identification (ID) numbers are serialized and not duplicated or reissued. They are attached to equipment using an appropriate label. References to equipment are typically by means of these ID numbers.

4.1.2 Inspect newly procured M&TE to verify correct serial number and equipment ID number, as applicable.

4.1.3 Tag, segregate, or otherwise control newly-procured M&TE to prevent its use until it is calibrated.

4.1.4 Ensure that a unique M&TE ID number is assigned (see Section 4.3 for Labeling).

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4.2 M&TE Entry into Integrated Data Center (IDC) Database

CCP M&TE Custodian

4.2.1 To enter new calibration dates complete the following:

[A] Verify new M&TE has an ID number assigned and an M&TE ID label.

[B] Log into M&TE database.

[C] Click on M&TE Edit.

[D] Type in equipment ID number in “Search Equipment ID” field.

[E] **IF** equipment ID does not come up,
THEN GO TO Section 4.2.5.

[F] Click on “Edit Cal Data” button.

[G] To enter new calibration dates click on the “+” button.

[H] Enter calibration date, expiration date, vendor, as found condition, and as left condition in appropriate fields.

[I] Click the “Update” button.

[J] Click the “Close” button.

[K] Click the “Update” button below the “Comment” field on main page to update the record.

4.2.2 At a minimum, the following data for all M&TE is required in the database:

[A] M&TE ID number

[B] Description

[C] Cal interval

[D] Cal Date

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CCP M&TE Custodian

4.2.3 An independent verification of data entry in IDC shall be performed by a qualified M&TE Custodian prior to filing records.

4.2.4 IDC maintains a recall system to notify users when due for calibration.

[A] Equipment shall also be recalled for calibration or other disposition if:

[A.1] It has exceeded its calibration interval.

[A.2] It has broken calibration seals.

[A.3] It has been repaired, modified, or had any components replaced.

[A.4] It is suspected to be malfunctioning because of mishandling, misuse, or unusual results.

NOTE

This notification should be 60 days in advance for items that must be sent off site for calibration and upon calibration expiration.

[B] IDC notifies VPM or Designee and Quality Assurance (QA) upon expiration of M&TE calibration for recall using the recall notification e-mails.

4.2.5 For entering new M&TE into IDC perform the following:

[A] On the main M&TE Edit screen fill in all of the white boxes.

[B] Before clicking the insert button, make sure all of the boxes with white background are filled out (including the ID number if M&TE already has an ID number, if not leave blank).

[C] Click insert.

[D] **GO TO** Section 4.2.1 and complete the new calibration information for new M&TE.

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4.3 Controlling CCP M&TE

NOTE

M&TE will be transported, stored, and calibrated in an environment that will not adversely affect its accuracy. When practical, M&TE is shipped directly from the generator site to the calibrating agency and then returned to the generator site. Returned instruments are checked by a person designated by the VPM or project manager.

NOTE

M&TE labeling (or verification of labeling) can be done either by VPM or Designee at generator site for equipment owned/used by generator site or by M&TE Custodian for equipment handled through Skeen-Whitlock Building (SWB).

CCP M&TE CustodianVPM/Designee

4.3.1 If practical, ensure the M&TE is labeled with the unique ID number assigned in Section 4.1 as indicated in Attachment 1, Identification Labels and Calibration Tags.

4.3.2 **IF** labeling or tagging is not practical,
THEN:

[A] Determine an acceptable means of ensuring control of M&TE.

[B] Document any alternative control methods that are established.

[C] File documentation of control methods with the equipment records per CCP-QP-008, *CCP Records Management*.

4.3.3 Calibrate M&TE in accordance with Section 4.5.

4.3.4 Inspect M&TE received from calibration to verify correct serial number and equipment ID number, as applicable.

4.3.5 Tag, segregate, or otherwise control damaged, suspect, out-of-tolerance (OOT), and out-of-calibration M&TE to prevent use until the condition has been resolved. If an evaluation of previous measurements is needed (for an OOT or other condition), perform in accordance with Section 4.7.

4.3.6 Store M&TE in an environment that will not adversely affect its accuracy to ensure M&TE integrity.

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4.4 Determining and Adjusting Calibration Parameters

NOTE

Manufacturer's recommended calibration intervals or standardized CCP calibration intervals are normally used, as are manufacturer's recommended ranges and tolerances. The calibration intervals are recorded in the M&TE database.

Calibration exemptions are based on what the item is used for.

Calibration and control measures are not applied to rulers, tape measures, levels, and other such devices, if normal commercial equipment provides adequate accuracy.

VPM Designee or M&TE Custodian

4.4.1 Establish and maintain the calibration interval to ensure acceptable reliability. The calibration interval should be set so the M&TE is expected to remain in tolerance throughout the interval, as applicable.

4.4.2 Consider any or all of the following:

[A] Calibration range, tolerance, and job requirements.

[B] Review of the manufacturer's tolerance, wear allowance, and recommended calibration interval.

[C] Comparison of calibration intervals for similar instruments or M&TE.

[D] Consultation with calibration organization for historical data on similar instruments.

[E] Intended use and frequency of the instrument.

[F] Environment in which the device will be subject.

[G] Results of previous calibration.

4.4.3 To adjust calibration parameters initiate and process Attachment 4, Calibration Interval/Tolerance Adjustment Evaluation or Attachment 5, Exemption/Temporary Extension Evaluation, as applicable to document changes to calibration parameters.

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NOTE

The reliability target for CCP M&TE is a minimum of 85 percent. Data will be collected and evaluated to aid in adjustment to calibration intervals, decisions on retirement of equipment, and the need for additional equipment. The analysis shall consider the as-found calibration data.

NOTE

When justified, M&TE assigned a periodic calibration interval may have its due date extended an additional 25 percent of the assigned interval. The M&TE that has had its calibration interval temporarily extended will not be used after the extension expires until it is recalibrated. If the reason for the extension becomes no longer valid, it will also be removed from service.

4.4.4 Ensure the follow-up actions are completed, as applicable:

[A] M&TE calibration tag (and/or limited calibration tag) reflects the adjusted parameter.

[B] Procurement documents reflect the adjusted parameter.

[C] Submit Attachment 4 or 5 to M&TE Custodian.

CCP M&TE Custodian

4.4.5 Update IDC with submitted information.

4.4.6 Submit the completed attachment to CCP records in accordance with CCP-QP-008.

4.5 Calibration of M&TE

NOTE

VPM/Designee will coordinate with designated calibration lab for all user site owned M&TE for all calibration services.

VPM or Designee

4.5.1 Coordinate the calibration activities with the M&TE Custodian for CCP owned M&TE.

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CCP M&TE Custodian

4.5.2 Procure calibration services from approved calibration suppliers following WP 15-PC3044, *Quality Credit Card Purchases*, or send to a user site calibration lab (i.e., INL Cal Lab) using a Shipping Authorization. Specify in the procurement documentation that calibration standards are traceable to National Institute of Standards and Technology (NIST) **OR** if nationally recognized standards do not exist, the basis for calibration is documented **AND** a record of calibration be produced upon successful calibration addressing at a minimum the following information:

[A] A description or identification of the item

NOTE

The calibration interval is the difference between the calibration date and the calibration due date. This cal interval can be set at a lesser rate as applicable to limitations in IDC.

[B] Calibration interval

[C] Date calibrated

[D] Identification of the calibration source

[E] Calibration results (data and status)

[F] Calibration action taken (e.g. adjusted, repaired, new value assigned, derated)

[G] Evaluation and corrective action taken in response to out of calibration or out-of-tolerance conditions

4.5.3 Verify records of calibration comply with procurement requirements and are complete.

4.5.4 Inspect all CCP owned M&TE received from calibration at SWB and verify:

[A] Correct serial number as applicable

[B] Equipment ID label with correct number

[C] Correct calibration tag – prepare and apply a calibration tag as needed

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[D] If found OOT, go to Section 4.7

4.5.5 Update M&TE Database following Section 4.2.

4.5.6 Submit records of calibration for M&TE to records in accordance with CCP-QP-008.

4.6 Use of M&TE

CCP M&TE User

NOTE

While M&TE is in use, the user will be responsible for maintaining the M&TE in a manner that will not adversely affect its accuracy. Definitions for “in use” and “storage” are included in Attachment 2, Glossary.

4.6.1 Handle, store, and transport M&TE in a manner that will not adversely affect its accuracy (e.g., give due consideration to temperature, humidity, lighting, vibration, dust control, cleanliness, electromagnetic interference, and any other factors affecting the results of measurements).

4.6.2 Prior to use, confirm M&TE for the following:

[A] M&TE is on the Approved M&TE List and information on tag matches list, as applicable,

[B] Calibration tags are not expired,

[C] Calibration seals are intact, if applicable,

[D] And the M&TE shows no evidence of mishandling, misuse, or unusual results.

4.6.3 Notify the VPM/Designee of any exceptions identified in step 4.6.2.

4.6.4 Notify the VPM/Designee when M&TE is transferred to a different location.

4.6.5 Coordinate equipment recall and calibration with the VPM/Designee.

VPM or Designee

4.6.6 Notify M&TE Custodian of any conditions found above.

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4.6.7 Notify M&TE Custodian if M&TE is transferred to a different location.

4.6.8 Tag, segregate or otherwise control M&TE with expired calibration to prevent use.

4.6.9 Coordinate with site calibration lab to calibrate any M&TE that is user site owned, as applicable.

4.6.10 Coordinate with M&TE Custodian to calibrate any CCP owned M&TE, as applicable.

4.7 Out-of-Tolerance, Defective, or Lost M&TE

M&TE User

4.7.1 **IF** M&TE is identified as lost, OOT , or defective,
THEN notify the VPM/designee.

VPM or Designee

4.7.2 **IF** notified M&TE is lost, OOT, or defective,
THEN notify M&TE Custodian, and QA.

4.7.3 **IF** the M&TE is lost, OOT, or defective,
THEN initiate an evaluation of measurements made by the M&TE since its last calibration and document results on Attachment 3, Out-of-Tolerance (OOT) Evaluation.

NOTE

An evaluation of the impact of OOT M&TE includes finding out if M&TE was used since the last calibration, when it was used, what it was used on and if the OOT condition affected the operations it was used on. If it did affect the operations it was used on, how many items did it affect.

4.7.4 Submit Attachment 3 to M&TE Custodian.

4.7.5 Initiate appropriate action based on the results of the evaluation.

4.7.6 Arrange for disposition of the M&TE according to recommendation and further technical evaluation, including NCR disposition.

CCP M&TE Custodian

4.7.7 Enter information needed from Attachment 3 into IDC.

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4.8 Closing/Exit Calibrations

NOTE
If CCP pulls out from a site before the exit calibrations can be made, an e-mail from the VPM is acceptable as a closing/Exit calibration notification.

VPM/Designee

4.8.1 When notified that M&TE is being taken out of service, arrange for a closing or exit calibration/evaluation.

4.8.2 Document results on Attachment 6, Closing/Exit Calibration.

4.8.3 Tag, segregate, or otherwise control the M&TE to prevent use.

4.8.4 Submit Attachment 6 to the CCP M&TE Custodian, as applicable.

4.8.5 **IF** results of calibration/evaluation indicate M&TE OOT,
THEN initiate an evaluation in accordance with Section 4.7.

4.8.6 **IF** an exit calibration was performed,
THEN arrange for the M&TE to be excessed.

4.8.7 **IF** a closing calibration was performed,
THEN remove the M&TE from service.

CCP M&TE Custodian

4.8.8 **IF** notified by VPM that M&TE is being taken out of service,
THEN instruct VPM to complete Steps 4.8.1 through 4.8.7 above.

4.8.9 Update the M&TE database.

4.8.10 **IF** M&TE is CCP owned,
THEN arrange for M&TE to be shipped back to SWB, as applicable after evaluation has been completed by VPM following applicable steps above.

4.8.11 Arrange for CCP owned M&TE to be excessed or disposed of, as applicable.

4.8.12 Submit Attachment 6 to records in accordance with CCP-QP-008.

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4.9 Shipping M&TE to Calibration Lab

4.9.1 Follow Waste Isolation Pilot Plant (WIPP) procedure (WP) 15-PC3044 for coordinating with a calibration lab to get M&TE (re)calibrated including filling out the Inspection Plan from Q-Card Database, does not apply to user site cal labs.

4.9.2 Fill out Attachment 1 to EA15PM3525-1-0, *Shipping Authorization* following requirements in WP 15-PM3525 for each vendor being used.

4.9.3 Fill out Attachment 1, Quality Credit Card Purchase Log to WP 15-PC3044 following requirements in WP 15-PC3044.

4.9.4 Fill out Q-Card Authorization Form and get management approval.

4.9.5 Print a copy of the purchasing requirements for all vendors.

4.9.6 Print a copy of line item spreadsheet for all M&TE being shipped from IDC.

4.9.7 Print a copy of the approved Inspection Plan for Q-Card database.

4.9.8 Scan all signed documents prior to making shipment.

CCP M&TE Custodian

4.9.9 Box all M&TE into shipping boxes (use separate boxes for different vendors) as appropriate.

4.9.10 Record which boxes contain what M&TE on Shipping Authorization.

4.9.11 Include in each box the original Inspection Plan with initials and date (each item is assigned its own inspection plan), line item spreadsheet from IDC and the requirements sheet for all vendors, does not apply to user site cal labs.

4.9.12 Tape all boxes closed and weigh them.

4.9.13 Record the weight of each box onto Shipping Authorization.

4.9.14 Turn original Shipping Authorization into United States Department of Energy (DOE) Mailroom and coordinate the shipment of the boxed M&TE with mailroom.

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4.9.15 File all records together for each shipment and retain in file following approved Records Inventory and Disposition Schedule (RIDS).

4.10 Receiving M&TE at SWB

CCP M&TE Custodian

4.10.1 Follow receipt requirements listed in “Receipt of Goods” in WP 15-PC3044.

4.10.2 Inspect each M&TE for ID tag that is intact and readable and for calibration tag being intact, readable and updated date.

4.10.3 Once all requirements in WP 15-PC3044 for Receipt of Goods is complete, contact mobile loading unit (MLU) contact for pick up of M&TE, or arrange for the M&TE to be shipped back to user site.

4.11 Procedure for Host site M&TE

NOTE

Labeling of Host site provided M&TE will be in accordance with the Host site requirements and defined labels. The steps provided in Section 4.9 define how CCP ensures compliance of Host site M&TE used in the CCP program.

4.11.1 Procurement of Host site M&TE

[A] Performed by the Host site.

4.11.2 Host Site M&TE in the CCP M&TE Database

M&TE User

[A] Provide M&TE records, including calibration records to the CCP VPM/Designee.

VPM Designee

[B] When additional Host site M&TE is requested for use, ensure it is on the CCP Approved M&TE List. Where calibration records are not immediately available, verify a current calibration tag is available on the M&TE Item and send an e-mail with applicable calibration information from the tag to the M&TE Custodian.

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CCP M&TE Custodian

[C] Enter updated information in IDC following Section 4.2 and update the Approved M&TE List online.

VPM or Designee

[D] Obtain records of calibration from Host site for all M&TE used in CCP operations and transmit them to M&TE Custodian.

[E] For M&TE calibrations performed by work package, verify the M&TE has a current calibration sticker and transmit the calibration record to the M&TE Custodian. If calibration record is in review, provide written notification to M&TE Custodian with M&TE ID number, Calibration Date, and Calibration Due Date. When calibration record is available, transmit to M&TE Custodian.

CCP M&TE Custodian

[F] Update M&TE Database with new M&TE calibration dates following Section 4.2 and update the Approved M&TE List.

[G] Submit Host site M&TE records to CCP records in accordance with CCP-QP-008.

NOTE

Host site provided equipment that has been entered into the M&TE database is included in the CCP recall system for notification that M&TE calibrations are coming due (60 days prior and upon calibration expiration).

[H] Recall actions are the responsibility of the Host site.

4.11.3 Control of Host site M&TE used in the CCP Program

VPM or Designee

[A] Verify Host site M&TE is adequately labeled with a unique Host site provided ID number.

[B] Coordinate monthly with the M&TE Custodian to verify the CCP M&TE database is updated to reflect the current records of calibration.

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[C] Notify M&TE Custodian of any conditions that could merit recall of M&TE.

[D] Notify the M&TE Custodian when M&TE is transferred to a different location.

[E] Coordinate equipment recall and calibration with the Host site.

CCP M&TE Custodian

[F] Enter Host site ID number in M&TE database along with calibration data per Section 4.2.

[G] Notify the Host site of any conditions that could merit recall.

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5.0 RECORDS

5.1 Records generated during the performance of this procedure are maintained as QA records in accordance with CCP-QP-008. The records are the following:

5.1.1 <u>QA/Nonpermanent</u>

[A] M&TE Database

[A.1] CCP Approved M&TE List

[A.2] Calibration Recall System

[B] Records of Calibration

[B.1] Evaluations/Impact Studies using Attachment 3 – Out-of-Tolerance (OOT) Evaluation, as applicable.

[B.2] Evaluations of Calibration Interval/ Tolerance Adjustments, Attachment 4 – Calibration Interval/Tolerance Adjustment Evaluation

[B.3] Evaluations of Exemptions/Temporary Extensions, Attachment 5 – Exemption/Temporary Extension Evaluation

[B.4] Closing/ Exit Calibration Evaluations, Attachment 6 – Closing/Exit Calibration

[B.5] E-mails from Host site documenting verification of current M&TE calibration and e-mails authorizing use of the M&TE for CCP processes (as applicable).

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Attachment 1 – Identification Labels and Calibration Tags

This attachment describes the labels and tags used to indicate the status of M&TE.

M&TE Identification Label

The M&TE identification label bears a unique ID number that may be alpha numeric or any combination of numbers or symbols as long as it is unique to that piece of equipment. CCP unique ID numbers, typically start with an XC (e.g., XC0410). However, equipment with both CCP and Host site ID numbers are used for CCP operations.

Calibration Tag

A calibration tag that identifies the calibration status shall include, as a minimum, a unique ID number for the equipment, and next calibration due date. CCP ID numbers will be the same on the M&TE Identification Label as described above and on the Calibration Tag.

Limited Calibration Tag

When all ranges and/or functions of an item calibrated by CCP have not (or cannot) be calibrated, a Limited Calibration Tag will be used. The limitations will be noted on the item's record of calibration and may be included as part of the calibration tag or on a separate tag applied in addition to the calibration tag. If the limitation/restrictions are too lengthy to include on the tag, the tag will direct the user to see the record of calibration which will be required to be retained with the item at all times.

Out of Calibration Tag

A tag that identifies a piece of M&TE as being overdue for calibration or suspended, suspected to be, or actually out-of-calibration. The label will include the date when the label was affixed and the name (initial or stamp) of the individual affixing the label.

Below are examples of calibration, limited calibration, and out-of-calibration tags that may be used to label CCP M&TE.

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Attachment 1 – Identification Labels and Calibration Tags (Continued)

CALIBRATION*

CALIBRATION

I.D. No. _____

By _____ **Date** _____

Due _____

LIMITED CALIBRATION*

LIMITED CALIBRATION

_____

By _____ **Date** _____

DO NOT USE, OUT OF CALIBRATION*

OUT OF CALIBRATION

By _____ **Date** _____

DO NOT USE

*Sample of tag and may not reflect the color of tag the calibration vendor uses.

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Attachment 2 – Glossary

Accuracy – Measure of the degree by which the actual output of a device approximates the output of an ideal device nominally performing the same function.

As-found – Measurements made during calibration before any adjustments are made that could affect the accuracy and acceptability of the data collected with the M&TE since its last calibration.

As-left – Final measurements made during calibration, after any required adjustments to the M&TE being calibrated have been made. These data may be the same as "as-found" when no adjustments are required.

Calibration – Set of operations that establish, under specified conditions, the relationship between values indicated by a measuring instrument or measuring systems, and the corresponding standard, or known values derived from the standard.

Calibration interval – Length of time (days, months, years) that a measurement device may be used for acceptance inspections with a high level of confidence that the measurements are accurate.

Calibration organization/approved supplier – Ensures proper calibration and repair of M&TE. Performs calibration/work to physical and electrical standards traceable to NIST, or nationally recognized physical constants, necessary to perform required calibration services. Ensures the performance of field calibration services traceable to NIST upon request. External organizations providing calibration services must be on the NWP Qualified Suppliers List. The CCP qualified suppliers list (QSL) can include suppliers previously qualified by mobile vendors or generator sites.

Closing calibration – A calibration prior to removing M&TE from service with the intent of maintaining equipment as a spare.

Exit calibration – A calibration prior to removing M&TE from service with the intent to excess.

In use – M&TE being used while CCP operators are present.

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Attachment 2 – Glossary (Continued)

Measuring and test equipment (M&TE) – Devices or systems used to calibrate, measure, gauge, test, inspect, or control to acquire research, development, test, or operational data or to determine compliance with design, specifications, or other technical requirements. M&TE is normally used when a precision measurement with known tolerance and calibration traceability to NIST or other recognized standards is required.

M&TE history – Data that provides a calibration reliability profile for a piece of M&TE. Data may include as-found values for calibration cycles, any notes on repair, adjustments, restriction on use, next calibration due date, and other appropriate data.

M&TE usage history – Collection of data consisting of M&TE unique ID number, date M&TE was used, what M&TE was used on (e.g., tag, part number), and work control document (e.g., work packages, engineering maintenance standards, procedures, etc.).

National Institute of Standards and Technology (NIST) – U.S. Government organization that has responsibility for nationally recognized M&TE standards (formerly National Bureau of Standards).

Nondata M&TE – Portable test equipment used for preliminary checks, troubleshooting, or other nonprecision measurements where the data obtained will not be used to determine acceptability or verify conformance to established criteria.

Notice of deficiency – A notification that the equipment is lost, OOT, or defective.

Out-of-calibration – A condition in which the calibration for M&TE has expired or is otherwise indeterminate.

Out-of-tolerance (OOT) – A condition in which the readings, results, or function of M&TE are beyond the limits of permissible error.

Precision – The closeness of agreement between randomly selected individual measurements or test results under specified conditions. Precision can be viewed as repeatability.

Record of calibration – document that demonstrates the M&TE identified has been calibrated, using approved procedures, by comparisons to a known standard traceable to the NIST or other nationally accepted standard for those disciplines where no NIST standard exists.

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Attachment 2 – Glossary (Continued)

Reference standard – Standards (that is, primary, secondary, and working standards, where appropriate) used in a calibration program. These standards establish the basic accuracy limits for that program.

Reverse traceability – The ability to determine what work or equipment a piece of M&TE was used on, for purposes of impact analysis in response to a notice of deficiency.

Storage – M&TE will be stored at the end of each work shift or if CCP operators are not present. M&TE must be stored in an environment that will not adversely affect its accuracy (i.e., toolbox/storage cabinet).

Tolerance – The allowable deviation from a specified or true value.

Traceability – The ability to demonstrate, by means of recorded identification, a valid relationship between M&TE and nationally recognized standards (such as NIST), industry recognized standards, or accepted values of national constants.

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Attachment 3 – Out-of-Tolerance (OOT) Evaluation

1. M&TE ID Number:	2. Calibration Date:	3. Page ____ of ____

4. M&TE Item Description:

Manufacturer and Model Number:

CCP Process and Operations the M&TE Item is Used for:

5. Evaluation:

IF M&TE was used in OOT condition evaluate :

OOT Condition Found On M&TE Unit Under Test (UUT) : _____

Calibration Requirement Not Met by M&TE Item (UUT): _____

Range (or Tolerance) Required for CCP Process and Operations M&TE Item is Used for:_____

Based on Data Taken with UUT, was the Operating Range (or Tolerance) Violated?

YES ☐ If YES, Go to Block 6. NO ☐ If NO, Go to Block 7.

IF M&TE was NOT used in OOT condition, explain (e.g., "broke and was found in tolerance after repair"):
_____
Go to Block 7.

6. Associated NCR, (If Applicable):

7. Evaluator (Date Indicates that evaluation was completed):

_____ _____
Evaluator Print Name/Sign **Date**

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Attachment 4 – Calibration Interval/Tolerance Adjustment Evaluation

1. M&TE ID Number:	2. Calibration Date:	3. Page ____ of ____

4. M&TE Item Description:

Manufacturer and Model Number:
CCP Process and Operations the M&TE Item is Used for:

5. Calibration Parameter Being Evaluated: **Interval** ☐ **Tolerance** ☐ **Range** ☐

6. Evaluation:

What is the Current Calibration Interval, Tolerance, or Range for the M&TE Item?

Range (or Tolerance) Required for CCP Process and Operations M&TE Item is used for:

Basis for Changing M&TE Calibration Interval, Tolerance, or Range:

Recommended Change to M&TE Calibration Interval, Tolerance, or Range:

_____ _____
Cognizant Engineer Print Name/Sign **Date**

7. CCP M&TE Custodian Disposition of Calibration Interval, Tolerance, or Range Adjustment:

Recommendation Accepted? ☐ Yes ☐ No

Basis:
New Calibration Interval or Tolerance:

Follow-up Actions to Implement the Change:

☐ **Calibration Interval:**
Update IDC, Revise Calibration Procurement Documents, Revise Operations Procedures (if Required)

☐ **Calibration Tolerance:**
Add "COMMENT" In IDC, Revise Calibration Procurement Documents, Revise Ops Procedure (if Required)

☐ **Calibration Range:**
Apply "LIMITED CALIBRATION" Tag, Add "COMMENT" In IDC, Calibration Proc'mt. Docs., Ops Procedure (if Required)

_____ _____
CCP M&TE Custodian Print Name/Sign **Date**

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Attachment 5 – Exemption/Temporary Extension Evaluation

1. ID Number: (N/A for Exemptions)	2. Calibration Date: (N/A for Exemptions)	3. Page ____ of ____

4. M&TE Description:

Manufacturer and Model Number:

CCP Process and Operations the M&TE Item is Used for:

5. Evaluation is for: ☐ **Exemption** ☐ **Temporary Extension**

6. Evaluation:

Exemption: ☐

Is calibration required by procedure or regulatory requirement? ☐ Yes ☐ No

Basis for calibration exemption and how procedure or regulatory requirement will be met:

Temporary Extension: ☐
Temporary Extension requested for_____ (days) (Not to exceed 25% of Calibration Interval)

Basis for temporary extension:

_____ _____
Cognizant Engineer Print Name/Sign **Date**

7. Exemption/Temporary Extension Disposition

Accept Recommendation? ☐ Yes ☐ No

Basis:

Exemption Granted? ☐ Yes ☐ No

Temporary Extension for_____ (days) (Not to exceed 25% of Calibration Interval)

Follow-up Actions to Implement the Change:

☐ **Calibration Exemption:**
Update IDC (if Required – "ARCHIVE" file)

☐ **Calibration Extension:**
Issue Revised Cal. Tag, Update IDC & Add "EXTENSION JUSTIFICATION" in IDC

_____ _____
CCP M&TE Custodian Print Name/Sign **Date**

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Attachment 6 – Closing/Exit Calibration

1. ID Number:	2. Calibration Date:	3. Page ____ of ____

4. M&TE Description:

Manufacturer and Model Number:

CCP Process and Operations the M&TE Item is Used for:

5. Method used to Verify Measurement Data since Previous Calibration:

☐ **Re-calibration in accordance with Section 4.5.**

☐ **Field verification with known source:**

ID Number:
Calibration Date:
Calibration Due Date:

☐ **Other – Explain (e.g., M&TE Item was contaminated and had to be disposed):**

6. Associated NCR(s), (If Applicable):

7. Evaluator (Date Indicates that evaluation was completed):

_____ _____
Evaluator Print Name/Sign **Date**

M&TE Follow-up Actions:

☐ **Closing Calibration:**
"ARCHIVE" file & Add "COMMENT" in IDC

☐ **Exit Calibration:**
"ARCHIVE" file & Add "COMMENT" in IDC

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CCP-QP-017

Revision 3

CCP
Identification and Control of Items

EFFECTIVE DATE: 11/16/2006

J.R. Stroble

PRINTED NAME

APPROVED FOR USE

RECORD OF REVISION

Revision Number	Date Approved	Description of Revision
3	11/16/2006	Revised to implement the Waste Isolation Pilot Plant Hazardous Waste Facility permit requirements resulting from the Section 311/Remote-Handled (RH) Permit Modification Request (PMR).

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1.0 PURPOSE

This procedure describes the responsibilities, interfaces, and requirements for the identification and control of quality-affecting items or systems related to the Central Characterization Project (CCP) waste characterization and certification activities.

1.1 Scope

This procedure applies to identification and control of items or systems requiring status indicators that are related to the CCP activities associated with waste characterization, certification, packaging, and transportation. Status indicators are used for identification and control of items and systems.

2.0 REQUIREMENTS

2.1 References

Baseline Documents

- CBFO-94-1012, *U.S. Department Of Energy Carlsbad Field Office Quality Assurance Program Document*
- CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*
- CCP-PO-002, *CCP Transuranic Waste Certification Plan*

Referenced Documents

- CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control*
- CCP-QP-026, *CCP Inspection Control*
- CCP-QP-027, *CCP Test Control*

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2.2 General

2.2.1 Traceability requirements will be specified in design documents or implementing procedures. Processes will be established and implemented to control consumables and items with limited operating or shelf life and to prevent the use of incorrect or defective items. If codes, standards, or specifications include specific identification or traceability requirements (such as identification or traceability of the item to applicable specification or grade of material; heat, batch, lot, part or serial number; or specified inspection, test, or other records), identification and traceability methods will be implemented to ensure meeting the special requirements.

2.2.2 Status indicators identify the inspection, test, and operating status of items or systems procured or fabricated in support of CCP activities. Status indicators ensure that:

[A] Items are identified, controlled, and maintained in a manner that ensures traceability from time of receipt through installation or end use.

[B] Records are maintained to ensure that the item can be traced at all times from its source through installation or end use.

[C] Required inspections and tests are performed, acceptability of the item is known, and items that have not passed the required inspections and tests are not inadvertently installed, used, or operated.

2.2.3 The status indicator will:

[A] Be applied using materials and methods that provide a clear, permanent, and legible identification. These materials and methods may include physical markings, physical separation, or labels and tags.

[B] Not be detrimental to the function or service life of the item.

[C] Be transferred to each part of an identified item when the item is subdivided.

[D] Not be obliterated or hidden by surface treatments, coatings, or installation unless other means of identification are substituted.

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[E] Requirements for inspections of items supporting CCP activities are addressed in CCP-QP-026, *CCP Inspection Control*.

[F] Requirements for testing of CCP-related items are addressed in CCP-QP-027, *CCP Test Control*.

[G] Status indicators for nonconforming items will be controlled in accordance with CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control.*

2.3 Application and Removal of Status Indicators

2.3.1 Status indicator tags will be initiated, applied, and removed by personnel performing the verification of status.

2.4 Status of Items

2.4.1 Item identification methods include physical markings.

2.4.2 When physical markings are impractical or insufficient, status shall be maintained through indicators such as physical location, tags, markings, shop travelers, stamps, inspection records, operator aids, equipment labeling, or other suitable means. Status indicators will be used to:

[A] Provide identification and control of items

[B] Provide status of systems and components (e.g., tagging valves and switches) to prevent inadvertent operation

2.4.3 When the status of the item changes, the original status indicator will be removed by authorized personnel.

2.4.4 Status indicator tags will be legible, with all sections completed. Non-applicable sections will have "NA" entered.

2.4.5 Status indicators for nonconforming items will be controlled in accordance with CCP-QP-005.

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3.0 RESPONSIBILITIES

3.1 CCP Quality Assurance (QA)

3.1.1 Controls the process and ensures that the procedure is followed.

3.2 Operator

3.2.1 Applies a status indicator tag to the item or system when another status indicator process is not used.

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4.0 PROCEDURE

4.1 Nonconformance Discovery

4.1.1 When a nonconforming condition is discovered, initiate or ensure initiation of a nonconformance report (NCR) in accordance with CCP-QP-005.

4.1.2 Apply a CCP HOLD TAG to the item.

4.2 Application of Status Indicators

NOTE

Item identification and control system records will provide the operating status of items. The identification methods will preclude the inadvertent installation, use, or operation of items that have not passed required inspections and tests.

Operator

4.2.1 Identify condition or action that would change the status of an item or system.

4.2.2 When a nonconforming condition is discovered, initiate or ensure initiation of an NCR in accordance with CCP-QP-005.

NOTE

CCP HOLD TAGS will be used to identify nonconforming items. The CCP HOLD TAG will remain attached to the nonconforming item until disposition has been completed. The NCR will describe extent of the hold (e.g., a description of action(s) required prior to release of hold) and the NCR number will be included on the tag.

4.2.3 When another status indicator process is not used (e.g., logbooks) or as an additional safety measure, apply a status indicator tag to item or system.

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5.0 RECORDS

5.1 There are no records generated during the performance of this procedure.

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CCP-QP-018

Revision 10

CCP
Management Assessment

EFFECTIVE DATE: 12/31/2012

Mike Ramirez

PRINTED NAME

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RECORD OF REVISION

Revision Number	Date Approved	Description of Revision
2	07/15/2002	Placed in CCP-QP-010 format, and numerous changes throughout the procedure.
3	09/11/2003	Clarified CCP Project Manager participation in the Management Assessment process. Removed the requirement to separately sign the checklist and plan, and made the checklist optional.
4	12/03/2004	Added management assessment schedules and notifications to the list of QA records in Section 5.0. Changed CCP Project Manager to CCP Manager. Editorial changes throughout document. Updated references.
5	02/27/2006	In accordance with WTS Management direction, added WTS PAAA Coordinator to distribution of reports, and require assessment actions to be tracked in the WTS Commitment Tracking System.
6	11/16/2006	Revised to implement the Waste Isolation Pilot Plant Hazardous Waste Facility Permit requirements resulting from the Section 311/Remote-Handled (RH) Permit Modification Request (PMR). In addition, includes some editorial and format improvements.
7	10/01/2009	Revised in response to CAR-CCP-0004-09 to clarify the process for tracking management assessment actions in the Washington TRU Solutions (WTS) Commitment Tracking System, and to add Central Characterization Project (CCP) Safety to the review of management assessments whose scope includes an evaluation of safety.
8	06/08/2010	Revised in response to MA-CCP-0026-09, to clarify the process for entering action items into the Washington TRU Solutions Commitment Tracking System, and to improve consistency in reporting and classifying assessment results. Also changed language in the Purpose and Scope sections to align with WTS Management Policy 1.20, *Management Assessments*.
9	01/31/2012	Revised to delete the requirement for an annual management assessment summary report, based on revision to Washington TRU Solutions (WTS) procedure WP 15-GM1000, *Management Assessments*. Added the Performance Assurance Manager to the distribution for management assessment schedules and reports.

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RECORD OF REVISION (CONTINUED)

Revision Number	Date Approved	Description of Revision
10	12/31/2012	Revised to add the new position of Central Characterization Program (CCP) Management Assessment Coordinator. This position assumes responsibility for scheduling and tracking CCP management assessments, actions that were performed by Quality Assurance (QA) in previous revisions of the procedure. General requirements in Sections 2.2 through 2.6 were consolidated and transferred to newly-created Attachment 4, Management Assessment Criteria from the CBFO Quality Assurance Program Document and General Requirements.

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1.0 PURPOSE

This procedure establishes the process for performing management assessments.

1.1 Scope

This procedure provides instruction for the planning, performance, and reporting of management assessments including follow-up within the Central Characterization Program (CCP).

1.2 Managers at every level will periodically assess the performance of their organization to determine that work is performed within the scope of the project to identify problems, unresolved issues, and evaluate the implementation of programs. Management assessments should also address the adequacy of resources to achieve the organization's goals and objectives.

2.0 REQUIREMENTS

2.1 References

Baseline Documents

- DOE/CBFO-94-1012, *U.S. Department of Energy, Carlsbad Field Office Quality Assurance Program Document*
- CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*
- CCP-PO-002, *CCP Waste Certification Plan*
- WP 15-GM1000, *Management Assessments*

Referenced Documents

- CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control*
- CCP-QP-006, *CCP Corrective Action Reporting and Control*
- CCP-QP-008, *CCP Records Management*

3.0 RESPONSIBILITIES

3.1 CCP Manager

3.1.1 Participates in the management assessment process by reviewing individual management assessment reports as they are issued, as the basis for any senior management action that may be required, such as the identification and tracking of improvement opportunities.

3.1.2 Appoints a Management Assessment Coordinator

3.2 Management Assessment Coordinator

3.2.1 Prepares and maintains an annual schedule of Management Assessments based on input received from CCP management.

3.2.2 Maintains the Management Assessment Log

3.2.3 Assigns management assessment numbers

3.2.4 Ensures that a copy of each completed Management Assessment Report is forwarded to the CCP Manager, Quality Assurance (QA), the Site Project Manager (SPM), the CCP Records Center, the Nuclear and Worker Safety Compliance Coordinator, the Nuclear Waste Partnership (NWP) Performance Assurance Manager, and other management as appropriate.

3.2.5 Ensures that the NWP Performance Assurance Manager is aware of changes to the CCP schedule for performing management assessments. The NWP Performance Assurance Manager maintains the overall management assessment schedule for all of NWP.

3.3 Assessment Leader

3.3.1 Develops Management Assessment Plan.

3.3.2 Develops Management Assessment Checklist(s), if used.

3.3.3 Performs management assessments, and prepares, signs, and dates Management Assessment Report(s).

3.3.4 Ensures that the management assessment number is included as part of each record listed in Section 5.0.

3.3.5 Notifies the organization to be assessed prior to conducting the management assessment, only if the organization to be assessed is outside the area of responsibility of the manager performing the management assessment (such as assessment of a remote facility). This notification may be by letter, memorandum, or e-mail.

3.4 Safety

3.4.1 Reviews and approves those Management Assessment Reports whose scope includes an evaluation of safety, and issues safety memoranda or lessons learned as appropriate.

4.0 PROCEDURE

Management Assessment Coordinator

4.1 Prepare and publish an annual schedule of CCP project management assessments, with periodic (typically quarterly) updates. The schedules will be sent to the CCP manager, with copies to all managers who have assessments on the schedule. The NWP Performance Assurance Manager will be included in the distribution of published management assessment schedules and updates.

4.1.1 The criteria in Attachment 4, Management Assessment Criteria from the CBFO Quality Assurance Program Document and General Requirements, will be used in developing assessment schedules and periodic updates.

Assessment Leader

4.2 Obtain a number which comes from an electronic Management Assessment Log, from the Management Assessment Coordinator. Management Assessment Reports are numbered MA-CCP-XXXX-YY, where XXXX is a sequential number and YY is the last two digits of the calendar year in which the management assessment is performed.

4.3 Confirm that the scope of the management assessment is consistent with the requirements of this procedure.

4.4 Develop a Management Assessment Plan (for each individual assessment) (See example in Attachment 3, Management Assessment Plan [Example]).

4.5 Develop Management Assessment Checklist(s) or include assessment elements in the Management Assessment Plan.

4.5.1 Management assessment checklists, if used, will be consistent with the format shown in Attachment 2, Management Assessment Checklist (Example).

4.6 **IF** the organization to be assessed is outside the area of responsibility of the manager performing the management assessment (such as assessment of a remote facility),
THEN notify the organization that is going to be assessed by memorandum, letter, or e-mail.

4.7 Conduct the assessment.

4.8 Identify any problems that hinder the organization from achieving its objectives.

4.8.1 If the assessed organization was outside the area of responsibility of the manager who performed the management assessment, brief the responsible manager on the results at the end of the assessment as soon as possible, prior to the issue of the assessment report.

4.9 Prepare the management assessment report in a format that is consistent with the example in Attachment 1, Management Assessment Report Format (Example).

NOTE

Safety issues must be brought to the attention of management as soon as they are identified. If they cannot be resolved immediately, interim measures (e.g., physical barriers) must be implemented to protect personnel until they can be corrected.

4.10 Include a discussion of the assessment results, as well as all deficiencies, other conditions requiring resolution, and observations that are identified during the assessment.

4.11 Classify management assessment results as follows, for purposes of reporting:

4.11.1 Deficiency – A condition adverse to quality (CAQ) or nonconformance as defined in CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control* or CCP-QP-006, *CCP Corrective Action Reporting and Control* respectively.

4.11.2 Other Conditions Requiring Resolution (OCRR) – A condition that requires resolution but which does not meet the definition of a deficiency. This includes, but is not limited to safety issues and issues for which there are no clear requirements.

4.11.3 Observation – A condition that if not controlled, could lead to a deficiency.

4.11.4 Recommendation – A suggested opportunity for process improvement or enhanced compliance.

4.11.5 Programmatic Strength – A condition that affects achievement of organizational objectives in a positive way.

4.12 **IF** CAQs are noted during the course of this management assessment, **THEN** initiate a Corrective Action Report (CAR) in accordance with CCP-QP-006.

4.13 **IF** nonconforming conditions are identified during this management assessment,
THEN initiate a Nonconformance Report (NCR) in accordance with CCP-QP-005.

4.14 **IF** other conditions requiring resolutions are identified during this management assessment (other than CARs and NCRs),
THEN determine the actionee for each such condition (e.g., the Responsible Manager).

4.14.1 Discuss the following with each actionee:

- The condition identified in the management assessment
- The action(s) required to resolve the condition
- The due date for completing the action(s)

4.14.2 **IF** the condition can be resolved (and the action(s) verified) while the management assessment report is still being finalized,
THEN state in the final report that the condition was corrected during the assessment, **AND** list the action(s) in the "Actions Taken" section of the final report.

NOTE

It is not the intent to track other assessment results such as Recommendations or Observations in NWP commitment tracking system (CTS); only those actions in response to conditions requiring resolution need to be entered into CTS.

4.14.3 **IF** the actions to resolve a condition cannot be completed and verified while the management assessment report is being finalized,
THEN ensure entry of the action into the CTS using the information in Step 4.14.1, above. The actual data entries are made by CCP administration personnel (e.g., the CCP secretary) with access to CTS.

4.14.4 List each such action in the "Results" section of the final report, along with the CTS tracking number.

4.15 Print, sign, and date the completed Management Assessment Report and provide to the Assessment Leader's manager for review, evaluation, and approval.

Assessment Leader's Manager

4.16 Review, evaluate, and approve the Management Assessment report or return the report to the Assessment Leader for resolution of identified issues.

Assessment Leader

4.17 **IF** the scope of the Management Assessment Report includes an evaluation of safety,
THEN provide to CCP Safety for review and evaluation.

4.18 Once the report is approved for issue by the Assessment leader's Manager, provide the (original) to the CCP Management Assessment Coordinator for transmittal to appropriate individuals.

Safety

4.19 Review, evaluate, and sign the Management Assessment Report for any safety improvement opportunities.

4.20 **IF** safety improvement opportunities are identified,
THEN issue a safety memorandum or lessons learned to appropriate organizations.

Management Assessment Coordinator

NOTE

The Nuclear and Worker Safety Compliance Coordinator will review each completed CCP management assessment report for any issues and conditions requiring further action in accordance with NWP program requirements.

4.21 Within 30 working days of final sign-off, distribute the report under cover of memorandum to the CCP Manager, with copies to the SPM, the QA Assurance Programs Manager, Safety (if the report includes an evaluation of safety), the Nuclear and Worker Safety Compliance Coordinator, the NWP Performance Assurance Manager, and other management, as appropriate, **AND** submit the (original) record copy to CCP Records.

CCP Manager

NOTE

The CCP Manager receives copies of all CCP Management Assessment Reports. As the senior manager for CCP, the CCP Manager directly participates in the management assessment process.

4.22 Review individual management assessment reports for identification and tracking of improvement opportunities as appropriate.

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5.0 RECORDS

5.1 Records generated during the performance of this procedure are maintained as QA records in accordance with CCP-QP-008, *CCP Records Management*. The records are the following:

5.1.1 <u>QA-Nonpermanent</u>

[A] Management Assessment Schedule

[B] Management Assessment Notifications (letter, memorandum, email)

[C] Management Assessment Report(s) with Transmittal Memorandum

[D] Management Assessment Checklist(s), if applicable

[E] Management Assessment Plan

[F] Management Assessment Log

Attachment 1 – Management Assessment Report Format (Example)

Management Assessment Number: _____

Date Initiated: _____

Assessment Type: Management

Project or Program: Central CharacterizationProgram

Basis for Assessment: (List the requirements governing this assessment).

Purpose: Describe why the assessment is being performed.

Background: If necessary, provide information leading to the need to perform the assessment.

Results: Describe what was actually done during the assessment and include all deficiencies, OCRRs, observations and programmatic strengths. Where appropriate include the requirement violated. Also include any actions that are necessary to resolve deficiencies, OCRRs and observations, and reference CTS tracking numbers where applicable.

Deficiencies:

Other Conditions Requiring Resolution:

Observations:

Recommendations:

Programmatic Strengths:

Actions Taken/ Corrected During Assessment: _____

Assessment Leader: _____ / _____
Print/Sign *Date*

Manager's Approval: _____ / _____
Print/Sign *Date*

Safety Review: (if applicable, or "N/A") _____ / _____
Print/Sign *Date*

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Attachment 2 – Management Assessment Checklist (Example)

CCP Management Assessment Checklist Page __ of __						
Assessment Number:					**Attachment:_____**	**Date:**
Attribute	**Ref. No.**	**SAT**	**UNSAT**	**N/A**	**Comment**	

Attachment 3 – Management Assessment Plan (Example)

Management Assessment Plan
(Management Assessment Number MA-CCP-XXXX-YY***)***

Management Assessment Plan

Management Assessment Scope

Elements to be Assessed

N/A if checklist is prepared. Otherwise, list the elements to be assessed.

Deliverables:

- Management Assessment Plan
- Completed Management Assessment Checklists (if prepared)
- Management Assessment Report

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Attachment 4 – Management Assessment Criteria from the CBFO Quality Assurance Program Document and General Requirements

Planning for management assessments should include management evaluation of the effectiveness of new processes, procedures, and programs, or significant changes in these areas. When major changes are made in an area, the responsible manager should schedule and perform a management assessment after a suitable implementation period.

Assessment planning should also take into consideration areas with previously-identified weaknesses, as documented in CARs.

The management assessment should include an introspective evaluation to determine if the entire integrated management system effectively focuses on meeting strategic goals.

Managers will retain overall responsibility for management assessments. Direct participation by senior management is essential to the success of the process because management is in the position to view the organization as a total system. Management assessments will be conducted regularly and reports provided to an identified senior management level with sufficient authority to affect corrective measures, as necessary.

Management assessments will be comprehensive enough to keep management informed of the status of CCP Programs and the effectiveness of the implementation, as well as other aspects discussed in this procedure.

Processes being assessed should also include:

- Strategic planning
- Organizational interfaces
- Cost control
- Use of performance indicators
- Staff training and qualifications
- Supervisory oversight and support

Effective management assessments should evaluate such conditions as the state of employee knowledge, motivation, and morale; the amount of mutual trust and communication among workers and organizations; the existence of an atmosphere of creativity and improvement; and the adequacy of human and material resources.

Management assessment results will be used as input to the continuous improvement process.

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CCP-QP-019

Revision 7

CCP
Quality Assurance Reporting to Management

EFFECTIVE DATE: 01/23/2013

Mike Ramirez

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RECORD OF REVISION

Revision Number	Date Approved	Description of Revision
2	01/21/2004	Updated a reference in Section 2.0 and deleted the requirement in Section 3.1 to submit the semiannual report for approval.
3	08/01/2005	Changed responsibility for sending the report to Records from SPM to SPQAO and made several editorial clarifications.
4	11/16/2006	Revised to implement changes to the Waste Isolation Pilot Plant Hazardous Waste Facility Permit requirements resulting from the Section 311/RH PMR.
5	08/26/2008	Revised to add adverse trends related to removal of drums from Waste Isolation Pilot Plant (WIPP) Waste Information System (WWIS) as additional information to be included in the semi-annual report. This change is an action resulting from U.S. Department of Energy Carlsbad Field Office (DOE/CBFO) Corrective Action Report (CAR) 08-025.
6	02/23/2011	Revised to clarify administrative protocols on the distribution of the Semiannual Quality Assurance (QA) Report.
7	01/23/2013	Revised to incorporate Nuclear Waste Partnership (NWP) transition changes.

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1.0 PURPOSE

This procedure establishes a mechanism for providing a Semiannual Quality Assurance (QA) Report on the activities occurring within the Central Characterization Program (CCP) to the Site Project Manager (SPM) and the U.S. Department of Energy (DOE), Carlsbad Field Office (CBFO).

1.1 Scope

This procedure applies to QA and the SPM and covers QA/Quality Control (QC) activities that occur during the semiannual period.

2.0 REQUIREMENTS

2.1 References

Baseline Documents

- DOE/CBFO-94-1012, *U.S. Department Of Energy Carlsbad Field Office Quality Assurance Program Document* (QAPD)
- CCP-PO-002, *CCP Transuranic Waste Certification Plan*

Referenced Documents

- CCP-QP-029, *CCP Corrective Action Management*
- CCP-QP-008, *CCP Records Management*
- CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*

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3.0 RESPONSIBILITIES

3.1 Quality Assurance (QA)

3.1.1 Reviews relevant information for the semiannual period.

3.1.2 Submits a Semiannual QA Report summarizing all relevant information on QA/QC activities during the period to the NTP Certification Manager.

3.2 Site Project Manager (SPM)

3.2.1 Reviews the Semiannual QA Report, and if comments are identified, forwards a copy of the report with comments to the CBFO and provides a copy of the comments to Records in accordance with CCP-QP-008, *CCP Records Management*.

3.2.2 Implements corrective measures, as necessary, in accordance with CCP-QP-029, *CCP Corrective Action Management*.

3.3 NTP Certification Manager

3.3.1 Submits the Semiannual QA Report summarizing all relevant information on QA/QC activities during the semiannual period to the SPMs and the CBFO.

3.3.2 Provides a copy of the completed Semiannual QA Report to Records.

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4.0 PROCEDURE

QA

4.1 Review the results of assessments, performance demonstration program sample results, significant QA/QC problems, trend analyses, and performance assessments of QC data, including performance against data quality objectives (DQOs).

4.2 Prepare a report of all relevant information on the QA/QC activities performed during the semiannual period. The Semiannual QA Report includes the following information, as appropriate:

4.2.1 Any changes in CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*.

4.2.2 Identification of any significant QA/QC problems, recommended solutions, and corrective actions.

4.2.3 An assessment of QC data collected during the period, including the frequency of repeated analyses, reasons they were repeated, and corrective actions.

4.2.4 Discussions of whether the QA objectives (QAOs) have been met and any resulting impact on decision making.

4.2.5 Limitations on the use of measurement data.

4.2.6 Status of performance demonstration program sample results.

4.2.7 Results of audits, assessments, and surveillances conducted during the program.

4.2.8 Any adverse trends related to the removal of drums from Waste Isolation Pilot Plant (WIPP) Waste Information System (WWIS)/Waste Data System (WDS).

4.3 Provide Semiannual QA Report to the NTP Certification Manager.

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NOTE

QA generates and approves the Semiannual report but cannot distribute the report to the CBFO because of administrative protocols for external correspondence.

NTP Certification Manager

4.4 Distribute the completed Semiannual QA Report to the SPM and the CBFO.

4.5 Provide a copy of the report to Records.

SPM

4.6 Review the Semiannual QA Report.

4.7 **IF** comments are identified,
THEN forward a copy of the report, with comments as appropriate, to the CBFO, **AND** provide a copy of the comments to Records.

4.8 Effect corrective measures, as necessary, in accordance with CCP-QP-029.

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5.0 RECORDS

5.1 Records generated during the performance of this procedure are maintained as QA records in accordance with CCP-QP-008. The records are the following:

<u>QA/Nonpermanent</u>

5.1.1 Semiannual QA Reports (may include comments and resolutions)

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CCP-QP-021

Revision 8

CCP
Surveillance Program

EFFECTIVE DATE: 01/16/2013

Mike Ramirez

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RECORD OF REVISION

Revision Number	Date Approved	Description of Revision
3	06/03/2002	Section 2.0, Requirements (page 2): Change the first paragraph after the bullets to read as follows: "Planned and periodic surveillance will be conducted to measure item and service quality, process effectiveness, and promote improvement. The organization performing the assessments will have sufficient authority and freedom from the activities being assessed to carry out its responsibilities. Persons conducting surveillances will be qualified in accordance with CCP-QP-002, *CCP Training and Qualification Plan*, and knowledgeable of the items and activities being assessed."
4	05/24/2004	Revised Sections 1.1, 2.0, 2.3, 2.4, 4.0, 5.0 and Figure 2.
5	11/16/2006	Reengineered Surveillance Program to make it more comprehensive, to ensure findings are identified and tracked, and to ensure consistency amongst CCP Quality Assurance (QA) personnel, and to implement the Waste Isolation Pilot Plant Hazardous Waste Facility Permit-requirements resulting from the Section 311/Remote-Handled (RH) Permit Modification Request (PMR). Addressed Carlsbad Field Office (CBFO) Document Review Record (DRR) comment.
6	12/10/2008	Revised to delete reference to “assessments” incorporate conditions Corrected During Surveillance (CDS) and clarify training and qualification of surveillance personnel.
7	05/07/2010	General revision to clarify follow-up to observations and provide clarity of text.
8	01/16/2013	Revised to incorporate Nuclear Waste Partnership (NWP) transition changes.

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1.0 PURPOSE

This procedure establishes the responsibilities and requirements for planning, performing, documenting, and reporting independent surveillances (evaluations) of Central Characterization Program (CCP) transuranic (TRU) waste characterization loading and shipping activities.

1.1 Scope

This procedure applies to CCP organizations and personnel performing surveillances of TRU waste characterization activities. This procedure also applies to CCP facilities being evaluated. Planned and periodic surveillances will be conducted to measure item and service quality, process effectiveness, and promote improvement. The organization performing the surveillance will have sufficient authority and freedom from the activities being evaluated to carry out its responsibilities. Person conducting surveillances will complete a Quality Assurance Surveillance Personnel Qualification Card prepared and approved by required individuals in accordance with CCP-QP-002, *CCP Training and Qualification Plan,* and be knowledgeable of the items and activities being evaluated.

Surveillances will accomplish the following:

- Monitor work in progress;
- Document compliance or noncompliance with established requirements and procedures;
- Identify actual and potential conditions adverse to quality;
- Obtain timely corrective action commitment from cognizant managers for identified conditions adverse to quality;
- Provide notification to responsible managers of the status and performance of work under surveillance; and
- Verify timely implementation of corrective action

All surveillances will have a unique Surveillance (SUR) Number. The Surveillance (SUR) Log, (See Attachment 3, Surveillance [SUR] log, for an example) will provide the following information:

- SUR Number
- Item, activity, or process being evaluated

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- Date the surveillance was initiated (Initiation Date)
- Person(s) that initiated the surveillance (Surveillance Lead)

The SUR number system will provide the capability to determine the following:

- Designator for surveillance (SUR)
- Facility identifier (LANL, INL, SRS, ORNL, CCP, etc.)
- Sequential number issued for the organization or facility in that calendar year
- Calendar year issued

Example SUR numbers:

- SUR-LANL-0001-06
- SUR-SRS-0002-06
- SUR-CCP-0013-06

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2.0 REQUIREMENTS

2.1 References

Baseline Documents

- DOE/CBFO-94-1012, *U.S. Department of Energy Carlsbad Field Office Quality Assurance Program Document*

Referenced Documents

- CCP-QP-002, *CCP Training and Qualification Plan*
- CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control*
- CCP-QP-008, *CCP Records Management*
- CCP-QP-029, *CCP Corrective Action Management*

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3.0 RESPONSIBILITIES

3.1 Assurance Programs Manager

3.1.1 Ensures implementation of the surveillance program as described in this procedure.

3.1.2 Approves the surveillance schedule.

3.1.3 Ensures that surveillance personnel have successfully completed a Quality Assurance Surveillance Personnel Qualification Card.

3.1.4 Ensures surveillance personnel have sufficient authority and organizational freedom to carry out their assigned responsibilities.

3.1.5 Assigns Surveillance Lead.

3.1.6 Provides information on status and/or findings to the Nonconformance Report (NCR) Coordinator, Corrective Action Report (CAR) Coordinator and Nuclear and Worker Safety Compliance Coordinator.

3.2 Surveillance Lead

3.2.1 Selects the Surveillance Team Members and ensures they have been qualified by the Assurance Programs Manager.

3.2.2 Provides information to the surveillance team.

3.2.3 Notifies affected organizations of surveillances, as applicable.

3.2.4 Develops the surveillance plan.

3.2.5 Approves surveillance checklists, when used by surveillance team members.

3.2.6 Organizes and directs the surveillance.

3.2.7 Reports the surveillance results.

3.2.8 Follows up on observations and findings identified in previous surveillances.

3.3 Surveillance Team Members

3.3.1 Identifies the criteria to be used during the surveillance.

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3.3.2 Develops the surveillance checklist(s), if applicable, under the direction of the Surveillance Lead.

3.3.3 Informs the Surveillance Lead of progress and/or problems with assigned tasks periodically during the surveillance.

3.3.4 Notifies the Cognizant Manager/Surveillance Lead if conditions are identified that are believed to be unsafe.

3.4 Surveillance Coordinator

3.4.1 Develops and maintains a surveillance schedule.

3.4.2 Develops and maintains a Surveillance (SUR) Log Example provided as Attachment 3, Surveillance Log).

3.4.3 Develops and maintains surveillance schedules that contain the anticipated surveillances for a specific time frame.

3.4.4 Prepares copies of the surveillance schedules for record or contract deliverable purposes, as necessary.

3.5 Cognizant Manager of Area Evaluated

3.5.1 Provides timely corrective action for conditions adverse to quality and tracks and follows up on Observations identified during the surveillance.

3.6 NCR/CAR Coordinator

3.6.1 Enters NCR/CAR data into the Integrated Data Center or the WIPP Commitment Tracking System (CTS) for tracking and follow-up-purposes.

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4.0 PROCEDURE

Assurance Programs Manager

4.1 In conjunction with Management, determine areas/activities to be evaluated.

Surveillance Coordinator

4.2 Prepare and maintain the surveillance schedule based on QA and Management input, **AND** obtain Assurance Programs Manager approval.

Assurance Programs Manager

4.3 Approve the surveillance schedule.

NOTE

The Assurance Programs Manager's signature on correspondence transmitting surveillance schedules to Management will constitute the Assurance Programs Manager's approval of surveillance schedules and assignment of Surveillance Leads.

4.4 Assign a Surveillance Lead.

Surveillance Lead

4.5 Obtain a SUR Number from the Surveillance Coordinator.

NOTE

The following should be considered when selecting Surveillance Team Members:

- Personnel having direct responsibility for performing the activities being evaluated shall **NOT** be involved in the selection of the team.
- Surveillance Team Members shall have requisite authority to perform surveillances, and shall be independent from the organization being evaluated.
- During surveillance, technical specialists shall be used when evaluating the adequacy of technical processes.
- The Surveillance Lead will ensure that technical specialists are knowledgeable of the technical processes being evaluated, and that specialists receive the same instructions as other team members.

4.6 Select Surveillance Team (as needed) based on the scope, complexity, or special nature of the work being evaluated, technical expertise, availability, experience, and the prospective member's ability to provide an objective contribution.

4.7 Ensure that the Surveillance Team collectively have appropriate training and experience commensurate with the scope of the surveillance.

4.8 Prepare the Surveillance Plan (Example provided as Attachment 1, Surveillance Plan) to include the elements specified.

4.9 Review, with Surveillance Team, any plan generated, pertinent background information including previous surveillance or oversight results, applicable procedures, and applicable technical documents to familiarize Surveillance Team with the work being evaluated.

4.10 Notify the cognizant organization(s) of the surveillance date and the purpose of the surveillance.

Surveillance Team Members

4.11 Prepare surveillance checklists (as appropriate) listing the elements to be evaluated.

4.12 Evaluate the applicable quality program element(s) by examining objective evidence, observing activities in progress, examining items (including components, specimens, and machinery, etc.), and/or interviewing personnel responsible for the activity. Include technical evaluations of the applicable procedures, instructions, activities, and items, as appropriate.

4.13 Evaluate the objective evidence related to the planning and technical aspects of work performance to the depth necessary to determine if these elements are being implemented effectively.

4.14 Review previous corrective actions, as applicable, to evaluate implementation and effectiveness when recurring problems are found.

4.15 Review applicable documents, standards, and criteria pertaining to the process to be evaluated.

4.16 Observe, to the extent possible, actual operations to verify conformance to requirements.

4.17 Conduct interviews with selected personnel having knowledge of the activity or area of evaluation.

4.18 Document the results of the surveillance with sufficient detail to allow preparation of the surveillance report including but not limited to objective evidence examined and personnel interviewed.

4.19 Inform the Surveillance Lead of progress and/or problems with assigned tasks periodically during the surveillance.

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4.20 Notify the Cognizant Manager/Surveillance Lead if conditions are identified that are believed to be unsafe.

Surveillance Lead

4.21 Notify the Assurance Programs Manager and the management of the cognizant organization as soon as practicable if conditions are discovered that could have a significant adverse impact on prior work or affect work in progress, or if conditions require prompt attention.

4.22 If applicable, prepare NCRs or CARS in accordance with CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control* or CCP-QP-029, *CCP Corrective Action Management*.

4.23 Brief management of the cognizant organization.

4.24 Prepare the formal surveillance report following the guidance in the Surveillance Report (Example provided as Attachment 2, Surveillance Report) and include the following elements, as applicable:

- Identify findings which are conditions that deviate from the requirements, with sufficient detail to enable corrective actions to be taken by the cognizant organization, and subsequent closure by QA. Briefly state the requirement(s) applicable to the deficiencies cited. Group findings of a common nature together whenever possible so that systematic problems can be identified. .

- If observations are identified, state that conditions observed, and if not addressed, could deteriorate into a finding.

- Provide recommendations that could strengthen the existing program or process.

- Include in the report descriptions of all actions taken to resolve conditions, and identify those conditions as being corrected during the surveillance (CDS).

4.25 Submit to the Assurance Programs Manager for review and approval.

Assurance Programs Manager

4.26 Review the surveillance report and resolve any issues with the Surveillance Lead.

NOTE

The preferred system for tracking Surveillances is the Integrated Data Center. However, if the system is unavailable for Surveillance Tracking, use of the WIPP CTS is acceptable.

4.27 Approve and issue the surveillance reports to management, Nuclear and Worker Safety Compliance Coordinator, NCR/CAR Coordinator, Surveillance Coordinator, and the cognizant Subcontract Technical Representative (STR) for the Host site.

NCR/CAR Coordinator

4.28 Make a separate entry for each finding (NCR/CAR) identified in the report into the Integrated Data Center or the WIPP CTS.

Cognizant Manager of Surveilled Area

4.29 Ensure timely and effective corrective actions in response to CARs or NCRs or other conditions requiring resolution resulting from the surveillance.

4.30 Work with the Surveillance Lead and the QA Manager to resolve issues regarding necessary corrective actions.

4.31 Upon completion of corrective actions associated with surveillance, inform the NCR/CAR Coordinator and the Surveillance Coordinator.

Surveillance Lead/Assurance Programs Manager

4.32 Track the progress of corrective actions required by any CAR or NCR written as the result of the surveillance.

Surveillance Coordinator

4.33 Upon completion of corrective actions associated with surveillance, inform the NCR/CAR Coordinator.

4.34 Update the Surveillance Schedule and Log (Attachment 3).

5.0 RECORDS

5.1 Records generated during the performance of this procedure are maintained as QA records in accordance with CCP-QP-008, *CCP Records Management*. The records are the following:

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5.1.1 QA/Nonpermanent

[A] Surveillance File which includes the following:

- Surveillance Notification, if applicable
- Surveillance Plan
- Surveillance Checklist(s), if applicable
- Surveillance Report(s)

[B] Surveillance (SUR) Log

[C] Surveillance Schedule

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Attachment 1 – Surveillance Plan (Example)

SURVEILLANCE PLAN

Surveillance Number:

Organization to be Evaluated:

Location:

Surveillance Dates:

Surveillance Team:

Scope:

Applicable Requirements Documents:

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Attachment 2 – Surveillance Report (Example)

SURVEILLANCE REPORT

SUR-XXXX-####-##

Central Characterization Program

Surveillance Number:

I. SUMMATION OF RESULTS

II. SURVEILLANCE SCOPE

III. CRITERIA

IV. PERSONNEL CONTACTED

V. FINDINGS (NCR/CAR)

VI. ISSUES CORRECTED DURING THE SURVEILLANCE

VII. CONCERNS PREVIOUSLY IDENTIFIED

VIII. OBSERVATIONS

IX. RECOMMENDATIONS

X. OBJECTIVE EVIDENCE

SURVEILLANCE LEAD_____DATE_____

ASSURANCE PROGRAMS MANAGER_____DATE_____

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Attachment 3 – Surveillance (SUR) Log (Example)

SUR Number	Item, Activity, or Process Evaluated	Surveillance Lead	Initiation Date	Completion Date

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CCP-QP-022

Revision 13

CCP
Software Quality
Assurance Plan

EFFECTIVE DATE: 02/25/2013

Mike Ramirez

PRINTED NAME

APPROVED FOR USE

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RECORD OF REVISION

Revision Number	Date Approved	Description of Revision
3	09/26/2002	Made numerous changes to section and made changes to all attachments. Added step 4.9.1[K]. Added a Record of Revision. Updated Procedure Titles.
4	07/28/2005	Revision in response to Carlsbad Field Office (CBFO) Corrective Action Reports (CARs) # 05-031 and # 05-032 from the Idaho National Laboratory (INL) Certification Audit.
5	08/09/2005	Revised to change wording in Scope to align with the Site Project Manager (SPM) responsibilities.
6	01/25/2006	Revised to add new Section 4.7, language regarding proprietary software, steps to Section 4.5 and minor clarifications. This revision is in response to CBFO CAR 06-007.
7	05/30/2006	Removed the responsibility of the Software Configuration Management Coordinator (SCMC) to issue Software Change Order (SCO), SCO Addendum and SPER numbers and to maintain the associated logs.
8	11/16/2006	Revised to implement the Waste Isolation Pilot Plant Hazardous Waste Facility Permit requirements resulting from the Section 311/Remote-Handled (RH) Permit Modification Request (PMR).
9	10/15/2007	Revised in response to Central Characterization Project (CCP) Corrective Action Report (CAR) CAR-INL-0009-06 and in response to comments from the user community. The procedure was completely revised to provide separate sections addressing each type of software. The forms were adjusted to accommodate the newly-created sections, but the overall process was not significantly changed. A new section was added, addressing the control and use of Library Data Files.
10	10/16/2008	Revised to include Software Configuration Change Report (SCCR) for Central Characterization Project (CCP) software. Added the role of Records Custodian. CCP software end user testing is now required.

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RECORD OF REVISION (Continued)

Revision Number	Date Approved	Description of Revision
11	12/08/2009	Revised to include unique identifier information on all applications within commercial off the shelf software (COTS) spreadsheets (software change order [SCO] #, Addendum #, Software name and version, and tested operating environment). Annual review of the Software Inventory Listing (SIL) will be performed incrementally on a quartery basis. Minor software changes were also incorporated.
12	11/18/2010	Revised to add steps for the Software Configuration Management Coordinator (SCMC) to issue software change order (SCO) numbers through the data center. This is in reference to the CAR-CCP-0010-10.
13	02/25/2013	Revised to include Safety Software per Department of Energy (DOE) Order 414.1D, and to remove repetition and streamline procedure.

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1.0 PURPOSE

This Central Characterization Program (CCP) Software Quality Assurance (QA) Plan (SQAP) addresses the procurement, development, maintenance, configuration management, and use of computer software, as applied to waste characterization, waste certification, and waste transportation activities.

1.1 Scope

This SQAP applies to all computer software including applications developed within Commercial-Off-The-Shelf (COTS) or System Software, used by the Nuclear Waste Partnership (NWP) Limited Liability Corporation (LLC), CCP, or any CCP subcontractor that produces data used to process, gather, or generate information used to make design, analytical, operational, or compliance-related decisions about transuranic (TRU) waste characterization, waste certification, waste transportation, or waste acceptance.

1.2 Applicable Software

1.2.1 System Software

System Software includes operating systems such as Windows, Linux, and system utilities such as compilers, assemblers, translators, interpreters, query languages, word processing programs, spreadsheet programs, database managers, and graphing programs. System Software is exempt from the requirements of this SQAP.

1.2.2 Library (Data) Files

Library files (e.g., nuclide library files used for Nondestructive Assay [NDA]) containing vendor-supplied data shall be controlled by the qualified supplier. A Software Change Order (SCO) is required for the initial library files when they are introduced into the CCP program for installation, and when they are updated with qualified supplier changes.

Data files that do not affect accuracy or precision, or the quality and correctness of the information, are exempt.

1.2.3 Supplier Software

Software that’s initial design, programming, and testing is performed by a third party. Supplier Software can be categorized as COTS, System Software, or Firmware and could be supplied by either a Qualified or Non-qualified Supplier.

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[A] COTS Software

COTS are software products that are general purpose, ready-made and available for sale to the general public. COTS products are mass-produced, and are designed to be implemented easily into existing systems without the need for customization by the vendor. COTS software that meets the requirements of Section 1.1 are not exempt from this SQAP.

[B] Applications within COTS

Specific Applications developed for use that fall under the applicability of this SQAP, based on COTS or System Software (e.g., Microsoft (MS) Excel spreadsheets, MS Access databases, detailed formulas, or macros) are not exempt from the requirements of this SQAP.

[C] Qualified Supplier Software

Qualified Supplier software is software that is developed for CCP to perform a specific end-user function. Only software that is provided from vendors that are on the NWP Qualified Supplier list (QSL) may be considered as Qualified Supplier software.

[D] Non-Qualified Supplier Software

Non-Qualified Supplier software is also developed for CCP to perform a specific end-user function. Non-Qualified Supplier software is provided by vendors that are not on the NWP QSL. Additional requirements are necessary for Non-Qualified Supplier software to ensure that it meets CCP criteria, before it can be used.

1.2.4 Safety Software

Safety software includes the following:

Safety System Software – Software that performs a safety function as part of a structure, system, or component and is cited in either a) a Documented Safety Analysis, or b) an approved hazard analysis.

Safety and Hazard Analysis Software and Design Software – Software that is used to classify, design, or analyze nuclear facilities. This software is not part of a structure, system, or component (SSC), but helps to ensure the proper accident or

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hazards analysis of nuclear facilities or a SSC that performs a safety function.

Safety Management and Administrative Controls Software – Software that performs a hazard control function in support of nuclear facility or radiological safety management programs or technical safety requirements or other software that performs a control function necessary to provide adequate protection from nuclear facility or radiological hazards. This software supports eliminating, limiting, or mitigating nuclear hazards to workers, the public, or the environment.

1.2.5 CCP Software

CCP Software is in-house custom software developed for CCP Personnel to perform specific end user tasks.

1.2.6 Firmware

Vendor supplied software that is included as an integral part of an instrument (e.g., programmed in a read-only memory [ROM] chip) and cannot be modified by another party. Firmware that cannot be removed or updated is exempt from the requirements of this SQAP. Firmware that is removable or updatable will be treated as software in accordance with this SQAP.

1.3 Software Evaluation

Software used by CCP will be evaluated to determine the applicable sections of this SQAP. Attachment 1, Software Evaluation Checklist, will be used for this evaluation.

1.4 Configuration Management

Configuration of software shall be maintained as follows:

Software shall be placed under configuration control as each configuration item is approved during the software development life cycle or as Qualified Supplier software is brought into the CCP program. A software baseline shall define the most recent approved software configuration. The configuration items and their associated documentation shall be traceable to one another.

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1.4.1 Labeling System

A labeling system for configuration items shall be implemented that:

- Uniquely identifies each configuration item.
- Identifies changes to configuration items by revision or version identifier.
- Provides the ability to uniquely identify each approved configuration of the revised software that is available for use.

1.5 Software Change Orders (SCO)

All software applications used to process, gather, or generate information used to make design, analytical, operational, or compliance-related decisions about TRU waste characterization, waste certification, waste transportation, or waste acceptance must have an Attachment 2, Software Change Order, completed when initially brought under software configuration management. Each application will be assigned an SCO number (see Section 1.5.1) that will act as a unique identifier in order to track future modifications to the software, new installations, retirements, etc.

An addendum to an SCO is indicated by Block 2 on Attachment 2. An addendum to an SCO is used for additional installations, removals, and modifications to software. A modification may be considered a minor change. The degree of software validation shall be commensurate with the nature and scope of the change. A minor change is any change that cannot affect the data quality of the application. Examples of this would be changing screen colors, adding a corporate logo, correcting grammar, etc.

NOTE

The Software Configuration Management Engineer (SCME) works with the Software Developer (SD), Site Project Manager (SPM), and other appropriate individuals to determine if a change is considered a minor change.

Each revision must have an addendum to the corresponding SCO completed.

1.5.1 SCO Numbering System

All software, when brought under the software configuration management program, will be assigned a unique SCO number by the SCME (example: 851, 852, etc.). The SCME will obtain the unique SCO number from the Integrated Data Center (IDC).

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1.6 Software Inventory Listing

The Software Inventory Listing (SIL) is a list that details all active, superseded, exempt, and retired software controlled by this SQAP. The SIL will be updated and maintained by the SCME.

The SIL will contain the following information, at a minimum:

- SCO number
- SCO Addendum number, if applicable
- Software name and version
- Host site location
- Classification (including the purpose of the software relative to its use in engineering, scientific, testing, data collection, design, analysis and operations activities)
- Exemption status
- The operating system on the computer in which the software is installed
- The COTS or System software in which the application was developed, if applicable
- The date the Application within COTS or System Software was developed, if applicable
- Computer model and serial number upon which the software is installed, if applicable
- Name of the SPM (that approved the software) of the site at which the software is installed

The SIL will be evaluated periodically, at least once annually, to ensure the data is accurate, current and complete. The process is administered by the SCME and utilizes management assessments, completed by the responsible area managers with the results compiled by the SCME. To facilitate a more manageable process the SCME may divide the SIL into four sections with one section completed each quarter.

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NOTE

The SCO number in Block 1 of Attachment 3, Software Problem Reporting and Change Request (SPRCR), is the SCO number for the software that the problem or change is being reported against. The report number in Block 2 is issued by the SCME.

1.7 Software Problem Reporting and Change Request (SPRCR)

Attachment 3 is used either to report problems with software, the potential impact of the problem, and the corrective action(s) taken, or to request a modification to the software, unrelated to a problem with the software.

1.8 Software Removal and Retirement

The removal of software applications is performed using Attachment 2, and retirement of software applications is performed using Attachment 3.

1.9 Secure File Transfer Protocol Site (sftp)

Controlled versions of software applications developed within COTS are posted to a Secure File Transfer Protocol (sftp) site. The site address is: https://sftp.wipp.energy.gov.

Applications will be tested in one or more operating environments prior to sftp site upload.

NOTE

Information for legacy applications posted to the sftp site will be added when the software is modified.

Applications developed within COTS that are posted to the sftp site shall contain the following information:

- SCO number and addendum, if applicable
- Software name and version
- Operating environment(s) in which the application was tested (e.g., operating system and platform)
- The unique identifier information will be included on every printed page of the spreadsheet.
- The unique identifier information must be locked and/or password protected to prevent inadvertent modification.

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Applications that are considered proprietary by the original software vendor are not required to be uploaded to the ftp site. This software will be identified on the SIL as Proprietary and will identify the software vendor.

The SIL will be posted to the sftp site after every modification.

1.10 Software from Qualified Suppliers Working as Subcontractors to CCP

Software and associated documentation obtained by CCP from active QSL suppliers, who are also subcontractors to CCP for other services, will be controlled under the supplier's approved Software QA Program.

1.11 Software Quality Assurance Plan (SQAP)

An SQAP shall be developed for software to assure that a quality product is supplied. This is the SQAP for all software except Non-Qualified Supplier software, and Safety Software. A separate SQAP is required for Non-Qualified Supplier software, and Safety Software. For all software (this SQAP or the separate SQAPs for Non-Qualified Supplier software or Safety Software), the SQAP shall include:

- Software name
- Responsible person and organization
- Development standards and techniques to be used and methods of verifying compliance with them.
- Required activities, responsibilities, and documentation
- Required reviews and methods of verifying implementation of requirements
- Items that need to be base lined and methods for controlling the baseline configuration
- Provisions for error reporting, evaluation, and corrective action
- The procedure(s) used for establishing and maintaining the integrity of data, embodied mathematical models, and output files
- A plan to develop and document the Requirements, Verification and Validation (V&V) documents, Design, Tests, and User documents

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For safety software, the following shall be identified, as applicable:

- Risk management-potential software risks, likelihood, consequences, and methods of controlling the risk
- Design authority involvement in identifying requirements specifications, acquisition, design, development, V&V (including inspection and testing), configuration management, maintenance, and retirement
- Required training in design, development, and evaluation of safety software

1.12 Requirements Documentation

Software requirements documentation shall outline the requirements that the proposed software must satisfy. The software requirements shall, as applicable, address the following:

- Software name and version
- System the software supports
- Name of the person who developed the requirements
- Functions that the software is to perform
- Time-related issues of software operations such as speed, recovery time, or response time
- Design constraints
- Non-time related issues of software operation such as portability, acceptance criteria, access criteria and maintainability identified
- Required interactions with people, hardware, and other software identified
- Requirements verification
- Requirements consistency
- Requirements technical feasibility that results in useable code

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1.13 Design Documentation

The software design shall be based on the software requirements and shall be documented and reviewed. The design shall specify the overall structure (control and data flow) and the reduction of the overall structure into physical solutions (algorithms, equations, control logic, and data structures). The design may necessitate the modification of the requirements documentation and the verification and validation plans. The software design shall, as applicable, address the following:

- A description of the major components of the software design as they relate to the software requirements
- A technical description of the software with respect to the theoretical basis, mathematical model, control flow, data flow, control logic, and data structure
- Completeness and technical adequacy of the design
- A description of the allowable or prescribed ranges for inputs and outputs
- The design described in a manner that can be translated into code
- Traceability to the requirements

1.14 User Documentation

User documentation should be sufficient to allow any qualified user (i.e., one having adequate technical background) to install and run the software and properly respond to errors. User documentation, at a minimum, shall include:

- Software name and version
- User instructions that contain an introduction, a description of the user's interaction with the software, and a description of any required training necessary to use the software
- Input and output specifications and formats
- A description of functional requirements and system limitations, including hardware
- An explanation of the mathematical models and derivation of the numerical methods used in the software design (physical and

mathematical assumptions on which the software is based shall be included, along with an explanation of the capabilities and limitations inherent in the software), as applicable

- A description of the anticipated errors and how a user can respond
- Information for obtaining user and maintenance support

1.15 Testing

Installation, Integration, Regression, and Functionality are different types of tests that may be performed on software to ensure that it is working correctly prior to operational use. Installation testing will always be required prior to use for certification in the CCP program to ensure that the software was installed correctly. Integration testing is required if the software product interacts with other software products. Functionality testing is required if new features are added to the software or existing features have been modified. Regression testing is required if there is a concern that modifications to certain functions of the software could adversely affect other functions of the software that were not modified.

Testing will include methods of V&V, including the responsibilities of the organization(s) involved, resources needed, and the methods employed to ensure traceability of the requirements to final validation of software.

All modifications shall be formally evaluated and approved by the organization responsible for the original design, unless an alternate organization has been given the authority to approve the changes by the SCME. The SCME will identify other affected groups or organizations, as needed, to allow for additional evaluation.

The degree of software validation shall be commensurate with the nature and scope of the change.

V&V activities SHALL be performed by any independent individual(s) or group(s) other than those who performed the software design and implementation. The individuals may be from the same organization and may include the designer's supervisor, provided the supervisor:

- Did not specify a singular design approach
- Did not rule out certain design considerations
- Did not establish the design inputs used
- Is the only individual in the organization competent to perform the V&V

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Acceptable test methods may include:

- Hand calculations
- Calculations using comparable proven programs
- Empirical data and information from technical literature
- Comparison with other validated software of similar purpose
- Manual inspections or qualitative checks not involving numerical manipulation
- Visual inspection of empirical data or data results based on the acceptable knowledge within the organization responsible for the original design

Test Plans shall identify or address the following:

- Software name and version
- System software supports
- Name of the person who developed the test plan
- Required tests and test sequences
- Required ranges of input parameters
- Identification of stages at which testing is required
- Criteria for establishing test cases
- Acceptance criteria
- Requirements for testing logic branches
- Requirements for hardware integration
- Anticipated output values
- Type of test (Installation, Integration, Functionality, Regression, etc.)
- For CCP software, identification of tests to be performed by the End User.

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Test Reports/Results shall identify or address the following, as applicable:

- Computer program tested
- Computer hardware used
- Operating system(s) and version(s) used during test performance
- Test equipment and calibrations
- Date of test
- Tester or data recorder
- Simulation models used
- Test problems
- Results and acceptability
- Action taken in connection with any deviations noted
- Person evaluating test results
- Alternate test methods(s) used
- Type of test (Installation, Integration, Functionality, Regression, etc.).

1.16 Required Documentation

The documentation required for each software type is listed in Section 5.0.

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2.0 REQUIREMENTS

2.1 References

Baseline Documents

- DOE/CBFO-94-1012, U.S. Department of Energy Carlsbad Field Office, *Quality Assurance Program Document*
- DOE/WIPP-07-3361 *Cyber Security Risk: Assessment and Mitigation*
- Office of Environmental Management (EM) – Program Security Plan (PSP)

Referenced Documents

- CCP-QP-008, *CCP Records Management*

2.2 Definitions

2.2.1 See Attachment 5, Definitions

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3.0 RESPONSIBILITIES

NOTE
The Initiator can be the same person as the SD or Tester but the SD and Tester cannot be the same person.

3.1 Initiator

3.1.1 Brings issues regarding software and requests to develop, modify, or procure software to the attention of the SCME and the appropriate SPM.

3.1.2 Coordinates with the SD and SCME to initiate software development/modification activities in accordance with this procedure.

3.1.3 Develops SQAP in conjunction with the SD, SCME, and appropriate SPM for Non-Qualified Supplier and Safety Software per Section 1.11.

3.2 Software Developer (SD)

NOTE
The SD can be anyone knowledgeable on the software's application and the process in which the software is used.

3.2.1 Develops documentation required during various software life cycle phases in accordance with the requirements of this SQAP.

3.2.2 Develops and modifies software, as required.

3.2.3 Develops Test Plans and Test Cases, as required.

3.2.4 Coordinates with the SCME and appropriate SPM to document the development/modification of software in accordance with this procedure.

3.2.5 Participates in document reviews of requirements, design, code, and test documentation.

3.2.6 Develops/modifies user documentation.

3.2.7 Ensures all software packages are submitted to a Tester for testing.

3.2.8 Reviews and approves test plans and test results.

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3.2.9 Troubleshoots problems with software.

3.2.10 Ensures obsolete versions of software are deleted or disabled so production use is prevented.

3.3 Tester

NOTE

The Tester can be anyone knowledgeable on the software's application and the process in which the software is used.

3.3.1 Performs software testing.

3.3.2 Documents the software test results.

3.3.3 Identifies and documents software errors during testing.

3.3.4 Works with the SD to resolve problems identified during testing.

3.4 Software Configuration Management Engineer (SCME)

3.4.1 Maintains the CCP Software Configuration Management Program and a database that includes a system to track and control software used to support CCP activities.

3.4.2 Responsible for overall CCP software QA program administration.

3.4.3 Primary interface for CCP SQA evaluations and approvals.

3.4.4 Ensures that the SIL for the specific site location has been updated when software is procured, developed, modified, or installed.

3.5 Site Project Manager (SPM)

3.5.1 Approves operational use and documents validation of software in conjunction with the SD and SCME.

3.5.2 Reviews software posted on the sftp site.

3.5.3 Reviews the SIL for completeness.

3.5.4 Notifies the appropriate SD, SCME, and the involved EAs/SMEs that the SIL has been updated.

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3.6 CCP Records Custodian

3.6.1 Receives, processes, and maintains all records generated by this procedure in accordance with CCP-QP-008, *CCP Records Management*.

3.7 End User (Only for CCP Software)

3.7.1 Performs the testing.

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4.0 PROCEDURE

4.1 Software Evaluation

NOTE

A software evaluation must be done for initial software development or modification that may change the software baseline.

NOTE

Any personnel involved with developing, maintaining, using, or installing software used by CCP will follow the requirements of this SQAP, including verification that the software in use is listed on the SIL. The SPM will make notifications upon operational use approval and changes to the SIL.

Initiator

4.1.1 **IF** software has been previously categorized proceed to the applicable section of the SQAP. **IF NOT**,
THEN GO TO section 4.1.2.

4.1.2 Evaluate the software in accordance with Attachment 1, print name, sign, and date Attachment 1, **AND** obtain the SCME's printed name, signature, and date.

4.1.3 **IF** the software is **NOT** exempt,
THEN maintain the completed Attachment 1 with applicable software documentation, **AND** GO TO the applicable Section of this SQAP.

4.1.4 **IF** the software is exempt (Category 6),
THEN document basis for exemption in Block 7 of Attachment 1.

4.1.5 **IF** the software is exempt (Category 6),
THEN transmit the completed Attachment 1 to the SCME in accordance with CCP-QP-008.

NOTE

Some Firmware is exempt from the requirements of this SQAP (see Section 1.2.6).

SCME

4.1.6 Update the IDC to reflect the addition of the new exempt software.

4.1.7 Notify the appropriate Initiator/SPM the evaluation has been completed and the software was determined to be exempt.

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4.1.8 Place the completed Attachment 1 into the CCP SCM Records file.

4.1.9 Ensure the SIL has been updated.

SPM

4.1.10 Review the SIL for completeness.

4.2 Software

Initiator

4.2.1 Evaluate software in accordance with Section 4.1.

4.2.2 **IF** the request is for a modification to an existing Software,
THEN GO TO Section 4.2.43.

4.2.3 **IF** the software is for new Non-Qualified Supplier or Safety Software,
THEN GO TO Section 4.2.4. **IF NOT,**
THEN GO TO Section 4.2.8.

4.2.4 Develop a project-Specific SQAP that addresses the elements in Section 1.11, and that establishes how the documentation requirements in Section 5.1.1[E] and 5.1.1[F] will be completed,
AND forward to SCME for review.

SCME

4.2.5 Review and approve the project-specific SQAP to verify that it meets the requirements of CCP-QP-022, *CCP Software Quality Assurance Plan*.

4.2.6 **IF** there are Software Review Action Items that need to be resolved as a result of the project-specific SQAP review,
THEN initiate and complete Attachment 4, Software Review Action Item (see Section 4.5).

4.2.7 **IF** there are NO Software Review Action Items that need to be resolved as a result of the SQAP review,
THEN forward the SQAP to the initiator.

Initiator

4.2.8 Initiate Attachment 2 by obtaining an SCO number or SCO addendum number, as applicable, from the SCME, **AND** complete Blocks 1 through 11.

SCME

[A] Obtain SCO number or SCO addendum from the IDC.

4.2.9 **IF** COTS, Applications within COTS, or Qualified Supplier Software, record N/A for blocks 12a through 12c on Attachment 2 and forward to the SD,
THEN GO TO step 4.2.11. **IF NOT,**
THEN Go TO step 4.2.10.

SD

4.2.10 **IF** Non-Qualified Supplier, Safety, or CCP Software,
THEN develop software Requirements Document (Section 1.12), software Design Document (Section 1.13), and code, as applicable, **AND** complete blocks 12a through 12c on Attachment 2.

[A] For each review, document the review by obtaining participant's printed name, signature, and date of review.

[B] **IF** there are Software Review Action Items that require resolution as a result of the Requirement, Design, or Code review,
THEN check YES in the appropriate block, and for each review complete an Attachment 4 **AND** attach it to Attachment 2.
IF NO Software Review Action Items are needed,
THEN check NO in the appropriate block for each review that did not need an Attachment 4.

4.2.11 Upon receipt or development of user documentation, evaluate to determine if it is suitable for the intended use of user documentation (see Section 1.14).

4.2.12 Print name, sign, and date Block 13 of Attachment 2 after completing the user documentation evaluation.

4.2.13 Develop Test Plan in accordance with Section 1.15,using the user documentation, functional description of software, and appropriate knowledgeable personnel.

4.2.14 Forward, as applicable, Attachment 1, Attachment 2, SQAP, Requirements document, Design document, code, user documentation, and test plan to the SCME for adequacy and completeness review.

SCME

4.2.15 Review and approve Test Plan in conjunction with SD, Tester, and appropriate SPM, **AND** complete Block 14 of Attachment 2.

4.2.16 **IF** there are Software Review Action Items that require a resolution as a result of the Test Plan review,
THEN check YES in Block 14 of Attachment 2, initiate and complete Attachment 4, **AND** attach to Attachment 2.
IF there are no Software Review Action Items,
THEN check NO.

4.2.17 Forward all documentation to SD.

SD

4.2.18 Arrange for installation of the software for testing, as applicable.

4.2.19 Identify the testing to be performed by marking the appropriate boxes in Block 15 of Attachment 2.

4.2.20 Verify that all associated documentation is attached to Attachment 2; print name, sign and date Block 15 of Attachment 2; **AND** forward the data package to the Tester.

NOTE

Installation/integration tests are performed per each installation/integration of the software with hardware, data, or other components. Multiple operating systems and work stations may be listed in Block 16 of Attachment 2 for the same software and version at specific sites. An additional sheet may be attached if there is not enough room in Block 16.

NOTE

For CCP software applications there should be at least one tester that will be the End User for that software. Tests performed by the End User may be a subset of all tests identified in the test plan. The test plan SHALL identify which tests are to be performed by the End User.

Tester

4.2.21 Perform Test as outlined in the Test Plan.

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4.2.22 Determine if the results of the test are satisfactory.

4.2.23 **IF** the test results are satisfactory,
THEN document the test results, attach the Test Report, sign and date Block 15 of Attachment 2, **AND** proceed to step 4.2.25.

4.2.24 **IF** the test results are **NOT** satisfactory,
THEN document the test results, including errors and resolutions, **AND** determine if integration of the hardware, data, and other components need to be redone **OR** if hardware, data, and other components need to be replaced.

4.2.25 Upon determination of the issue complete a Software Review Action Item (Attachment 4), check YES in Block 15 of Attachment 2, **AND** repeat steps 4.2.13 through 4.2.21.

4.2.26 Print name, sign, and date Block 15 of Attachment 2.

4.2.27 Verify that all associated Test documentation is attached, **AND** forward the data package to the SD.

SD

4.2.28 Complete Block 16 of Attachment 2, as applicable.

4.2.29 Review the data package, **AND** verify that all of the required documentation is accurate and complete.

4.2.30 Print name, sign, and date on Block 17 of Attachment 2 documenting operational use approval and document validation, **AND** forward data package to SCME.

SCME

4.2.31 Review the data package, **AND** verify that all of the required documentation is accurate and complete.

4.2.32 Print name, sign, and date on Block 17 of Attachment 2 documenting operational use approval and document validation, **AND** forward data package to the appropriate SPM.

SPM

4.2.33 Review the data package, complete Block 17 of Attachment 2 documenting operational use approval and document validation, **AND** notify the appropriate SD and SCME in Block 17 of

Attachment 2, as well as the involved EAs/SMEs of operational use approval.

4.2.34 Submit the data package to SCME in accordance with CCP-QP-008.

SCME

4.2.35 Update the IDC.

4.2.36 Update or verify that the SIL has been updated.

4.2.37 Post software, as applicable, on the sftp site unless it has been determined to be proprietary (see Section 1.9).

4.2.38 Notify the appropriate SPM when the SIL has been updated.

4.2.39 Submit the data package to the Records Custodian in accordance with CCP-QP-008.

Records Custodian

4.2.40 Receive, process, and maintain all records generated by this procedure in accordance with CCP-QP-008.

SPM

4.2.41 Review the SIL for completeness.

4.2.42 Review the software posted on the sftp site, if applicable.

[A] Notify the appropriate SD and SCME in Block 17 of Attachment 2, as well as the involved EAs/SMEs that the SIL has been updated and is accurate.

4.2.43 Modification to Existing Software

Initiator

4.2.44 Initiate Attachment 3 by obtaining an SPRCR number from the SCME, **AND** complete Blocks 1 through 9 in conjunction with the SD to document reason for modification.

SCME

[A] Obtain new SPRCR number from the IDC.

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4.2.45 Determine if the modification is considered a minor change in conjunction with the SD, Tester, SCME, and SPM.

4.2.46 Document decision and basis for minor change in Block 10.

4.2.47 **IF** the change is considered a minor change,
THEN document the SCME's acceptance by obtaining their printed name, signature, and date in Block 10.

4.2.48 Document corrective action taken by completing Block 11 **AND** record N/A for Block 12.

4.2.49 **IF** a modification is **NOT** considered a minor change,
THEN document approval in Block 13 by obtaining the SCME's printed name, signature, and date.

Initiator

[A] Complete steps 4.2.8 through 4.2.42, as applicable.

4.2.50 **IF** a modification is considered a minor change,
THEN document approval by signing Block 13 and forward the Attachment 3 to the SCME for final approval.

SCME

4.2.51 Review the data package and verify that all required documentation is accurate and complete.

4.2.52 Approve the minor change by signing Block 13 of Attachment 3.

4.2.53 Notify the appropriate personnel that the minor change has been approved.

Initiator

4.2.54 Perform the change as outlined on the Attachment 3 and notify the SCME that the change has been made.

4.2.55 **IF** software is Applications within COTS,
THEN forward corrected software to SCME.

SCME

4.2.56 Update the IDC to reflect the minor change.

4.2.57 Ensure that the SIL has been updated.

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4.2.58 Update the controlled software folder on the sftp site, as applicable, with the new software, and notify the appropriate personnel that the folder has been updated.

4.2.59 Submit data package to Records Custodian.

Records Custodian

4.2.60 Receive, process, and maintain all records generated by this procedure in accordance with CCP-QP-008.

SPM

[A] Review the data package, complete Block 17 of Attachment 2 documenting operational use approval and document validation, **AND** notify the appropriate SD and SCME in Block 17 of Attachment 2, as well as the involved EAs/SMEs of operational use approval.

[B] Submit data package to SCME in accordance with CCP-QP-008.

4.3 Additional Software Installations

Initiator

4.3.1 Initiate Attachment 2 by obtaining an SCO addendum number from the SCME, **AND** complete Blocks 1 through 11.

SCME

[A] Obtain SCO Addendum number from the IDC.

4.3.2 Complete steps 4.2.9 through 4.2.42, as applicable.

4.4 Software Review Action Items

NOTE

This section explains Attachment 4. Attachment 4 is used to report Software Review Action Items.

SCME, Tester, OR SD

4.4.1 Initiate a Software Review Action Item when an issue arises while creating, using, or reviewing the requirements document, design document, code, test plan, or test report by completing Blocks 1 through 6 on Attachment 4.

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4.4.2 Determine and document the recommended action in Block 7 of Attachment 4.

4.4.3 Document final resolution by completing Block 8 of Attachment 4.

4.4.4 To indicate approval, obtain the appropriate signatures by printing name, signing, and dating Block 9 of Attachment 4 upon resolution of the Software Review Action Items as follows:

- Minimum approval signatures required for Software Review Action Items regarding the SQAP review: Initiator, SD, and SPM.
- Minimum approval signatures required for Software Review Action Items regarding the requirements review: Initiator, SD, and SPM.
- Minimum approval signatures required for Software Review Action Items regarding the Design review: SD and at least one other technical reviewer.
- Minimum approval signatures required for Software Review Action Items regarding the Code review: SD and at least one other technical reviewer.
- Minimum approval signatures required for Software Review Action Items regarding the Test Plan review: SD, Tester, and at least one other technical reviewer.
- Minimum approval signatures required for Software Review Action Items regarding the Testing review: SD, Tester, and at least one other technical reviewer.

4.5 Retirement

Initiator

4.5.1 Determine if the software:

- No longer provides a function used or required by CCP
- Will be replaced by different software
- Is obsolete and will **NOT** be replaced

4.5.2 **IF** none of the criteria in step 4.5.1 are met,
THEN the software CAN **NOT** be retired.

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4.5.3 **IF** any of the criteria in step 4.5.1 are met,
THEN initiate Attachment 3 by obtaining an SPRCR number from the SCME, **AND** complete Blocks 1 through 6, record N/A in Blocks 7 through 11.

SCME

[A] Obtain SPRCR number from the IDC.

4.5.4 Document the justification for the retirement of the software in Block 12 of Attachment 3, **AND** print name, sign, and date Block 12 and Block 13 of Attachment 3.

4.5.5 Obtain the printed names, signatures and dates of an SPM in Block 12 of Attachment 3 and the SCME in Block 13 of Attachment 3, to indicate approval.

SCME

4.5.6 Ensure all copies of the software are removed from the field, including the sftp site, **AND** are deleted from all computers and workstations.

4.5.7 Remove software from the sftp site, if applicable.

4.5.8 Update the IDC.

4.5.9 Ensure the SIL has been updated.

4.5.10 Notify the appropriate SPM that the SIL has been updated.

4.5.11 Submit Attachment 3 to Records Custodian in accordance with CCP-QP-008.

CCP Records Custodian

4.5.12 Receive, process, and maintain all records generated by this procedure in accordance with CCP-QP-008.

SPM

4.5.13 Confirm the software on the sftp site has been removed, if applicable.

4.5.14 Review the SIL for completeness.

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4.5.15 Notify the appropriate SD in Block 12 of Attachment 3, as well as the involved EAs/SMEs, that the SIL has been updated.

4.6 Software Removal

NOTE

Software removal is not retirement. Removal consists of taking software off of a specific workstation(s), but software will still be used and supported at a specific site. Software removal may be documented on the same SCO used for new software development, provided the software name and version are the same.

Attachment 2, using the original SCO number, is completed for software removal of the same software and version and hardware model number, serial number and operating system as the original SCO. Workstations from which software has been removed will be superseded on the SIL, based on the information in Attachment 2, but removal history is not required to be documented on the SIL.

Initiator

4.6.1 Determine if the software needs to be removed from a workstation.

4.6.2 Initiate Attachment 2 by obtaining an SCO Addendum number from the SCME, completing Blocks 1 through 11, **AND** record N/A for Blocks 12a through14.

SCME

[A] Obtain SCO Addendum number from the IDC.

4.6.3 Check NO in Block 15.

4.6.4 Document workstations in which software will be removed in Block 16.

Initiator, SD, SPM

4.6.5 Complete Block 17, and print name, sign, and date; obtain other signatures, as required; **AND** record N/A for any remaining signature blocks of Attachment 2.

4.6.6 Ensure the software is removed from the appropriate workstation(s).

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4.6.7 Transmit Attachment 2 to the SCME in accordance with CCP-QP-008.

SCME

4.6.8 Update the IDC.

4.6.9 Ensure the SIL has been updated.

4.6.10 Notify the appropriate SPM that the SIL has been updated.

4.6.11 Submit data package to Records Custodian in accordance with CCP-QP-008.

CCP Records Custodian

4.6.12 Receive, process, and maintain all records generated by this procedure in accordance with CCP-QP-008.

SPM

4.6.13 Review the SIL for completeness.

4.6.14 Notify the appropriate SD and SCME as well as the involved EAs/SMEs that the SIL has been updated.

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5.0 RECORDS

5.1 Records generated during the performance of this SQAP are maintained as QA records in accordance with CCP-QP-008. The records are the following:

NOTE

Software and associated documentation procured by CCP from active QSL suppliers, who are also subcontractors to CCP for other services, will be controlled and maintained under the supplier's approved Software QA Program.

5.1.1 <u>QA/Non-Permanent</u>

[A] Exempt Software (Category 6)

[A.1] Attachment 1, Software Evaluation Checklist

[B] COTS Software (Category 1)

[B.1] Attachment 1, Software Evaluation Checklist

[B.2] Attachment 2, Software Change Order

[B.3] Attachment 3, Software Problem Reporting and Change Request (SPRCR), if applicable

[B.4] Attachment 4, Software Review Action Item, if applicable

[B.5] User Documentation

[B.6] Test Documentation

[B.7] Associated Supporting Documentation, if applicable

[C] Application within COTS (Category 2)

[C.1] Attachment 1, Software Evaluation Checklist

[C.2] Attachment 2, Software Change Order

[C.3] Attachment 3, Software Problem Reporting and Change Request (SPRCR), if applicable

[C.4] Attachment 4, Software Review Action Item, if applicable

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[C.5] Test Documentation

[C.6] A listing of the software code (i.e., details of formulas, file/table/cell references, and/or macros)

[C.7] Documentation to demonstrate by hand or other independent calculations that the specific application provides the correct results for the specified range of input parameters

[C.8] Associated Supporting Documentation, if applicable

[D] Qualified Supplier Software (Category 3)

[D.1] Attachment 1, Software Evaluation Checklist

[D.2] Attachment 2, Software Change Order

[D.3] Attachment 3, Software Problem Reporting and Change Request (SPRCR), if applicable

[D.4] Attachment 4, Software Review Action Item, if applicable

[D.5] User Documentation

[D.6] Test Documentation

[D.7] Associated Supporting Documentation, if applicable

[E] Non-Qualified Supplier Software (Category 4)

[E.1] Attachment 1, Software Evaluation Checklist

[E.2] Attachment 2, Software Change Order

[E.3] Attachment 3, Software Problem Reporting and Change Request (SPRCR), if applicable

[E.4] Attachment 4, Software Review Action Item, if applicable

[E.5] Software Quality Assurance Plan

[E.6] Requirements Documents, per SQAP, if applicable

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[E.7] Validation and Verification Documents, per SQAP, if applicable

[E.8] Design Documents, per SQAP, if applicable

[E.9] User Documentation

[E.10] Test Documentation

[E.11] Associated Supporting Documentation, if applicable

[F] Safety Software (Category 7)

[F.1] Attachment 1, Software Evaluation Checklist

[F.2] Attachment 2, Software Change Order

[F.3] Attachment 3, Software Problem Reporting and Change Request (SPRCR), if applicable

[F.4] Attachment 4, Software Review Action Item, if applicable

[F.5] Software Quality Assurance Plan

[F.6] Requirements Documents, per SQAP, if applicable

[F.7] Validation and Verification Documents, per SQAP, if applicable

[F.8] Design Documents, per SQAP, if applicable

[F.9] User Documentation

[F.10] Test Documentation

[F.11] Associated Supporting Documentation, if applicable

[G] CCP Software (Category 5)

[G.1] Attachment 1, Software Evaluation Checklist

[G.2] Attachment 2, Software Change Order

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[G.3] Attachment 3, Software Problem Reporting and Change Request (SPRCR), if applicable

[G.4] Attachment 4, Software Review Action Item, if applicable

[G.5] Requirements Documents

[G.6] Validation and Verification Documents

[G.7] Design Documents

[G.8] User Documentation

[G.9] Test Documentation

[G.10] Associated Supporting Documentation, if applicable

[H] Integrated Data Center (IDC)

[H.1] Software Change Order Log

[H.2] Software Problem Reporting and Change Request Log

[H.3] Addendum Log

[H.4] Exempt Software Log

[H.5] Software Inventory List

Attachment 1 – Software Evaluation Checklist

1. Initiator: (Print Name)	**2. Date:**	**3. Site:**
4. Software Name:	**5. Software Version:**	**6. Process Affected:**

7. Purpose/function of software (including whether software is used for data collection, design, analysis or scientific reasons):

8. If any of the answers to **c** through **h** are "YES", then Section 4.3 of this SQAP is applicable.

a. Is this System Software as defined in Section 1.2.1?	☐ Yes ☐ No
b. Can the software output adversely impact certification? **If YES**, continue to Block 8**c**. **If NO**, this software is exempt from the requirements of this SQAP. N/A Blocks **c** through **g** and complete Block 9.	☐ Yes ☐ No ☐ N/A
c. Is this COTS Software as defined in Section 1.2.3 [A]? **If YES,** N/A Blocks **d** through **h**, and complete Block 9. **If NO**, continue to Block 8**d**.	☐ Yes ☐ No ☐ N/A
d. Is this an application developed within COTS or System Software as defined in Section 1.2.3 [B]? **If YES,** N/A Blocks **e** through **h,** and complete Block 9. **If NO**, continue to Block 8**e**.	☐ Yes ☐ No ☐ N/A
e. Is this Qualified Supplier Software as defined in Section 1.2.3 [C]? **If YES,** N/A Block **f** through **h** and complete Block 9. **If NO**, continue to Block 8**f**.	☐ Yes ☐ No ☐ N/A
f. Is this Non-Qualified Supplier Software as defined in Section 1.2.3 [D]? **If YES,** N/A Block **g** through **h** and complete Block 9. **If NO**, continue to Block 8**g**	☐ Yes ☐ No ☐ N/A
g. Is this Safety Software as defined in Section 1.2.4? **If YES,** N/A Block **g** and complete Block 9. **If NO**, continue to Block 8**h**.	☐ Yes ☐ No ☐ N/A
h. Is this CCP Software as defined below? (Defined in Section 1.2.5). **If YES,** complete Block 9.	☐ Yes ☐ No ☐ N/A

9. Evaluation performed by: **Approved by:**

Initiator Print Name/Sign	Date	SCME Print Name/Sign	Date

Attachment 2 – Software Change Order

1. SCO #:	**2. Addendum #:** ☐ N/A	**3. Page ___ of ____**
4. Initiator _____ Print Name	**5. Request Date** _____	
6. Software Name	**7. Version**	
8. Description of software or modification to be performed:		
9. Process Affected _____	**10. Site** _____	
11. New Development ☐ Yes ☐ No **Modification** ☐ Yes ☐ No	**Additional Installation** ☐ Yes ☐ No **Removal** ☐ Yes ☐ No	

12a. Requirements Review ☐ N/A		**Software Review Action Items** ☐ Yes ☐ No	
SD Print Name/Sign	Date	Requirements Reviewer Print Name/Sign	Date
Requirements Reviewer Print Name/Sign	Date	Requirements Reviewer Print Name/Sign	Date
12b. Design Review ☐ N/A		**Software Review Action Items** ☐ Yes ☐ No	
SD Print Name/Sign	Date	Design Reviewer Print Name/Sign	Date
Design Reviewer Print Name/Sign	Date	Design Reviewer Print Name/Sign	Date
12c. Code Review ☐ N/A		**Software Review Action Items** ☐ Yes ☐ No	
SD Print Name/Sign	Date	Code Reviewer Print Name/Sign	Date
13. User Documentation Evaluation ☐ N/A			
SD Print Name/Sign	Date		
14. Test Plan Review ☐ N/A		**Software Review Action Items** ☐ Yes ☐ No	
SCME Print Name/Sign	Date		

Attachment 2 – Software Change Order (Continued)

SCO #: **Addendum #:** Page ___ of ____

15. Testing ☐ Yes ☐ No **Software Review Action Items** ☐ Yes ☐ No

Installation Test	☐ Yes	☐ No	Regression Test	☐ Yes	☐ No
Alternate Test Method	☐ Yes	☐ No	Integration Test	☐ Yes	☐ No
Functionality Test	☐ Yes	☐ No	Hand Calculations	☐ Yes	☐ No

Any modification to development documentation as a result of testing activities must be identified by an SCO addendum.

SD Print Name/Sign	Date	Tester Print Name/Sign	Date
Tester Print Name/Sign	Date	Tester Print Name/Sign	Date

If used for additional installation of the same software and version as on an original SCO, list the software name, version; operating system, version; and hardware manufacture, model number and serial number.

16. Installation/Removal

Software	Software Version	Software Development Date (Applications within COTS only) ☐ N/A
Application	Application Version	
Database	Database Version	
Operating System (OS)	OS Version	
Hardware Mfr	Hardware Model #	Hardware Serial #

SD Print Name/Sign	Date

17. Operational Use Approvals and Document Validation

SD Print Name/Sign	Date	SPM Print Name/Sign	Date
SCME Print Name/Sign	Date		

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Attachment 3 – Software Problem Reporting and Change Request (SPRCR)

1. SCO #:	**2. SCO Addendum #**	**3. Report #:**	**4. Report Date:**
5.Software Name:	**6. Software Version:**		

7. Problem/Suggestion:

8. Research Analysis:

9. Description of System Impact:

10. Minor Change: ☐ Yes ☐ No

Reason: SCME Print Name/Sign Date

11. Corrective Action (Obtain SCO # or SCO Addendum, identify the SCO # in this block, and complete the SCO #):

12. Software Retirement ☐ N/A

Justification for Retirement:

Initiator Print Name/Sign Date SPM Print Name/Sign Date

13. Approvals (Date Indicates that resolutions were completed):

Initiator Print Name/Sign Date SCME Print Name/Sign Date

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Attachment 4 – Software Review Action Item

1. SCO #:	**2. Addendum #:**	**3. Initiation Date:**	**4. Page ____ of ____**

5. ☐ **SQAP** ☐ **Requirements** ☐ **Design** ☐ **Code** ☐ **Test Plan** ☐ **Testing**

6. Statement of Issue:

7. Recommended Action:

8. Final Resolution to Action Item:

9. Approvals (Date Indicates that resolutions were completed):

Initiator Print Name/Sign	Date	SPM Print Name/Sign	Date
SD Print Name/Sign	Date	Reviewer Print Name/Sign	Date

Attachment 5 – Definitions

Acceptance Criteria	The criteria that a system or component must satisfy in order to be accepted by a user, customer, or other authorized entity.
Acceptance Testing	Formal testing conducted to determine whether or not a system satisfies its acceptance criteria and to enable the customer to determine whether or not to accept the system, or formal testing conducted to enable a user, customer, or other authorized entity to determine whether to accept a system or component.
Baseline	Software that has been formally reviewed and agreed upon, and that can only be changed through formal change control procedures.
Change Control Board	The Change Control Board is a collection of technical, management, and administrative experts assigned the authority and responsibility to review and authorize developments and change request to CCP Software.
Code	One or more computer programs, or part of a computer program, expressing in programming language.
Code Review	A review during which software code is reviewed by another software developer for comment or approval.
Commercial Off the Shelf (COTS)	Software products that are general purpose, ready-made and available for sale to the general public.
Computer Program	A sequence of instructions and data definitions that enable computer hardware to perform computational or control functions.
Configuration Item	A collection of hardware or software elements treated as a unit for the purpose of configuration control.
Configuration Control	The process of identifying and defining the configuration items in a system, controlling the release and change of these items throughout the system life cycle, and the recording and reporting of the status of configuration items and change requests.
Configuration Identification	An element of configuration management, consisting of selecting the configuration items for a system and recording their functional physical characteristics in technical documentation.
Configuration Management	A discipline applying technical and administrative direction and surveillance to identify and document the functional and physical characteristics of a configuration item, control changes to those characteristics, record and report change processing and implementation status, and verify compliance with specified requirements.
Design	The process of defining the architecture, components, interfaces and other characteristics of a system.
Design Review	A documented evaluation of design output during the design process to determine the design adequacy and the conformance to specified acceptance criteria.
Error	A discrepancy between a computed, observed or measured value or condition and the true, specified or theoretically correct value or condition.
Firmware	Vendor supplied software that is included as an integral part of an instrument (e.g., programmed in a ROM chip) and cannot be modified by another party.
Implementation	When a software product is created with program language from design documentation and debugged.
Installation and Checkout	When a software product is integrated into its operational environment and tested in this environment to ensure that it performs as required.

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Attachment 5 – Definitions (Continued)

Library Files	Electronic data files used by computer software as sources of information required for the software to perform its intended function. They are primarily associated with software for the NDA characterization method (e.g., nuclide library files). Library files are created and maintained by the supplier of the software, under the qualified supplier's program. They are controlled under this SQAP when they are distributed for field installation on production equipment.
Minor Change	A minor change is any change that cannot affect the data quality of the application. Examples of this would be changing screen colors, adding a corporate logo, correcting grammar, changing a control property, search criteria change, etc. This will be determined by consultation between the SCME, SD, and/or SPM.
Portability	The ease with which software can be transferred from one computer system or environment to another.
Requirement	A condition or capability needed by a user to solve a problem or achieve an objective that must be met or processed by a system or system component.
Requirements review	A review during which the requirements for a system, hardware item or software item are presented to project personnel, managers, users, customers or other interested parties for comment or approval.
Software	Computer programs, procedures, rules, and associated documentation and data pertaining to the operation of a computer system.
Software Life Cycle	The period of time that starts when a software product is conceived and ends when the software product is no longer available for routine use. The software life cycle typically includes a requirements phase, a design phase, an implementation phase, a test phase, an installation and checkout phase, an operation and maintenance phase and sometimes a retirements phase.
Software Quality Assurance Plan	A plan for the development of software products necessary to provide adequate confidence that software conforms to established requirements.
Software Validation	The process of test and evaluation of the completed software to ensure compliance with software requirements.
Software Verification	The process of determining whether or not the product of a given phase of the software development cycle fulfills the requirements imposed by the previous phase.
System Software	Software which is used exclusively in the preparation, installation, or operation of executable software applications.
Test, Alternate Method	A test method, which differs from the original test, which is performed to verify the correctness of the original test.
Testing	The process of exercising or evaluating a system or system component by manual or automated means to verify that it satisfies specified requirements or to identify differences between expected and actual results.
Testing, Functional	Testing that ignores the internal mechanism of a system or component and focuses solely on the outputs generated in response to selected inputs and execution conditions. Testing that is employed to determine if software meets the intended specifications and functional requirements laid out in your requirements and design documentation. Testing that is not concerned with the internal workings of the system, but concentrates on the outputs generated from the system. This type of testing cannot be performed unless you have the requirements and design documentation for the software.

Attachment 5 – Definitions (Continued)

Testing, Initial	The first group or individual to test the system performs the initial test. For vendor-supplied software, the vendor will always be the entity to perform the initial test.
Testing, Integration	Testing in which software components, hardware components or both are combined and tested to evaluate the interaction between them.
Testing, Regression	Selective retesting of a system or component to verify that modifications have not caused unintended effects and that the system or component still complies with its specified requirements. This type of testing ensures that no other previously working functions have failed as a result of the reparations and that newly added features have not created any problems. Regression testing is initiated after a programmer has attempted to fix a recognized problem or has added source code to a program that may have inadvertently introduced errors. It is a quality control measure to ensure that the newly modified code still complies with its specified requirements and that unmodified code has not been affected by the maintenance activity.
Testing, Unit	Testing of individual hardware or software units or groups of related units.
Test Case	A specific set of test data and associated procedures developed for a particular objective such as to exercise a particular program path or to verify compliance with a specific requirement.
Test Plan	A document describing the approach to be taken for intended testing activities. The plan typically identifies the items to be tested, the testing to be performed, test sequences, personnel requirements, and evaluation criteria.
Traceability	The ability to trace the history, application and location of an item, data or sample using recorded documentation. The degree to which a relationship can be established between two or more products of the development process, especially products having a predecessor-successor or master-subordinate relationship to one another; for example, the degree to which the requirements and design of a given software match.
User Documentation	Documentation describing the way in which a system or component is to be used to obtain desired results. User documentation should be sufficient to allow any qualified user to install and run the software and properly respond to errors.
User Manual	A document that presents the information necessary to employ a system or component to obtain desired results.
Verification and Validation	The process of determining whether the requirements for as system or component are complete and correct, the products of each development phase fulfill the requirements or conditions imposed by the previous phase and the final system or component complies with specified requirements.

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CCP-QP-023

Revision 4

CCP
Handling, Storage and Shipping

EFFECTIVE DATE: 01/15/2013

Mike Ramirez

PRINTED NAME

APPROVED FOR USE

RECORD OF REVISION

Revision Number	Date Approved	Description of Revision
2	06/05/2006	Minor revision to update references to Carlsbad Field Office (CBFO) Quality Assurance Program Document (QAPD) and titles of responsible organizations.
3	11/16/2006	Revised to implement the Waste Isolation Pilot Plant Hazardous Waste Facility Permit requirements resulting from the Section 311/Remote-Handled (RH) Permit Modification Request (PMR), which resulted in changes in responsibilities.
4	01/15/2013	Revised to incorporate Nuclear Waste Partnership (NWP) transition changes.

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1.0 PURPOSE

This procedure describes the process for handling, storage and shipment of items identified as affecting the quality of Central Characterization Program (CCP) waste characterization, certification, packaging, and transportation.

1.1 Scope

This procedure applies to CCP activities and specifies requirements and processes for handling, storage, and shipping of items identified as affecting the quality of CCP waste characterization, certification, packaging, and transportation.

2.0 REQUIREMENTS

This procedure implements applicable requirements from:

- CBFO-94-1012, *U.S. Department of Energy Carlsbad Field Office Quality Assurance Program Document*
- CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*
- CCP-PO-002, *CCP Transuranic Waste Certification Plan*

Handling, storage, cleaning, shipping, and other means of preserving, transporting, and packaging of items will be conducted in accordance with established work and inspection procedures, shipping instructions, or other specified documents.

If required for critical, sensitive, perishable, or high-value articles, specific implementing procedures for handling, storage, cleaning, packaging, shipping, and other preservation will be prepared and used.

Measures will be established and implemented for the marking and labeling of items for packaging, shipping, handling, and storage, as necessary, to adequately identify, maintain, and preserve the item. Markings and labels will indicate the presence of special environments, or the need for special controls, as necessary, and be applied and removed by authorized personnel.

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If required for protection or maintenance of particular items, special equipment (such as containers, shock absorbers, and accelerometers) and special protective environments (such as inert gas and specific moisture and temperature levels) will be specified, planned for, and provided.

- If special protective equipment and environments are used, provisions will be made for verifying their adequacy.
- Special handling tools and equipment will be used and controlled, as necessary, to ensure safe and adequate handling.
- Special handling tools and equipment will be inspected and tested at specified intervals, and in accordance with implementing procedures to verify that the tools and equipment are adequately maintained.
- Operators of special handling and lifting equipment will be sufficiently experienced and trained to use the equipment.
- If storage of items is required, then methods will be established for the control of item identification records that are commensurate with the planned duration and conditions of storage. These methods will provide for, as applicable:
    - Maintenance or replacement of markings and identification tags damaged during handling or aging.
    - Protection of identification markings that are subject to excessive deterioration resulting from environmental exposure.
    - Update of related identification records and documentation.

Status indicators, such as tagging valves and switches to prevent inadvertent operation, will be used to indicate the operating status of items. Status indicators, such as lockout tagging, will also be used where appropriate and will be applied and removed by authorized personnel.

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3.0 RESPONSIBILITIES

3.1 CCP Site Project Manager (SPM)

3.1.1 Provides operational oversight for the requirements of this procedure.

3.2 Quality Assurance (QA)

3.2.1 Provides QA oversight for the requirements of this procedure, including scheduling of assessments and surveillances to verify implementation of handling, shipping and storage requirements.

3.3 Lead Operator (LO)

3.3.1 Assures that handling, storage, and shipping requirements for systems, components, items, and materials are determined, documented in the appropriate work control documents, and implemented by CCP personnel.

3.4 CCP Personnel

3.4.1 Assures that handling, storage, and shipping requirements for systems, components, items, and materials are implemented.

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4.0 PROCEDURE

4.1 CCP Personnel

4.1.1 When a system, component, item or material has been identified as quality affecting, determine whether the item is susceptible to damage or deterioration.

4.1.2 Determine the need for special equipment (e.g., containers, shock absorbers, accelerometers) for the system, component, item or material.

4.1.3 Determine the need for special protective environments (e.g., inert gas atmosphere, specific humidity levels and/or temperature levels) for the system, component, item or material.

4.1.4 Determine the need for special handling tools and lifting equipment to be used in lifting, handling, and movement of systems, components, items and materials.

4.1.5 Determine the need for warning notes, labels, tags, or other applicable operating status indicators, including lockout/tagout requirements.

4.1.6 Determine the need for special handling, storage, cleaning, maintenance, packing, preservation, or shipping instructions.

4.1.7 Establish methods for the control of item identification records that are commensurate with the planned duration and conditions of storage. Include provisions for:

- Maintenance or replacement of markings and identification tags damaged during handling or aging.
- Protection of markings and identification tags that are subject to excessive deterioration resulting from environmental exposure.
- Tracking of shelf life limitations and stock rotation as appropriate.

4.1.8 Revise or generate the procedure, work package, or other appropriate control document to reflect the needed processes. Include provisions for:

- Verification and documentation of the adequacy of any special protective equipment and environments.
- Calibration or other control requirements for equipment and tools used for handling or storage of systems, components, items or materials.

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5.0 RECORDS

5.1 There are no records directly generated by this procedure. Documentation associated with handling, storage, and shipping is prepared, validated and retained as an integral element of work control documents such as work orders, procedures, and purchase requisitions.

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CCP-QP-026

Revision 14

CCP
Inspection Control

EFFECTIVE DATE: 02/13/2013

Mike Ramirez

PRINTED NAME

APPROVED FOR USE

RECORD OF REVISION

Revision Number	Date Approved	Description of Revision
5	06/06/2002	Section 3.3 and Steps 4.3.5, 4.4.5, 4.5.6, and 4.4.9 were changed.
6	07/30/2003	Changes to implement the new Integrated Financial Management System (IFMS) and changes to reflect the new revision of the QAPD.
7	11/16/2006	Revised to implement the Waste Isolation Pilot Plant Hazardous Waste Facility permit requirements resulting from the Section 311/Remote-Handled (RH) Permit Modification Request (PMR), which eliminated the title of Site Project Quality Assurance Officer (SPQAO). In addition, some editorial changes were made for consistency.
8	12/20/2007	Incorporated inspection sampling requirements. Additionally, enhanced the procedure to more adequately describe actual practice within Central Characterization Project (CCP) Quality Assurance (QA) and the Host site inspection functions by CCP.
9	12/15/2008	Revised Attachment 2, CCP Random Sampling Plan for Receipt Inspection. Also deleted Section 3.1 and deleted reference to dimensional inspections.
10	08/11/2010	Revised Attachment 2, CCP Random Sampling Plan for Receipt Inspection, deleted reference to ANSI/ASQC Z 1.4, and made changes to better describe sequence activities.
11	05/19/2011	Revised to incorporate procedure changes and minor editorial comments.
12	11/22/2011	Revised to address inspections of items procured using WP 15-PC3044, *Quality Credit Card Purchases.*
13	04/05/2012	Revised to incorporate a minor change to correct the Q-Credit Card Inspection Plan number.
14	02/13/2013	Revised to incorporate Nuclear Waste Partnership (NWP) transition changes.

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1.0 PURPOSE

This procedure describes the process for quality related inspections and control of items in support of the waste characterization, certification, packaging, and transportation activities for the Central Characterization Program (CCP).

1.1 Scope

This procedure applies to CCP receipt inspection activities and specifies requirements and processes for control of items identified as affecting the quality of CCP waste characterization, certification, packaging, and transportation until the items have been inspected, accepted, and released for use. Receipt inspection activities include but are not limited to: inspection prerequisites, inspection planning, inspection performance, and review and acceptance of required documentation.

CCP receipt inspection includes, receipt of items procured by CCP-QP-015, *CCP Procurement* or WP 15-PC3044, *Quality Credit Card Purchase* (for use at generator and small quantity sites only).

2.0 REQUIREMENTS

2.1 References

Baseline Documents

- DOE/CBFO-94-1012*, U.S. Department of Energy Carlsbad Field Office Quality Assurance Program Document*
- CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*
- CCP-PO-002, *CCP Transuranic Waste Certification Plan*
- WP 13-QA1003, *Quality Assurance Receipt/Source Inspections*

Referenced Documents

- CCP-QP-001, *CCP Graded Approach*
- CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control*
- CCP-QP-008, *CCP Records Management*
- CCP-QP-015, *CCP Procurement*
- CCP-QP-016, *CCP Control of Measuring and Testing Equipment*
- CCP-QP-040, *Support Training*
- WP 13-QA.04, *Quality Assurance Department Administrative Program*
- WP 15-PC3044, *Quality Credit Card Purchases*

2.2 General

2.2.1 The acceptance of items will be made and documented by QA Inspectors qualified and authorized as Receipt Inspectors in accordance with CCP-QP-040, *Support Training* or by WIPP site inspection personnel qualified in accordance with WP 13-QA.04, *Quality Assurance Department Administrative Program*.

2.2.2 Inspection activities are performed in accordance with this procedure and associated support documentation such as procurement documentation, graded approach, Q-Credit Card database, etc., as applicable. Inspection attributes and criteria will be provided to QA by the CCP Cognizant Organization. Inspection documents will include the identification of items to be inspected, the parameters or characteristics to be evaluated, the techniques to be used, the use of established acceptance criteria for acceptance, and the organizations responsible for performing inspections.

2.2.3 Measuring and test equipment (M&TE) used for inspections will be calibrated and maintained in accordance with CCP-QP-016, *CCP Control of Measuring and Testing Equipment.* The type and extent of inspections to be performed will be consistent with governing documents.

2.2.4 When an inspection requires implementation by a team or a group, personnel who are not qualified as inspection personnel may be used in data taking assignments, provided they are supervised or overseen by a qualified inspector.

2.3 Receipt Inspections

2.3.1 Items procured by CCP that have inspection attributes assigned will be receipt inspected by a QA Inspector prior to use. Items identified as deficient shall be placed on hold until the deficient conditions have been resolved in accordance with CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control*.

2.3.2 Inspection(s) will be conducted to verify compliance with applicable procurement documents as identified in Attachment 1, CCP Receipt Inspection Verification Sheet, also known as RIVS. Receipt of gases will also be documented in the Q-Credit Card database, in accordance with WP 15-PC3044.

2.3.3 The Attachment 1 will be prepared by QA based on the information provided at the time a procurement requisition or Q-Credit Card Inspection Plan is submitted for approval.

2.4 Inspection Attributes

2.4.1 Attributes to be inspected will be selected based on procurement documents, including Q-Credit Card Inspection Plans, as applicable, and will consider such factors as the importance of their functions relative to safety or other risk considerations as well as the requirements specified in the Graded Approach Database in accordance with CCP-QP-001, *CCP Graded Approach*.

2.4.2 For purchase of gases only, the Master and individual Inspection plans are prepared by the CCP Q-Credit Cardholder in accordance with WP 15-PC3044.

2.4.3 When statistical sampling is to be used to verify the acceptability of a group of items, the statistical sampling method will be based in Attachment 2, CCP Random Sampling Plan for Receipt Inspection.

2.4.4 For receipt of gases at the generator and small quantity sites, the system will notify the appropriate QA Inspector(s) that the plan is approved and available for use during receipt. The system will also, notify QA that the individual plan has been approved and may be accessed for preparation of the Receipt Inspection Verification Sheet (RIVS).

2.4.5 The Inspection Plan number for gas purchases will be identified in the email notification and this number will be used in Section 1 of the RIVS rather than a PO number.

3.0 RESPONSIBILITIES

3.1 QA

3.1.1 Prepares Attachment 1 that includes inspection attributes and acceptance criteria, provided by the Cognizant Organization, to be used by QA Inspectors performing receipt inspections.

3.1.2 Reviews and approves completed Attachment 1 and (RIVS Package) received from the QA Inspectors.

3.1.3 Maintains receipt inspection documentation as QA records until they are transferred to Records in accordance with CCP-QP-008, *CCP Records Management*.

3.2 QA Inspector

3.2.1 Performs inspection in accordance with Attachment 1 and forwards completed RIVS package to QA for review and approval (see step 3.2.3 for receipt of gases).

3.2.2 Provides copies of RIVS package to users (i.e., generator and small quantity sites using CCP Procured Items).

3.2.3 For receipt of gases by the Q-Credit Card program, receives and inspects gases in accordance with the appropriate Inspection Plan and RIVS, and documents receipt in the Q-Credit Card database, in accordance with WP 15-PC3044, and on the associated RIVS.

3.2.4 For receipt of gases by the Q-Credit Card program, when the completed inspection plan and RIVS are approved by the STR or Q-Credit Cardholder, the QA Inspector forwards the completed Inspection Plan and RIVS to QA (for approval of the RIVS) prior to submittal to Records.

3.3 CCP Cognizant Organization

3.3.1 Establishes and provides inspection requirements, attributes, and acceptance criteria for item inspection in conjunction with QA for incorporation into Purchase Requisitions and/or Q-Credit Card Inspection Plans.

3.4 NWP Procurement Organization

3.4.1 Provides interface between QA and suppliers for resolving deficient conditions when identified.

4.0 PROCEDURE

4.1 Inspection Planning

CCP Cognizant Organization

4.1.1 Specify inspection requirements and acceptance criteria in governing procurement documents.

4.1.2 For purchases using the Q-Credit card process, GO TO WP 15-PC3044, *Quality Credit Card Purchases*.

QA

4.1.3 Review procurement documents in accordance with CCP-QP-015, *CCP Procurement,* to determine applicable needs for receipt inspections and to prepare the inspection plan.

4.1.4 Check the secure file transfer protocol (SFTP) site prior to utilizing the electronic Attachment 1 form to ensure that the current revision of the form is being used.

4.1.5 Verify purchase requisition (PR) is CCP related.

4.1.6 The Assurance Programs Manager reviews and approves the Master Inspection Plan, as prepared and submitted on EA15PC3044-2-0, and in accordance with WP 15-PC3044 for the purchase of gases (only).

4.1.7 **IF** the PR is **NOT** CCP related,
THEN:

[A] QA will process the PR in accordance with applicable WIPP site procedures.

Completing RIVS, Attachment 1

4.1.8 Enter the following in Section 1:

[A] Purchase Order (PO) number, as applicable

[B] Q-Credit card Inspection Plan number, as applicable

[C] Type of inspection

[D] Qualified Supplier List (QSL) vendor (if applicable)

[E] Appropriate Quality Level (QL)

4.1.9 Complete Section 2:

[A] Using the Required Documentation drop-down box, select appropriate category.

[B] Enter corresponding PO line number or Q-Credit Card Inspection Plan number to which documentation applies.

[C] Provide a brief description of the PO line item(s) (L.I.#) or Q-Inspection Plan number.

[D] In the Inspection Attributes box, enter the inspection characteristics to be inspected, including as applicable:

[D.1] Proper configuration

[D.2] Identification

[D.3] Verification of physical and other characteristics as needed

[D.4] Freedom from shipping damage

[D.5] Cleanliness

[D.6] Identify documents used (i.e., drawings, specifications, Statement of Work [SOW], Q-Credit Card Inspection Plan number, etc.) in the inspection process.

[E] **IF** item(s) need a Suspect Counterfeit Item (SCI) inspection performed,
THEN check SCI box, **AND** enter which L.I.# needs the SCI inspection.

[F] Enter name using the drop-down box **OR** print name in the space provided.

[G] Print the Attachment 1.

[H] Using the drop-down menu in the Signature box, select “Signature on Original RIVS” in the signature block.

[I] Sign and date the printed copy.

[J] Save electronic file of Attachment 1 in the CCP RIVS folder located on the network (\\Torreon\CCPQA\CCP Open RIVS) by PR number or Q-Credit Card Inspection Plan number.

[K] Save electronic files of Attachment 1 for gas receipts on the network (\\Torreon\CCPQA\CCP Open RIVS) in a subfolder titled "Q-Credit Card Inspection Plans," and using a file title format that includes the system-generated inspection plan number and the receiving generator site, for example, "4235-QA-2012 INL."

[L] Maintain original signed Attachment 1 in an appropriate records storage cabinet for further processing.

4.2 Receipt Inspections

NOTE

The Assurance Programs Manager monitors the qualifications for the QA Inspectors.

QA Inspector

4.2.1 When notified to perform a receipt inspection, perform the following:

[A] GO TO the "CCP Open RIVS" folder located on the network (\\Torreon\CCPQA\CCP Open RIVS), open the corresponding RIVS file, **AND** print Attachment 1, and any attached Requirement, Inspection documents, or save it to an electronic file to be used when entering inspection information.

[B] Save RIVS (Attachment 1) for gas receipts on the network (\\Torreon\CCPQA\CCP Open RIVS) in a subfolder titled "Q-Credit Card Inspection Plans," and using a file title format that includes the system-generated inspection plan number and the receiving generator site, for example, "4235-QA-2012 INL."

[C] For receipt of gases (only) at remote sites, document receipt inspection in the Q-Credit Card database, as required by WP 15-PC3044.

[D] Select sample size, using the reduced sample size column from Attachment 2 and record it in the space provided in Section 3 of the form. Assure sample size is reflective of quantity received in partial shipments and record each accordingly.

[E] Perform receipt inspection of the item(s) in accordance with the Attachment 1 requirements.

NOTE
NCRs should be initiated after the inspection process is complete rather than when an individual unacceptable item is identified.

[E.1] **IF** all selected items are found to be acceptable, **THEN** go to Section 4.2.2.

[E.2] **IF** any selected items are found to be unacceptable, **THEN** control the item(s) appropriately, **AND** if a sample size was selected, modify the sample size to Normal **AND** continue with the inspection.

[E.3] **IF** no additional items are found unacceptable,, **THEN** proceed to Section 4.2.2.

[E.4] **IF** any additional items are found to be unacceptable, **THEN** control the item(s) appropriately, **AND** if a sample size was selected, modify the sample size to Tightened **AND** continue with the inspection.

[E.5] **IF** no additional items are found unacceptable, **THEN** proceed to Section 4.2.2.

[E.6] **IF** any additional items are found unacceptable, **THEN** control the item (s) appropriately, **AND** notify QA and the buyer at the Project Office.

4.2.2 Record the inspection results in Attachment 1, Section 3, “Results” as follows:

[A] Enter the Sample Size used.

[B] Enter the Line Item number as listed in the purchase order.

[C] Check the appropriate box to indicate whether the item is accepted or rejected.

[D] **IF** the item (s) are unacceptable and are to be rejected, **THEN** initiate a Nonconformance Report (NCR) in accordance with CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control,*
AND enter the NCR number(s) in “Additional Information” in Section 3.

4.2.3 Indicate receipt as either partial or complete by checking "Yes" or "No" for the Line Item number in the PARTIAL/COMPLETE INSPECTION block.

[A] **IF** the item was **NOT** fully received,
THEN enter the quantity received in the block provided.

[B] Enter initials using the drop-down box **OR** print initials in the space provided, enter date.

[C] When using M&TE to perform receipt inspections:

[C.1] Select M&TE having accuracy and resolutions to meet accuracy requirements of required measurement in accordance with CCP-QP-016.

[C.2] Document on Attachment 1 the identification number and calibration due date of M&TE prior to use, in the Additional Information Block in Section 3.

[D] Ensure traceability of inspection documentation to the work inspected.

4.2.4 For a partial release(s) with documentation, attach applicable documentation to Attachment 1 and place it in the RIVS controlled records' storage file. Continue to process RIVS until all items have been received.

4.2.5 When items are inspected and released, provide copies of supporting documentation (e.g., Certifications, of Analysis) to the user.

[A] Enter the Integrated Financial Management System (IFMS) Receiver Number in the space provided.

[B] When all items have been received, perform the following:

[B.1] Enter QA Inspector's name in Section 4 of Attachment 1 using the drop down box, **OR** print name in the space provided.

[B.2] Print Attachment 1, and sign and date.

[B.3] Ensure all required documentation specified in the RIVS is attached, **AND** check the block on Attachment 1 indicating same.

4.3 Close Out and Validation of the RIVS

4.3.1 Transmit completed RIVS package to QA using the transmittal form found in CCP-QP-008.

QA

4.3.2 Print and transmit the completed Inspection Plan/Report, RIVS, and supporting documentation to QA (for approval of the RIVS) after receiving approval from the STR or Q-Credit Cardholder, for gases purchased through the Q-Credit Card program (only).

4.3.3 Perform final review of the RIVS package.

4.3.4 Verify all applicable sections of Attachment 1 are completed, required information is entered, and the QA Inspector has signed and dated Attachment 1.

4.3.5 Inspection documentation shall include the completed RIVS package.

4.3.6 At completion of final review and acceptance, enter name using the:

[A] Drop-down box **OR** print name in the space provided, sign, and date Attachment 1;

[B] Submit the completed RIVS package to Records.

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5.0 RECORDS

5.1 Records generated during the performance of this procedure are maintained as QA records in accordance with CCP-QP-008.

5.1.1 QA/Nonpermanent

<u>Purchase Order Receipt Inspection Verification (RIVS)</u>

[A] Attachment 1, RIVS, with attached required documentation

<u>Q-Card Purchase for CCP Gases RIVS</u>

[B] Attachment 1, RIVS, with attached Q-Credit Card Master Inspection Plan, and attached required documentation

Attachment 1 – CCP Receipt Inspection Verification Sheet

SECTION 1 – GENERAL INFORMATION –COMPLETED BY QA

□ P.O. Number: □ Q-Credit Card Inspection Plan Number:	Type of Inspection: (Check All that Apply) ☐ Receipt ☐ Drop Shipment ☐ Other: _____	QSL Vendor: ☐ Yes ☐ No	Quality Level: ☐QL1 ☐QL2 ☐QL0 Requiring Inspections

SECTION 2 - QUALITY REQUIREMENTS - COMPLETED BY QA

REQUIRED DOCUMENTATION	PO LINE#	ITEM DESCRIPTION	INSPECTION ATTRIBUTES ☐ SCI Required for L.I. #
			INSPECTION CHARACTERISTICS

QA: (Printed)	Signature:	Date:

SECTION 3 – RESULTS – COMPLETED BY THE QA INSPECTOR

SAMPLE SIZE:

STATUS				PARTIAL/COMPLETE INSPECTION			
Line #	**Ac**	**Re**	**NCR**	**HT**	**All Of Line Item**	**Qty**	**Initials**	**Date**
	☐	☐	☐	☐	☐ Yes ☐ No			
	☐	☐	☐	☐	☐ Yes ☐ No			
	☐	☐	☐	☐	☐ Yes ☐ No			
	☐	☐	☐	☐	☐ Yes ☐ No			
	☐	☐	☐	☐	☐ Yes ☐ No			

IFMS Receiver Number(s):	Required Documentation Attached ☐ Yes ☐ No

Additional Information:

SECTION 4 - CLOSURE - COMPLETED BY THE QA INSPECTOR AND QA

PRINTED NAME	SIGNATURE	DATE
QA Inspector Release:		
QA Review:		

Attachment 2 – CCP Random Sampling Plan for Receipt Inspection

Lot or Batch Size	Sample Size		
	Reduced	Normal	Tightened
2 to 8	100%		
9 to 15	100%		
16 to 25	3	5	8
26 to 50	5	8	13
51 to 90	5	13	20
91 to 150	8	20	32
151 to 280	13	32	50
281 to 500	20	50	80
501 to 1,200	32	80	125
1,201 to 3,200	50	125	200
3,201 to 10,000	80	200	315
10,001 to 35,000	125	315	500
35,001 to 150,000	200	500	800
150,001 to 500,000	315	800	1,250
500,001 and over	500	1,250	2,000

Exceptions:
Some products are always inspected 100%, such as gases used in FGA and HSG.

Instructions:
Inspect the received items according to Attachment 1 or additional document(s). Use Attachment 2 to determine sample size.

Attachment 3 – Example, Q-Credit Card Inspection Plan

InspectionPlan - Windows Internet Explorer

File Edit View Favorites Tools Help

Inspection Plan
Part II
Inspection Criteria

Q-Card Inspection Plan DB
WIPP Quality Assurance

Return to Menu | Print Page

Plan Number 4923-QA-2011

Todays Date 8/26/2011

Inspection Plan: 4923-QA-2011
Cardholder:
Mat./Goods: CCP - Calibration and repairs to ANSI/NCSL Z540-1-
Mat./Goods Description: CCP - Calibration and repairs to ANSI/NCSL Z540-1-1994
Quality Level: CCP - 1
Model/Part No.:

Documentation: Yes
Manuals:
C of C:
Other:
Doc. Other Comments.: As-Found/As-Left, Source Traceable to NIST, Certification of Calibration, QSL Vendor required. Correct S/N and Equipment I.D. Number required.

Visual: Yes
Like for Like:
S/CI:
Other:
Vis. Other Comments.: Receipt Inspection, correct WIPP Equipment I.D. number and correct Serial Number required.

Additional Instructions: None
Add. Inst. Comments:
Instructions: XC0369 PROTO Torque Wrench M/N 6169F, S/N 410596
Additional Comments:
Inspection Plan: 4923-QA-2011
Cardholder: Jerry Golden
Mat./Goods: CCP - Calibration and repairs to ANSI/NCSL Z540-1-
Mat./Goods Description: CCP - Calibration and repairs to ANSI/NCSL Z540-1-

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CCP-QP-027

Revision 6

CCP
Test Control

EFFECTIVE DATE: 02/12/2013

Mike Ramirez

PRINTED NAME

APPROVED FOR USE

RECORD OF REVISION

Revision Number	Date Approved	Description of Revision
3	11/16/2006	Revised to implement the Waste Isolation Pilot Plant Hazardous Waste Facility permit requirements resulting from the Section 311/Remote-Handled (RH) Permit Modification Request (PMR). Changed SPQAO to CCP QA and made some editorial corrections. Addressed Carlsbad Field Office (CBFO) Document Review Record (DRR) comment.
4	03/13/2008	Revised in response to U.S. Department of Energy (DOE) Carlsbad Field Office (CBFO) Corrective Action Report (CAR) CAR-08-011 which noted that test plans were not being controlled in accordance with CCP-QP-010, *CCP Document Preparation, Approval and Control*.
5	11/03/2010	Revised to clarify how CCP-QP-010, *CCP Document Preparation, Approval, and Control*, is applicable only to the control, not the development, of a test plan.
6	02/12/2013	Revised to incorporate Nuclear Waste Partnership (NWP) transition changes.

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1.0 PURPOSE

This procedure describes the method for test control of items that are considered to impact the quality of characterization, certification, packaging, or transportation of waste for the Central Characterization Program (CCP). The procedure addresses requirements and responsibilities for testing activities performed to ensure items related to CCP activities meet established design, performance, and quality requirements.

1.1 Scope

This procedure applies to waste characterization and certification testing activities that are used to determine the capability of an item to meet applicable requirements by subjecting the item to a set of physical, chemical, environmental, or operating conditions. Examples of such tests include prototype qualification tests, production tests, proof tests prior to installation, and pre-operational tests.

2.0 REQUIREMENTS

2.1 Training

2.1.1 Personnel performing testing shall have requisite qualifications for the testing to be performed as defined in the test plan.

2.2 References

Baseline Documents

- DOE/CBFO-94-1012, *U.S. Department of Energy Carlsbad Field Office Quality Assurance Program Document* (QAPD)
- CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*
- CCP-PO-002, *CCP Transuranic Waste Certification Plan*
- CCP-PO-003, *CCP Transuranic Authorized Methods for Payload Control (CCP CH-TRAMPAC)*

Referenced Documents

- CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control*
- CCP-QP-008, *CCP Records Management*
- CCP-QP-010, *CCP Document Preparation, Approval, and Control*

3.0 RESPONSIBILITIES

3.1 CCP Team Leader, Manager, or Lead Operator (LO)

3.1.1 Reviews and approves test plans and procedures.

3.2 CCP Personnel

3.2.1 Identifies the need for testing and a test plan.

3.3 Configuration Management

3.3.1 Identifies the test requirements.

3.3.2 Identifies the procedures to control and perform the test, and prepares the test plan, if applicable.

3.3.3 Evaluates the test data to ensure that the test requirements have been satisfied.

3.3.4 Provides final test documentation to CCP Records upon acceptance or rejection.

3.4 Quality Assurance

3.4.1 Designates and/or recommends and/or concurs with test hold points and witness points.

3.4.2 Reviews and concurs with test results.

3.5 Test Performer

3.5.1 Conducts the required test in accordance with the applicable test procedure/test plan.

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4.0 PROCEDURE

CCP Personnel

4.1 Determine the test process.

4.2 The documents will be identified with a unique number from the CCP-CM-XXX series, reviewed, approved, and controlled in accordance with CCP-QP-010, *CCP Document Preparation, Approval, and Control*, and will include the following, as appropriate:

4.2.1 Identification of implementing procedures to control/perform test.

4.2.2 Identification of item to be tested.

4.2.3 Identification of applicable measuring and testing equipment (M&TE).

4.2.4 Method of test.

4.2.5 Test prerequisites (equipment, instrumentation, software, training, conditions).

4.2.6 Identification of provisions for ensuring test prerequisites has been met.

4.2.7 Tester qualifications, if applicable.

4.2.8 Test requirements and acceptance limits, including required levels of precision and accuracy.

4.2.9 Mandatory hold points.

4.2.10 A section for the test results to be entered.

CCP Team Leader, Manager, or LO

4.3 Provide the approved test plan and other applicable test documentation to the test performer.

Test Performer

4.4 Conduct the required test.

4.5 Provide test results to quality assurance (QA) for review. The test results shall identify, as appropriate:

4.5.1 Applicable test requirements, plans, and procedures (including revisions).

4.5.2 Item or work product tested.

4.5.3 Date and time of test.

4.5.4 Name of tester and data recorders (ensure that the tester applies signature, initials, or controlled stamp as identification).

4.5.5 Type of observation and method of testing.

4.5.6 Identification of test criteria.

4.5.7 The results and acceptability of the test.

4.5.8 Actions connected to noted nonconformances.

4.5.9 Name of person evaluating the test result.

4.5.10 Identification of M&TE used in the test (including ID number and calibration due date).

QA

4.5.11 Review test results or other designated documentation.

4.5.12 **IF** review is satisfactory,
THEN document acceptance of the test by printing name, signing, and dating the test results.

4.5.13 **IF** the review is **NOT** satisfactory,
THEN initiate a nonconformance report (NCR) in accordance with CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control*.

4.5.14 Provide test results to Configuration Management.

Configuration Management

4.5.15 Evaluate the test data.

4.5.16 Review the test results and the acceptance criteria to ensure all test requirements have been satisfied.

4.5.17 **IF** the review is satisfactory,
THEN document acceptance of the test by printing name, signing, and dating the test results.

4.5.18 **IF** the review is **NOT** satisfactory,
THEN initiate an NCR in accordance with CCP-QP-005.

4.5.19 Submit completed test documentation to CCP Records with a copy to personnel requesting the test, if applicable.

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5.0 RECORDS

5.1 Records generated during the performance of this procedure are maintained as QA records in accordance with CCP-QP-008, *CCP Records Management*.

5.1.1 <u>QA/Nonpermanent</u>

[A] Test Plan/Procedure

[B] Test Results and Acceptance or Rejection Documentation

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Attachment 1 – Test Plan Format (Example)

Item to be tested

Test equipment including M&TE

Method or description of test in step by step actions and attributes

Test prerequisites (equipment, instrumentation, software, training, conditions)

Tester qualifications, if applicable

Test requirements and acceptance limits, including required levels of precision and accuracy

Mandatory hold points

Test results for each test attribute

Provisions for signatures for test performers, reviewers, and approvers

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CCP-QP-028

Revision 15

CCP
Records Filing, Inventorying, Scheduling, and Dispositioning

EFFECTIVE DATE: 01/22/2013

Mike Ramirez

PRINTED NAME

APPROVED FOR USE

RECORD OF REVISION

Revision Number	Date Approved	Description of Revision
3	08/20/2002	Added steps 4.3.3 through 4.3.6. Added a Table of Contents. Added a Record of Revision. Other editorial changes.
4	10/24/2002	Added new Step 3.1.2 and revised Step 4.2.4.[B] making the Project Manager responsible for signing RIDS; added as result of a comment during the SRS Recertification Audit.
5	09/25/2003	Separated electronically fillable forms and updated references in procedure. Added responsibilities for CCP personnel. Other editorial changes.
6	07/25/2006	Revised to change the CCP Project Manager's responsibility to the CCP Project Support Manager.
7	04/18/2007	Revised to change CCP Project Support Manager responsibilities to the CCP Program Development Manager.
8	09/11/2007	Revised to make minor editorial changes and to replace Attachment 1, Records Inventory and Disposition Schedule with new DOE form, DOE F 1324.10 (06-96).
9	02/24/2009	Revised to incorporate changes to titles of personnel and names for organizations. Also, a step was added to Section 4.2 (step 4.2.5) to complete the process performed. Section 4.4 was deleted since the requirements are not applicable to the CCP scope of work (they are implemented at the RCT level).
10	04/08/2010	Revised to incorporate changes to Attachment 2, Instructions for Filling Out the Records Inventory and Disposition Schedule.
11	05/19/2010	Revised to bring instructions regarding location in Attachment 4, Instructions for Filling Out the Records Inventory and Disposition Schedule, in line with current practice.
12	11/09/2010	Revised to remove examples form and re-number remaining attachments and update Attachment 2.
13	09/09/2011	Revised to correct reference section of the procedure and remove a reference that is no longer active.

RECORD OF REVISION

Revision Number	Date Approved	Description of Revision
14	01/16/2012	Revised to bring into line with the Waste Isolation Pilot Plant (WIPP) Inventory Worksheets and general editing of the procedure.
15	01/22/2013	Revised to incorporate Nuclear Waste Partnership (NWP) transition changes.

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1.0 PURPOSE

This procedure provides direction and instruction for generating, issuing, and using a Records Inventory and Disposition Schedule (RIDS).

1.1 Scope

The procedure applies to Central Characterization Program (CCP), CCP Manager, and Records Custodians responsible for inventory, scheduling, and disposing of CCP records under their cognizance, regardless of media, in order to document the activities related to the CCP.

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2.0 REQUIREMENTS

2.1 References

Baseline Documents

- 44 USC 3301, *Definition of Records*
- DOE/CBFO-94-1012, *U.S. Department of Energy Carlsbad Field Office* (CBFO) *Quality Assurance Program Document* (QAPD)

Referenced Documents

- EA15RM3002-1, *WIPP Records Inventory Work Sheet*
- EA15RM3002-2, *Records Inventory and Disposition Schedule (RIDS)*
- WP 15-RM3002, *Records Filing, Inventorying, Scheduling, and Dispositioning*
- CCP-QP-008, *CCP Records Management*

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3.0 RESPONSIBILITIES

3.1 CCP Manager or Designee

3.1.1 Approves the Records Inventory and Disposition Schedule (RIDS).

3.2 Lead Records Custodian

3.2.1 Develops new RIDS.

3.2.2 Performs annual review and revision of RIDS.

3.3 WIPP Records Management Services (WRMS)

3.3.1 Reviews the RIDS and associated WIPP Records Inventory Worksheets.

3.3.2 Provides final approval signature for the RIDS.

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4.0 PROCEDURE

4.1 Developing a New Inventory and RIDS

Lead Records Custodian

NOTE

The Lead Records Custodian may request assistance from WIPP Records Management Services (WRMS) for performance of steps 4.1.1 and 4.1.2.

4.1.1 Complete EA15RM3002-1, *WIPP Records Inventory Work Sheet* for each record and non-record series, using the instructions contained in WP 15-RM3002, *Records Filing, Inventorying, Scheduling, and Dispositioning*.

4.1.2 Complete the RIDS on form EA15RM3002-2, *Records Inventory and Disposition Schedule (RIDS),* using the instructions contained in WP 15-RM3002.

4.2 RIDS Review and Approval

Lead Records Custodian

4.2.1 Forward the draft RIDS and all EA15RM3002-1 to WRMS for review and comments.

4.2.2 **IF** WRMS returns the RIDS with comments,
THEN resolve the comments.

4.2.3 **IF** notified by WRMS that the RIDS is acceptable,
THEN print out a final copy of the RIDS for signatures.

4.2.4 Obtain the required signatures in Block 5, RIDS, as follows:

[A] Prepared by - Signature of the designated trained Lead Records Custodian who prepared the RIDS

[B] Approved by - Signature of the CCP Manager or Designee

[C] Record Liaison Officer - Enter “N/A”

4.2.5 Submit signed RIDS to WRMS for final approval by obtaining WRMS signature.

4.3 Revising and Reviewing the RIDS

Lead Records Custodian

4.3.1 Review files annually, at a minimum.

NOTE
Take into consideration organization changes that may affect record series custodianship, location, or when new record series are created.

4.3.2 Check all record and non-record material on the current RIDS.

4.3.3 **IF** a new series is added,
THEN complete an EA15RM3002-1, with the instructions in WP 15-RM3002, **AND** add the new record series to a draft CCP RIDS.

4.3.4 **IF** a record series is no longer generated and maintained,
THEN complete an EA15RM3002-1, with the instructions in WP 15-RM3002, **AND** delete the item on a draft RIDS.

4.3.5 Forward the draft RIDS, **AND** any new EA15RM3002-1 to the WRMS annually at a minimum.

4.3.6 Follow steps 4.2.2 through 4.2.5.

4.3.7 **IF** an interim RIDS change is needed to make an immediate change of information on the RIDS,
THEN complete an EA15RM3002-1, with the instructions in WP 15-RM3002.

4.3.8 Send copy to WRMS and add changes to a draft RIDS to be submitted in the next RIDS review.

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5.0 RECORDS

5.1 Records generated during the performance of this procedure are maintained in accordance with CCP-QP-008, *CCP Records Management.* The records are the following:

Non-Quality Assurance

5.1.1 Records Inventory and Disposition Schedule

5.1.2 WIPP Records Inventory Worksheet

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CCP-QP-029

Revision 0

CCP Corrective Action Management

EFFECTIVE DATE: 02/06/2013

Mike Ramirez

PRINTED NAME

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RECORD OF REVISION

Revision Number	Date Approved	Description of Revision
0	02/06/2013	Initial Issue. To combine CCP-QP-004, *CCP Corrective Action Management* and CCP-QP-006, *CCP Corrective Action Reporting and Control*, into one procedure for ease of review and use.

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1.0 PURPOSE

This procedure establishes the management controls and processes for Central Characterization Program (CCP) to ensure that identified deficiencies and conditions adverse to quality are analyzed and resolved. This procedure identifies the process for evaluation of nonconformances to determine significant conditions adverse to quality (SCAQ) and identifies the process for documenting, evaluating, and controlling conditions adverse to quality through the use of Corrective Action Reports (CARs).

1.1 Scope

This procedure, applies to CCP personnel who are responsible for the identification, classification, control, and correction of conditions adverse to quality, and nonconforming items, activities, and processes associated with the CCP, including one or more of the following:

- Regulatory compliance
- Nuclear and industrial safety
- Waste characterization
- CCP programmatic compliance

Additionally, this procedure applies to activities affecting the quality of CCP waste characterization, certification, packaging, and transportation. It establishes the process for identifying, documenting, controlling, evaluating, dispositioning, and verifying completion of corrective actions for conditions adverse to quality related to programmatic or process failures, malfunctions, and deficiencies. It provides the controls to identify recurring conditions adverse to quality to determine effectiveness of corrective action implementation.

All personnel are responsible for identifying quality problems and are encouraged by management to suggest improvements. Management at all levels should foster a “no-fault” attitude toward the identification of quality problems by:

- Endeavoring to “fix the problem, NOT the blame”
- Encouraging candid, frank, and open communications

Control of conditions adverse to quality for hardware (items) and batch data report (BDR) deficiencies are addressed in CCP-QP-005.

Control of conditions adverse to quality related to programmatic or process failures, malfunctions, and deficiencies are addressed in this procedure.

All CARs are forwarded to the Price-Anderson Amendments Act (PAAA) Coordinator for evaluation of potential PAAA issues.

Trending of conditions adverse to quality is addressed in CCP-QP-014, *CCP Quality Assurance Trend Analysis and Reporting*.

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2.0 REQUIREMENTS

2.1 References

Baseline Documents

- DOE/CBFO-94-1012, *U.S. Department Of Energy Carlsbad Field Office Quality Assurance Program Document*
- DOE/WIPP-02-3214, *Remote-Handled TRU Waste Characterization Program Implementation Plan*
- CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*
- CCP-PO-002, *CCP Transuranic Waste Certification Plan*
- *Waste Isolation Pilot Plant Hazardous Waste Facility Permit (HWFP)*, Attachment C, *Waste Analysis Plan (WAP)*

Referenced Documents

- CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control*
- CCP-QP-008, *CCP Records Management*
- CCP-QP-014, *CCP Quality Assurance Trend Analysis and Reporting*

2.2 Conditions Adverse to Quality

2.2.1 Processes will be established and implemented to detect and prevent conditions adverse to quality and to ensure continuous improvement.

2.2.2 Conditions adverse to quality will be classified with regard to their significance. Corrective actions will be developed accordingly. The following categories have been established:

[A] Conditions adverse to quality

[B] Significant Condition Adverse to Quality (SCAQ)

2.2.3 Conditions adverse to quality are identified, documented, controlled, and corrected. Documentation will clearly identify and describe the characteristics that do not conform to specified criteria.

2.3 Reporting and Control

2.3.1 Conditions adverse to quality will be documented on Attachment 1, Corrective Action Report, by the individual identifying the problem or the manager of the adverse condition in accordance with the requirements of this procedure. The identified responsible manager will be notified and corrective actions taken, documented, and verified.

2.3.2 CARs will clearly identify and describe the required condition (i.e, procedure, section, paragraph, including revision), and the characteristics that do **NOT** conform to specified requirements.

2.3.3 CARs will have a unique numbering and logging system. The logging system will account for all CARs issued, including voided CARs. The CAR Log will be maintained at the Project Office by the CAR Coordinator. Attachment 9, CAR Log, will, at a minimum, identify the following:

- CAR Number
- Brief Description of CAR Condition
- Initiation Date
- Significant (Y/N), when known
- Originator

2.3.4 The CAR numbering system (e.g., CAR-LANL-0001-05, Rev. 0; CAR-SRS-0001-05, Rev. 1; CAR-CCP-0001-05, Rev. 2; CAR-RHINL-0001-12, Rev. 0) will provide the capability to determine the following:

- CAR
- Site designator
- Sequential number issued for the organization or site in that calendar year
- Calendar year issued
- Revision Number

2.4 Significant Conditions Adverse to Quality

2.4.1 SCAQ are reported to and evaluated by quality assurance (QA) organization, and the Responsible Management to determine if a Stop Work order is necessary.

2.4.2 A SCAQ is a condition that:

[A] If uncorrected could lead to a serious effect on safety/operability, the ability to isolate waste, TRU waste site certification, regulatory compliance demonstration, or effective implementation of the QA program; or

[B] Is noncompliant with the Compliance Recertification Application; or

[C] Requires immediate notification of regulatory entities (e.g., 10 CFR Part 21, HWFP reporting requirements); or

[D] Indicates a significant failure or breakdown in the implementation of QA program requirements; or

[E] Has not been resolved after repeated attempts; or

[F] Is identified in items or activities important to safety or waste isolation and compromises the ability to prevent or mitigate the consequences of an accident, thereby presenting a significant hazard to safety and health of workers and/or the public; or

[G] Constitutes an adverse trend or inclination, as determined by formal performance evaluation and trend analysis.

2.4.3 All violations of the HWFP-WAP shall be evaluated as a SCAQ.

2.4.4 Nonconformances related to defects or failure to comply with requirements applicable to NRC-licensed packaging (e.g., TRUPACT II, TRUPACT-III, RH-TRU 72-B, CNS 10-160B) shall be reported to the CBFO Office of the National TRU Program.

2.4.5 Deficiency Evaluation Forms are required for all SCAQs and are documented using Attachment 5, CCP Deficiency Evaluation Form Part 1 (DEF), Attachment 6, CCP Deficiency Evaluation Form Part 2 (DEF), and Attachment 7, CCP Deficiency Evaluation Form (DEF) Continuation Sheet (if applicable), and shall address the following:

[A] Stop work consideration

[B] Root cause (See Attachment 8, Guidance for Performing Direct Derivation Root Cause Analysis)

[C] Immediate/compensatory actions

[D] Extent and impact

[E] Action(s) to preclude recurrence

[F] Expected completion dates for each item and responsible individuals

2.4.6 Corrective Action Plans (CAP) for conditions adverse to quality are documented using Attachment 3, CCP Corrective Action Plan (CAP) and Attachment 4, CCP Corrective Action Plan (CAP) Continuation Sheet (if applicable), and shall address the following:

[A] The cause of the deficiency

[B] Immediate/compensatory actions

[C] Extent and impact; including effectiveness of corrective actions previously taken

[D] Corrective Actions

[E] Action(s) to preclude recurrence

[F] Expected completion dates for each item and responsible individuals

2.5 Corrective Action Tracking and Follow-up

2.5.1 Conditions adverse to quality are tracked using the Corrective Action Reporting Module (CARM). This system facilitates the effective implementation of scheduled corrective actions, trending for quality improvement, and the timely completion of corrective actions.

2.5.2 As a minimum, CARs will be tracked in the CARM.

2.6 CAR Evaluation, Disposition

2.6.1 QA will validate the CAR before the evaluation and disposition process.

2.6.2 QA will evaluate the CAR for significant and recurring conditions adverse to quality.

2.7 Corrective Action Responses and Evaluations

2.7.1 Corrective action responses and evaluations will be accomplished in accordance with this procedure.

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2.8 Corrective Action Report Module (CARM)

2.8.1 The CARM will provide the schedule to assure accurate and timely reporting of the status of all CARs.

2.8.2 The CARM will provide the information necessary to support trending of conditions adverse to quality.

2.8.3 The CARM will provide, as a minimum, the following:

- CAR Number and Revision
- CAR Initiation Date
- CAR Originator
- Required Condition
- Actual Condition
- Expected Completion Date
- Responsible Manager
- Trend Code
- SCAQ or Condition Adverse to Quality
- Closure Date, if applicable

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3.0 RESPONSIBILITIES

3.1 CCP CAR Originator

3.1.1 Identifies the condition adverse to quality and initiates the corrective action process in accordance with the requirements of this procedure.

3.1.2 Responsible for starting the CAR revision process when necessary.

3.2 QA

3.2.1 Ensures consistent application of the Corrective Action Management Program, and provides support to the CCP Site Project Manager (SPM) and Responsible Managers.

3.2.2 Screens CARs for significant and recurring conditions adverse to quality.

3.2.3 Ensures the CAR process is followed in accordance with this procedure.

3.2.4 Validates CARs.

3.2.5 Determines the appropriate trend code, in accordance with CCP-QP-014.

3.2.6 Performs CAR evaluations in accordance with this procedure.

3.2.7 Verifies corrective action is complete and adequate.

3.2.8 Closes CARs.

3.3 Assurance Programs Manager

3.3.1 Approves the CAR for issuance.

3.3.2 Confirms the CAR has been correctly evaluated and completed in accordance with this procedure.

3.3.3 Makes the final determination whether CAR conditions represent SCAQ.

3.3.4 Verify corrective actions are complete and authorizes the CAR closure.

3.4 Responsible Manager

3.4.1 Prepares Corrective Action Responses in accordance with this procedure, and ensures that actions to resolve identified problems are completed in a timely manner.

3.4.2 Identifies necessary corrective actions to resolve conditions adverse to quality and precludes recurrence in accordance with this procedure.

3.4.3 Monitors to ensure corrective actions are completed in accordance with the established dates.

3.4.4 Provides objective evidence of completion of corrective actions.

3.5 CCP SPM

3.5.1 Serves as authority for determining responsible individuals and/or corrective action owners (if necessary).

3.5.2 Participates in the evaluation of CAQ/SCAQ.

3.5.3 Initiates Stop Work, if applicable.

3.5.4 Notifies Vendor Project Manager (VPM) in case of an event or occurrence.

3.5.5 Evaluates, analyses, and initiates corrective action as appropriate.

3.5.6 Determines if CBFO notification is required for significant and/or Resource Conservation and Recovery Act related CARs.

3.6 CAR Coordinator

3.6.1 Maintains the CAR Log.

3.6.2 Updates CARM.

3.6.3 Processes CARs in accordance with this procedure.

3.6.4 Maintains CARs and submits related documentation in accordance with CCP-QP-008, *CCP Records Management*.

3.6.5 Reconciles CAR Logs in accordance with this procedure.

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4.0 PROCEDURE

4.1 CAR Initiation

CAR Originator

4.1.1 Upon identification of a condition adverse to quality, perform the following:

[A] Obtain a CAR number from the CAR Coordinator.

[B] Enter the number and revision on both pages of Attachment 1 (and Attachment 2, Corrective Action Report Continuation Sheet, if necessary).

[C] Complete Blocks 1 thru 3b of Attachment 1.

[D] Confirm that Block 3b of Attachment 1 addresses the applicable section(s) and the revision of the implementing procedure and/or requirement.

[E] Print name, sign, and date Block 5 of Attachment 1.

4.1.2 Forward the CAR to QA, **OR** perform the next step, if qualified.

4.2 CAR Review and Validation

QA

4.2.1 Review and validate the CAR by performing the following as a minimum:

[A] Verify that the identified condition and requirement meet the criteria for a CAR.

NOTE

The identified deficiencies may require both a CAR and a nonconformance report (NCR): A CAR to address programmatic issues, and an NCR to provide control of nonconforming items to prevent inadvertent use.

[B] **IF** the identified condition is determined to meet the criteria for an NCR, but **NOT** a CAR,
THEN void the CAR in accordance with Section 4.4, **AND** instruct the originator to initiate an NCR in accordance with CCP-QP-005.

[C] **IF** it is determined to be a valid CAR,
THEN verify the following:

- CAR number and revision are on both pages of the CAR
- Form is filled out correctly

[D] Verify that the condition requiring corrective action adequately addresses the identified requirement (procedure, section, and revision).

[E] Determine whether the condition is a SCAQ in accordance with Section 4.5, **AND** check the appropriate box in Block 4a of Attachment 1.

[F] Determine whether a CAP is required **AND** check the appropriate box in Block 4b of Attachment 1.

[G] Determine the Trend Code in accordance with CCP-QP-014, **AND** indicate the code in Block 4d of Attachment 1.

NOTE

If any inconsistencies, clarifications, or other concerns are identified, they shall be resolved with the CAR Originator, prior to proceeding.

4.2.2 **IF** the CAR is determined to be valid,
THEN validate the CAR by printing name, signing, and dating Block 6 of Attachment 1.

NOTE

The responsible manager determination is based on discussions and agreement between QA and CCP management, with QA making the final determination.

4.2.3 Determine the manager responsible for resolution, (i.e., the Responsible Manager).

4.2.4 Enter the Responsible Manager's name in Block 7 of Attachment 1. Discuss the following with the Responsible Manager:

- Conditions identified in the CAR
- Recommendations for corrective actions
- Initial response due date

4.2.5 Record the Initial Response Due Date in Block 4c of Attachment 1.

4.2.6 Forward the CAR to the Assurance Programs Manager for approval.

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4.3 CAR Review and Approval

Assurance Programs Manager

4.3.1 Review the CAR to validate the adverse condition and applicable requirement.

4.3.2 Confirm that the adverse condition has been correctly evaluated **AND** documented in Block 4a. Provide additional documentation in accordance with this procedure, as necessary.

4.3.3 **IF** the CAR can **NOT** be validated,
THEN return the CAR to originator for resolution or void the CAR in accordance with Section 4.4.

4.3.4 **WHEN** the CAR can be validated,
THEN print name, sign, and date Block 8 of Attachment 1, **AND** forward the original CAR to the CAR Coordinator for processing.

4.4 Voiding CARs

QA

4.4.1 **IF** a CAR is determined to be invalid in accordance with Section 4.2 and/or 4.3,
THEN perform the following:

[A] Draw a diagonal line across page one of the CAR form, **AND** mark “VOID” with an initial and date.

[B] Provide detailed justification for voiding.

[C] Print name, sign, and date adjacent to the justification concurring with the reason for voiding, **AND** forward the CAR to the CAR Coordinator.

CAR Coordinator

4.4.2 Update the CAR Log identifying that the CAR is voided.

4.4.3 Input the CAR into CARM.

4.4.4 Submit voided CAR to CCP Records Center.

4.5 Significant Conditions Adverse to Quality

Assurance Program Manager/QA

4.5.1 Make an initial determination as to whether or not a SCAQ exists by determining if the following apply to the CAQ:

[A] If uncorrected could lead to a serious effect on safety/operability, the ability to isolate waste, TRU waste site certification, regulatory compliance demonstration, or effective implementation of the QA program; or

[B] Is noncompliant with the Compliance Recertification Application; or

[C] Requires immediate notification or regulatory entities (e.g., 10 CFR Part 21, HWFP reporting requirements); or

[D] Indicates a significant failure or breakdown in the implementation of QA program requirements; or

[E] Has not been resolved after repeated attempts; or

[F] Is identified in items or activities important to safety or waste isolation and compromises the ability to prevent or mitigate the consequences of an accident, thereby presenting a significant hazard to safety and health of workers and/or the public; or

[G] Constituents an adverse trend or inclination, as determined by formal performance evaluation and trend analysis.

4.5.2 **IF** the answer is YES to any of the criteria in step 4.5.1, **THEN** check YES in Block 4a of the CAR, **AND** proceed to Section 4.6.

4.5.3 **IF** the answer is NO to all of the criteria in step 4.5.1, **THEN** search the CARM to determine if there are previous violations of the same requirement/condition (recurring conditions adverse to quality).

Recurring Conditions Adverse to Quality

4.5.4 **IF** multiple occurrences are identified (three or more within the last six months),
THEN discuss with the Assurance Programs Manager, who will determine whether the recurring nature of the condition represents a SCAQ, **AND** document the determination in an e-mail to the CAR Coordinator, who will include it as part of the QA record file for the CAR.

4.5.5 **IF** multiple occurrences are identified (three or more within the last six months), **AND** the Assurance Programs Manager has determined the recurring nature of the condition represents a SCAQ, **THEN** check YES in Block 4a of the CAR.

4.5.6 **IF** there have been any previous CARs (less than three) citing the same condition and requirement within the last six months,
THEN check NO in Block 4a of the CAR, check YES in Block 4b of the CAR, Corrective Action Plan Required, **AND** list the previous CAR(s) in the space provided.

4.5.7 **IF** there are no previous occurrences,
THEN check NO in Block 4b of the CAR.

4.5.8 Identify the Trend Code in accordance with CCP-QP-014, enter the appropriate code in Block 4d of the CAR, and continue processing CAR.

4.6 Deficiency Evaluation Prerequisites

CCP SPM

4.6.1 Determine if CBFO notification is appropriate and/or required.

4.6.2 Notify the VPM by memo in the case of an event or occurrence report.

4.6.3 Identify the need for Subject Matter Experts (SMEs) to assist in the evaluation.

4.7 CAR Processing

CAR Coordinator

4.7.1 Verify CAR information in the CAR Log.

4.7.2 Update CARM.

4.7.3 Transmit an e-mail on behalf of the Manager with the attached copy of the CAR to the Responsible Manager, **AND** distribute copies to those entities identified for distribution to the CCP SPM, Nuclear and Worker Safety Compliance Coordinator, CAR originator, and any others, as identified by the Manager.

4.7.4 Retain original CAR, **AND** attach a copy of the CAR to the e-mail.

4.8 Corrective Action Determination

Responsible Manager

4.8.1 **IF** a CAP is required,
THEN prepare the CAP in accordance with this procedure, **AND** enter "See attached Corrective Action Plan" in Block 9 of Attachment 1.

4.8.2 **IF** a CAP is **NOT** required,
THEN investigate, **AND** document all corrective actions necessary to resolve the deficiency in Block 9 of Attachment 1, using Attachment 2 (if necessary).

4.8.3 Verify that the corrective action addresses, as a minimum, the following:

- Cause
- Impact of the deficiency on completed work
- Detailed corrective actions to correct the deficiency
- Identification of documentation needed to substantiate completion of corrective actions.

4.8.4 Consider the need to address the following, **AND**, if deemed necessary, document in Block 9 of Attachment 1:

- Immediate/Compensatory actions
- Extent of condition
- Actions taken to preclude recurrence of the problem

4.8.5 **IF** the CAR is significant and Attachment 5 has been completed,
THEN GO TO step 4.8.7.

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4.8.6 **IF** the CAR is significant, and Attachment 5 has **NOT** been completed in accordance with this procedure,
THEN complete the attachment, **AND** document it in Block 9 of Attachment 1.

4.8.7 Enter expected Completion Date in Block 10 of Attachment 1.

4.8.8 Print, sign, and date Block 12 of Attachment 1, **AND** forward original CAR and attachments, if applicable to QA.

4.9 Deficiency Evaluation

QA/CCP SPM/Manager/Responsible Manager

NOTE
Management may decide to arrange for an independent root cause analysis when analysis beyond direct derivation is determined appropriate.

4.9.1 Conduct the evaluation and document the results on Attachment 5 and Attachment 7 (if applicable), to include the following:

[A] Complete DEF Form Part 1 (Attachment 5) by the date shown in Block 4c.

[B] Document the logic for Stop Work decisions, as applicable.

[C] Determine responsible manager (if not previously addressed in CAR).

[D] Document immediate/compensatory action(s), or provide justification if not applicable.

[E] Evaluate extent and impact of the deficiency.

4.9.2 Conduct the evaluation and document the results on Attachment 6 and Attachment 7 (if applicable), to include the following:

[A] Determine appropriate root cause and document Trend Code in the Block of 4d of the CAR.

[B] Document Corrective Actions.

[C] Enter actions to be taken to preclude recurrence of the problem.

[D] Identify expected completion dates for each corrective action (if required) and responsible individuals (if not the Responsible Manager).

QA/CCP SPM/Responsible Manager

4.9.3 Print name, sign, and date Attachments 5 and 6.

QA

4.9.4 Attach Attachment 5, Attachment 6, and Attachment 7 (if applicable), to the CAR, and submit the CAR to the Assurance Programs Manager for approval in accordance with this procedure.

4.10 CAP Preparation

Responsible Manager

4.10.1 When a CAP is required, evaluate the recurring conditions to the following:

[A] Determine the events leading to the deficiencies.

[B] Develop an understanding of the technical and work activities associated with the conditions adverse to quality.

[C] Determine the extent to which similar quality problems or precursors to the problem have been recognized by responsible management.

[D] Evaluate the effectiveness of any previous corrective actions that were taken and impacts on completed work.

4.10.2 Summarize the results of step 4.9.1 to determine the cause and document in Section 1 of Attachments 3 and 4 (if applicable).

4.10.3 Complete Sections 2 through 5 of Attachments 3 and 4 (if applicable).

4.10.4 Submit Attachments 3 and 4 to QA for approval in accordance with step 4.12 of this procedure (if applicable).

4.11 Stop Work Processing

CCP SPM

4.11.1 **IF** a Stop Work order is necessary,
THEN perform the following:

[A] Initiate appropriate notifications to other relevant regulatory compliance functions (e.g., environmental and safety) and to responsible management.

[B] Issue the Stop Work order to the CCP Manager in accordance with CCP-QP-005.

[C] Take appropriate action to resolve the Stop Work order based on the resolution of the related condition.

QA

4.11.2 Verify and validate the completion of applicable corrective actions prior to any action releasing the Stop Work order.

4.12 Corrective Action Approval

QA

4.12.1 Review the CAR and applicable attachments, **AND** determine the following:

[A] The corrective actions in Block 9 of Attachment 1 or, if applicable, CAP adequately addresses measures to be taken to correct the identified deficiency and preclude recurrence.

[B] Assure corrective actions address all items on the DEF in accordance with this procedure (if applicable).

[C] Assure that an expected completion date is identified in Block 10 of Attachment 1.

4.12.2 **IF** corrective action is deemed appropriate,
THEN approve by completing Block 13 of Attachment 1.

4.12.3 **IF** corrective action is deemed to be deficient,
THEN make recommendations for corrective actions; resolve with responsible manager, **AND** reprocess per Section 4.8.

4.12.4 Forward CAR and attachments to the CAR Coordinator for processing (if applicable).

4.13 CARM Update

CAR Coordinator

4.13.1 Update CARM.

4.13.2 File original CAR and any attachments as a working file until CAR closure and maintain in accordance with CCP-QP-008.

Responsible Manager

4.13.3 Upon completion of the required corrective actions, request the original CAR from the CAR Coordinator.

CAR Coordinator

4.13.4 Forward the original CAR to the Responsible Manager.

Responsible Manager

4.13.5 Provide objective evidence of completion by one or more or any combination of the following:

[A] Attachments prepared as required by Section 4.16.

[B] Reference to traceable documentation that substantiates completion of corrective actions and actions to preclude recurrence.

[C] Statement(s) of Fact, name printed, signed, and dated and included as an attachment.

4.13.6 Complete Block 14 of Attachment 1.

4.13.7 Print name, sign, and date Block 15 of Attachment 1, **AND** submit original CAR with attachments to QA for closure.

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4.14 Extensions

Responsible Manager

4.14.1 In the event that a CAR can **NOT** be completed by the commited completion date, determine a new date **AND** initiate an e-mail to the CAR Coordinator requesting an extension.

CAR Coordinator

4.14.2 Record the new date in Block 11 of Attachment 1, mark the Yes box, **AND** attach extension documentation.

4.14.3 Update the CARM with the new completion date.

Responsible Manager/Immediate Supervisor

4.14.4 **IF** a need arises to request another extension,
THEN perform the following:

[A] Submit the request to the Assurance Program Manager identifying the new completion date, **AND** a justification as to why an extension is needed.

[B] Once approval is obtained from the Assurance Program Manager, forward the approval e-mail to the CAR Coordinator to be included with the CAR-supporting data and updated in the CARM.

[C] Any subsequent extension requests will be reviewed by the Assurance Program Manager.

4.15 Revisions and Corrections

Originator/QA/Assurance Programs Manager/Responsible Manger

NOTE

After Assurance Programs Manager approval of the CAR, any changes to technical content shall require a revision which will be performed in accordance with this section.

Editorial changes as defined in CCP-QP-008, **NOT** affecting technical content may be lined through, **AND** the correct data entered, initialed and dated during the life cycle of the CAR.

4.15.1 Apply next sequential revision number to all pages of the CAR and all attachments.

4.15.2 Record the reason for revision for the changes in Block 3a of Attachment 1 or use the Attachment 2 (if necessary).

4.15.3 Supersede the previous revision by drawing a diagonal line across the first page, adding a statement, "Superseded by Revision # (next sequential rev #)" **AND** initial and date.

4.15.4 Attach the superseded revision to the new revision.

4.15.5 Submit the new revision for review and approval in accordance with Section 4.2.

4.16 Attachments

Originator/QA/Assurance Programs Manager/Responsible Manager

4.16.1 When using attachments for a CAR, perform the following:

[A] Identify the CAR number and revision on each page of the attachment.

[B] Identify the attachment number.

NOTE

EXAMPLE – CAR-LANL-0003-05, Rev. 0, Attachment 1, Page 1 of 1
CAR-SRS-0004-05, Rev.1, Attachment 2, Page 1 of 6

[C] Paginate each page of the attachment.

4.17 Completion, Verification, and Closure

Responsible Manager

4.17.1 Review original CAR **AND** verify the following:

[A] Block 14 of Attachment 1 provides traceability to objective evidence substantiating completion of corrective action.

[B] Documentation provides adequate objective evidence of completion of corrective actions.

[C] Print name, sign, and date Block 15 of Attachment 1, **AND** submit original CAR with attachments, if applicable, to QA.

QA

[D] CAR is completed as required by this procedure.

[E] Verify Block 11 of Attachment 1 applicability, **AND**
IF blank,
THEN check the NO block.

4.17.2 **IF** corrective action and/or other requirements are **NOT** satisfactorily completed,
THEN perform the following:

[A] Return the original CAR to the Responsible Manager, with detailed reasons for return, for correction, and re-submittal.

4.17.3 **IF** corrective action and/or other requirements are satisfactorily completed,
THEN enter the verification methods used in Block 16a of Attachment 1, **AND** print name, sign, and date in Block 16b of Attachment 1**.**

4.17.4 Forward closed original CAR **AND** attachments, if applicable, to the CAR Coordinator for processing.

4.18 Closeout

CAR Coordinator

4.18.1 Update CARM.

4.18.2 Submit closed original CAR **AND** attachments to CCP Records Center (if applicable).

4.19 CAR Log Reconciliation

NOTE
Annually, the CAR Log is reconciled in accordance with this section.

CAR Coordinator

4.19.1 Reconcile the CAR Log to determine if the blocks of numbers issued versus the actual numbers used are accurate.

4.19.2 Annotate unused numbers during the calendar year as “Number Not Used” in the CAR Log.

4.19.3 Print the CAR Log annually after reconciliation, **AND** submit to CCP Records Center in accordance with CCP-QP-008.

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5.0 RECORDS

5.1 Records generated during the performance of this procedure are maintained and submitted as QA records in accordance with CCP-QP-008. The records are the following:

5.1.1 <u>QA/Nonpermanent Records</u>

- Attachment 9, CAR Log
- CCP CARM

<u>CAR Documentation Package</u>

- Attachment 1, CCP Corrective Action Report and supporting documentation
- Attachment 2, CCP Corrective Action Report Continuation Sheet (if applicable)
- Attachment 3, CCP Corrective Action Plan (CAP) (if applicable)
- Attachment 4, CCP Corrective Action Plan (CAP) Continuation Sheet (if applicable)
- Attachment 5, CCP Deficiency Evaluation Form Part 1 (DEF) (if applicable)
- Attachment 6, CCP Deficiency Evaluation Form Part 2 (DEF) (if applicable)
- Attachment 7, CCP Deficiency Evaluation Form (DEF) Continuation Sheet (if applicable)
- CBFO Notifications (if applicable)
- Management e-mail (if applicable)
- SPM Memo – Notification of Occurrence (if applicable)
- E-mail documentation of significance and recurrence determinations made by the Assurance Programs Manager (if applicable)

Attachment 1 – Corrective Action Report Page ____ of ____

CCP CORRECTIVE ACTION REPORT		
CAR No: CAR -	**Revision No.**	
1. Facility/Organization	2. Supplier Name/Address (if applicable)	
DESCRIPTION OF DEFICIENCY		
3a. Description of Condition Requiring Corrective Action. (Use CAR Continuation Sheet, Attachment 2, if necessary.)		
3b. Requirement, including revision		
4a. Significant Condition Adverse to Quality?	☐ Yes ☐ No	(If yes, see attached DEF, which can also serve as a CAP)
4b. Corrective Action Plan Required?	☐ Yes ☐ No	(Previous CARs)
4c. Initial Response Due Date		
4d. Trend Code		
5. Originator (*Print name, sign, and date*)	6. QA Concurrence (*Print name, sign, and date*)	
7. Assigned Responsible Manager *(Print name)*	8. Assurance Programs Manager Approval (*Print name, sign, and date*)	

Attachment 1 – Corrective Action Report (Continued) Page ____ of ____

CAR No: CAR -	**Revision No.**
9. Cause and Action to Correct Deficiency (Use CAR Continuation Sheet, Attachment 2, if necessary).	
10. Expected Completion Date	11. Extension Requested? ☐ Yes ☐ No
CORRECTIVE ACTION APPROVALS	
12. Responsible Manager (*Print name, sign, and date*)	13. QA Approval (*Print name, sign, and date*)
CLOSURE	
14. Corrective Action Completion Documentation (To be completed after completion of corrective action[s]).	
15. Corrective Action Complete - Responsible Manager (*Print name, sign, and date*)	
16a. Verification Methods:	
16b. Corrective Action Verified QA Approval (*Print name, sign, and date*)	

Attachment 2 – Corrective Action Report Continuation Sheet Page ____ of ____

CCP CORRECTIVE ACTION REPORT CONTINUATION SHEET	
CAR No: CAR-	**Revision No.**
Continuation from Section(s) # _____	

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Attachment 3 – CCP Corrective Action Plan (CAP)

CAR No. _____Revision No._____Attachment #_____Page_____of____

1. Document Cause. (Use CAP Continuation Sheet, if necessary.)

2. Document Immediate/Compensatory Actions (as applicable). (Use CAP Continuation Sheet, if necessary.)

3. Evaluate and document the Extent and Impact of the Deficiency. (Use CAP Continuation Sheet, if necessary.)

4. Document Corrective Actions. (Use CAP Continuation Sheet, if necessary.)

5. Document action(s) taken to preclude recurrence of the deficiency. (Use CAP Continuation Sheet, if necessary.)

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Attachment 4 – CCP Corrective Action Plan (CAP) Continuation Sheet

CAR No._____Revision No._____Attachment # _____Page_____of_____
Continuation from CAP Section(s) #_____

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Attachment 5 – CCP Deficiency Evaluation Form Part 1 (DEF)

CAR No._____ Revision No._____Attachment #_____Page_____ of_____

1. Document the logic for Stop Work decisions (as applicable). (Use DEF Continuation Sheet, if necessary.)

2. Determine Responsible Manager(s) if not already identified in CAR.

Responsible Manager_____

3. Document immediate/compensatory action(s) (as applicable). (Use DEF Continuation Sheet, if necessary.)

4. Evaluate the extent and impact of the deficiency. (Use DEF Continuation Sheet, if necessary.)

APPROVALS:

CCP SPM:

Print	Signature	Date

QA:

Print	Signature	Date

RESPONSIBLE MANAGER:

Print	Signature	Date

Attachment 6 – CCP Deficiency Evaluation Form Part 2 (DEF)

CAR No._____ Revision No._____Attachment #_____Page_____ of_____

1. Determine Appropriate Root Cause. (Use DEF Continuation Sheet, if necessary.)

2. Document Corrective Actions. (Use DEF Continuation Sheet, if necessary.)

3. Document actions to be taken to preclude recurrence of the problem. Identify expected completion dates (for each item) and responsible individuals.

APPROVALS:

CCP SPM:

Print	Signature	Date

QA:

Print	Signature	Date

RESPONSIBLE MANAGER:

Print	Signature	Date

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Attachment 7 – CCP Deficiency Evaluation Form (DEF) Continuation Sheet

CAR No._____Revision No._____ Attachment # _____ Page _____of___
Continuation from DEF Section(s)#_____

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Attachment 8 – Guidance for Performing Direct Derivation Root Cause Analysis

This attachment provides guidance for performing a Direct Derivation Root Cause Analysis (RCA) of a deficiency considered a SCAQ.

The Table A-1 summarizes the information that may be used for Direct Derivation RCA. The codes used to classify the trend codes of deficiencies are contained in CCP-QP-014.

1.0 PROCESS

1. Review the accumulated data on the deficiency being examined. Consider the information that may represent relevant factors from the topics listed below in Table A-1, Information For Direct Derivation Root Cause Analysis.

2. Perform a Direct Derivation RCA.

3. Determine the trend code, in accordance with CCP-QP-014 for the deficiency.

4. Document the results of the Direct Derivation RCA on the Attachments 1 and 2, as applicable.

Table A-1. Information For Direct Derivation Root Cause Analysis
The following information is useful in the investigation and evaluation of a condition when conducting root cause analysis. 1. Deficiency documentation describing the condition 2. Situation before and after occurrence or event 3. Personal interviews 4. Personnel statements as to conditions before and after the time of the occurrence and perceived cause 5. Procedure and drawings being employed 6. Physical equipment being employed 7. Environmental factors at the time 8. Operating logs 9. Training and qualification records 10. Background information on personnel involved 11. Recommendations for corrective actions

Attachment 9 – CAR Log Page ____ of ____

CCP CAR Log

CAR Number	Brief Description of CAR Condition	Initiation Date	Significant (Y/N)	Originator

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CCP-QP-030

Revision 8

CCP
Written Practice for the Qualification of CCP Helium Leak Detection Personnel

EFFECTIVE DATE: 08/04/2009

Larry Porter

PRINTED NAME

APPROVED FOR USE

RECORD OF REVISION

Revision Number	Date Approved	Description of Revision
2	02/25/2002	Replaced NDA with Helium Leak Detection. Removed RTR.
3	10/18/2002	Added steps 2.1, 4.6.2 and 4.6.3 and updated numbers in Attachment 5.
4	01/14/2004	Removed Annual Record of Eye Examination from Attachment 1 and created Attachment 6, *CCP Annual Record of Eye Examination*. Changed Section 4.7 to reflect addition of Attachment6. Added (L) to Level designators as needed. Replaced Table C in Attachment 4.
5	05/01/2006	Revised to add procedure steps for clarification of the qualification and re-qualification process. These steps were added as part of the annual procedure review.
6	11/16/2006	Revised to implement the Waste Isolation Pilot Plant Hazardous Waste Facility Permit requirements resulting from the Section 311/Remote-Handled (RH) Permit Modification Request (PMR) and to clarify re-qualification requirements for Helium Leak Detection (HLD) Level III (L).
7	03/05/2008	Revised to clarify eye exam training criteria.
8	08/04/2009	Revised to more clearly define American Society for Nondestructive Testing (ASNT) nomenclature, removal of Leak Testing (LT)-I personnel qualifications, and editorial changes.

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1.0 PURPOSE

This written practice procedure defines the qualification/re-qualification of nondestructive examination (NDE) personnel in the method of Helium Leak Detection (HLD) for the Central Characterization Project (CCP).

1.1 Scope

Qualification of personnel under this document is limited to those operations specific to CCP. The specific qualification covered by this procedure is HLD using the Mass Spectrometer Leak Test (MSLT) process. These operations are as defined in the applicable CCP and/or Carlsbad Field Office (CBFO) Department of Energy (DOE)/Waste Isolation Pilot Plant (WIPP) packaging procedures.

2.0 REQUIREMENTS

2.1 References

Referenced Documents

- American Society for Nondestructive Testing (ASNT) Recommended Practice No. SNT-TC-1A (June 1980 Edition), *Personnel Qualification and Certification in Nondestructive Testing*
- CCP-QP-002, *CCP Training and Qualification Plan*
- CCP-QP-008, *CCP Records Management*

2.2 Training

2.2.1 Personnel implementing this procedure are qualified based upon education, experience, and training. Documentation of training requirements and qualification status for all personnel who perform roles specified in this procedure is maintained by CCP Training.

2.2.2 Personnel performing this procedure will be trained and qualified in accordance with CCP-QP-002, *CCP Training and Qualification Plan*, prior to performing this procedure.

2.2.3 Personnel considered for qualification shall receive, as a minimum, the training as outlined in American Society for Nondestructive Testing (ASNT) Recommended Practice No. SNT-TC-1A (June 1980 Edition), *Personnel Qualification and Certification in Nondestructive Testing*, or as defined in the attachments to this procedure.

2.2.4 The ASNT nomenclature used for training level designations are as follows: Leak Testing (LT), level (II or III) and the Limited (L) qualification designator (i.e., LT-II [L] or LT-III [L]). This procedure specifically addresses the method of HLD. The limitation denotes the process using the MSLT.

2.2.5 Trainees involved with obtaining experience hours for qualification, are supervised by a qualified LT-II (L), LT-III (L) or ASNT LT-III.

2.3 Acceptance Criteria

2.3.1 Proper qualification to perform Helium Leak Detection (HLD) provides evidence of satisfactory implementation of this procedure.

3.0 RESPONSIBILITIES

3.1 LT-III (L)

3.1.1 Overall responsibility for the administration and grading of examinations, for verifying and documenting physical and technical qualifications, and for the overall qualification of LT-II (L) personnel.

3.1.2 The actual administration and grading of examinations may be delegated to a designee of the LT-III (L) and so recorded. All questions used for LT- II (L) examinations shall be approved and documented by the responsible LT-III (L).

3.1.3 Provides supporting documentation and technical endorsements for other LT-III (L) candidates to CCP Training for initial qualifications per the requirements of this procedure.

3.1.4 Transmits records identified by this procedure to CCP Training in accordance with CCP-QP-008, *CCP Records Management*.

3.2 CCP Quality Assurance (QA)

3.2.1 Reviews supporting documentation and technical endorsements for LT-III (L) initial qualification.

3.2.2 Reviews applicable letters, certificates and any supporting documentation for LT-III (L) re-qualification.

3.2.3 Provides qualification letter for LT-III (L).

3.3 NDE Instructor

3.3.1 Plans, organizes, and presents classroom, laboratory, demonstration and/or on-the-job training (OJT) in accordance with course outlines approved by the responsible LT-III (L).

3.4 CCP Training

3.4.1 Provides letter of technical endorsement, letter of performance and support documentation to CCP QA for qualification and re-qualification of LT-III (L) personnel.

4.0 PROCEDURE

4.1 Levels of Qualification Used for CCP NDE Personnel:

4.1.1 LT-II (L)

[A] Shall be qualified to set up and calibrate equipment, perform inspections, and interpret and evaluate results with respect to the applicable codes, standards, and specifications.

[B] Shall be thoroughly familiar with the scope and limitations of the applicable equipment.

[C] Shall exercise assigned responsibility for OJT and guidance of trainees.

[D] Shall be capable to prepare written instructions, and organize and report HLD Test Results.

4.1.2 LT-III (L)

[A] Shall be capable of writing, reviewing, and/or approving procedures, interpreting specifications and codes for testing, and interpreting test results.

[B] Shall be capable of evaluating results to existing codes or specifications.

[C] Shall have sufficient practical background in the applicable material technology to assist in establishing tests and acceptance criteria where none are available.

[D] Shall be capable of administering personnel qualification examinations and be capable of conducting those training programs necessary for qualification.

4.2 Personnel considered for HLD qualification shall have sufficient training and experience to ensure understanding of the principles and procedures. Previous training and experience shall be documented.

4.2.1 To be considered for qualification as a LT-II (L), a candidate shall satisfy the training and experience requirements, as stated in Attachment 2, Minimum Training and Experience Requirements for LT-II (L) Qualification.

4.2.2 To be considered for qualification as a LT-III (L), a candidate shall satisfy the training and experience requirements, as stated in Attachment 3, Minimum Training and Experience Requirements for LT-III (L) Qualification.

NOTE

Should an outside agency or consultant be utilized for the training, testing, and/or qualification of HLD personnel, they shall first be approved by CCP QA and responsible LT-III (L) for compliance with this procedure.

4.2.3 To be considered for qualification as an NDE Instructor, a candidate shall satisfy at least one of the following criteria:

[A] Possess a current ASNT LT-III certificate.

[B] Possess academic credentials equivalent to a B.S. in engineering, physical science or technology, and possess adequate knowledge in the method being taught.

[C] Graduate of a two-year school of science or engineering, with five or more years experience as a LT-II in the method being taught.

[D] Eight or more years experience as a LT-II in the method being taught.

4.3 The LT-III (L) may designate other individuals to assist in the administration of LT-II (L) examinations and tests. This designation shall be documented in a designation letter submitted to CCP Training.

4.4 To be qualified for LT-II (L) or LT-III (L), a candidate shall have:

4.4.1 Completed the required training specified in Attachments 2 or 3. (Training shall be conducted in accordance with this procedure, unless prior training was received. All previous training shall be documented and objective evidence shall be obtained when used to waive any new training).

4.4.2 Completed the required work experience specified in Attachments 2 or 3 (Work experience shall be documented. Previous qualification to ASNT Recommended Practice No.SNT-TC-1A shall satisfy the work experience requirements. Objective evidence of previous qualification shall be maintained on file).

4.5 Each LT-II (L) examination shall consist of a physical (except as noted below), general, specific, and practical exam, all approved by a LT-III (L) or designated ASNT LT-III.

NOTE

The physical exam does **NOT** have to be approved by the LT-III (L). The candidate/CCP Training is to notify the responsible LT-III (L) in the event of failing the annual eye examination.

4.5.1 Physical Examination

[A] Visual Acuity Examination

[A.1] Shall be administered to the candidate by a professional optometrist, medical doctor, nurse, or any other qualified designee prior to the initial qualification and thereafter on an annual basis, or at more frequent intervals, if required.

[A.2] Candidate shall have natural or corrected near distance acuity in at least one eye, and the capacity to read J-2 letters on a standard Jaeger test chart at a distance of not less than 30.5 cm (12 in.).

[A.3] Candidate shall receive a color vision examination to verify the capability of distinguishing color and differentiating contrast between colors normally used.

[A.4] Results of the visual acuity examination shall be recorded on Attachment 4, CCP Annual Record of Eye Examination.

4.5.2 General Examination

[A] Shall be a closed book examination consisting of at least the number of questions indicated in Table 1, Minimum Number of Test Questions.

[B] Shall cover theory and principles.

[C] Shall be completed within a period of two hours and shall have a percentile weight of 0.33.

4.5.3 Specific Examination

[A] Shall be a closed book examination, with necessary data, such as graphs, tables, specifications, and procedures provided.

[B] Shall consist of at least the number of questions indicated in Table 1.

[C] Shall cover the operating procedures, examination techniques, specifications, and acceptance criteria that may be encountered in a specific assignment.

[D] Shall consist of a review of the applicable procedures, codes, and/or specifications.

[E] Shall be completed within a period of two hours and shall have a percentile weight of 0.34.

4.5.4 Practical Examination

[A] Candidate shall show familiarity with equipment and related components.

[B] Candidate shall evaluate and provide10 different checkpoints requiring an understanding of the test variables and procedural requirements.

[C] Shall be completed within a reasonable amount of time.

[D] The description of test specimen, test procedure, and test results shall be documented on a test report.

[E] Shall have a percentile weight of 0.33.

Table 1. Minimum Number of Test Questions

Method	**General Examination**	**Specific Examination**
HLD LEVEL II	20	40

NOTE

If the prospective candidate for LT-III (L) does **NOT** meet the degree and/or work experience requirements, or equivalencies described in Attachment 3, then CCP QA will require that the prospective candidate must be qualified by examination. This exam is developed and administered by an ASNT LT-III.

4.6 When a LT-III (L) is to be qualified by examination, the individual must satisfactorily complete the following:

4.6.1 Basic Examination (required only once)

[A] Consisting of 20 questions relative to understanding the ASNT Recommended Practice No. SNT-TC-1A document.

[B] Twenty questions relating to applicable materials, fabrication, and product technology.

[C] Twenty questions, which are selected from or are similar to published Level II questions for other appropriate NDE methods.

4.6.2 Method Examination

[A] Thirty questions relating to fundamentals and principles, which are selected from or are similar to published ASNT LT-III questions.

[B] Fifteen questions relating to applicable establishment of techniques and procedures selected from, or are similar to, published ASNT LT-III questions.

[C] Twenty questions related to capability of interpreting codes, standards, and specifications.

4.6.3 Specific Examination

[A] Twenty questions relating to specifications, equipment, techniques, and procedures applicable to the employer's program and written practice.

NOTE

Candidates failing an examination or test for any level must wait 30-days for re-examination. The 30-day waiting period may be waived by the LT-III (L) if the candidate can show evidence of completion of additional training or study.

4.7 After the candidate has completed all required examinations in the allotted time, the LT-III (L) or designated ASNT LT-III shall grade and sign the examinations and/or checklists.

NOTE

If the qualification is disapproved, the LT-III (L) SHALL promptly notify the candidate.

NOTE

Qualifications may be questioned or revoked at any time by the LT-III (L) or CCP management.

4.8 When the following requirements are met, the LT-III (L) SHALL review and sign Attachment 1, CCP HLD Qualification Card.

4.8.1 For qualification, a composite grade of 80 percent or greater is required.

4.8.2 Each individual grade for the general, specific, and practical examinations shall be 70 percent or greater.

4.8.3 Experience and formal training requirements have been met, per the requirements found on applicable attachment.

4.9 For initial qualification of a LT-III (L) candidate, a qualified LT-III (L) reviews the documented evidence of education, experience, and training.

4.9.1 Once the qualified LT-III (L) verifies the education, experience, and training requirements of this procedure are met, then the qualified LT-III (L) generates a letter of technical endorsement and provides the letter to CCP Training.

4.9.2 CCP Training provides CCP QA with letter of technical endorsement and supporting documentation.

4.10 For initial qualification of a LT-III (L) candidate, CCP QA verifies the qualification requirements of this procedure are completed by review of the supporting documentation and technical endorsement.

4.10.1 CCP QA generates a Qualification Letter for LT-III (L).

4.11 Re-qualifications of LT-II (L) personnel will be completed as follows:

NOTE

Re-qualification of LT-II personnel is performed by the LT-III (L) and documented on Attachment 1.

4.11.1 LT-II (L) personnel shall be re-qualified by re-examination at intervals **NOT** to exceed two years.

4.11.2 Re-examination and re-qualification may be required at any time the LT-III (L) deems necessary.

4.11.3 Re-qualification may also be accomplished without re-examination, based on continued satisfactory performance.

4.12 Re-qualifications of LT-III (L) personnel will be completed as follows:

NOTE

Re-qualification of LT-III (L) personnel is performed by CCP QA and documented on a qualification letter.

4.12.1 LT-III (L) personnel shall be re-qualified not to exceed three years based on evidence of continued satisfactory performance or re-examination.

4.12.2 LT-III (L) provides one of the following to CCP Training:

[A] A letter of performance describing activities (related to items listed in step 4.1.2) performed during the LT-III (L) tenure (previous 3-year period) to satisfy requirements for re-qualification.

[B] ASNT Certificate.

4.12.3 CCP training provides CCP QA with letter of performance or ASNT certificate and any supporting documentation.

4.12.4 CCP QA verifies the qualification requirements of this procedure are completed by review of the applicable letters, certificates, and any supporting documentation.

4.12.5 CCP QA generates a re-qualification letter for LT-III (L).

4.13 Re-qualification of personnel with interruption of service

4.13.1 Personnel with an interruption of service of less than six-months in the method qualified to may be re-qualified without re-examination.

4.13.2 Personnel with an interruption of service of 6 to 12-months may be re-qualified by passing a practical exam, thereby demonstrating adequate proficiency.

4.13.3 Personnel with an interruption of service of over 12-months shall be re-qualified in full accordance with this procedure.

4.13.4 Personnel may be re-examined any time at the discretion of the LT-III (L) or CCP Manager.

4.14 All qualifications shall be automatically terminated when the individual permanently leaves the employment of CCP.

4.15 A new or rehired employee previously qualified to a LT- II or LT-III may be re-qualified to the previously held level of qualification provided the candidate can meet the following requirements:

4.15.1 Provide proof of previous qualification.

4.15.2 Worked in that capacity within six-months before termination of previous employment.

4.15.3 Successfully completed all required examinations and tests.

4.15.4 Re-qualified within six months after termination of previous employment.

4.16 A new or rehired employee previously qualified to a LT- II or LT-III, but who does **NOT** satisfy the requirements of this procedure, shall be provided refresher training prior to taking the required examinations and tests for re-qualification.

4.17 Submit all records generated by this procedure to CCP Training in accordance with CCP-QP-008.

5.0 RECORDS

5.1 Records generated during the performance of this procedure are maintained as QA records in accordance with CCP-QP-008. The records are the following:

5.1.1 QA/Nonpermanent

[A] CCP HLD Qualification Card (Attachment 1)

[B] CCP Annual Record of Eye Examination (Attachment 4)

[C] Qualification Letter(s) (includes initial and requalification)

[D] Designation Letter(s) (to assist in administering lists)

[E] LT-III (L) Letter of Performance or ASNT Certificate

[F] LT-III (L) Letter of Technical Endorsement

[G] Examinations for LT-II (L)

[G.1] General Exam

[G.2] Specific Exam

[G.3] Practical Exam

[H] Examinations for LT-III (L)

[H.1] Basic Exam

[H.2] Method Exam

[H.3] Specific Exam

Attachment 1 – CCP HLD Qualification Card

Page 1 of 1

Date: _____

This certifies that _____
has been evaluated in accordance with the current revisions of the CCP written practice for qualification of NDE personnel, which meets the guidelines of SNT-TC-1A (June 1980 Edition) for the following methods and levels.

NDE Method	Levels
HLD	

Limitations _____ Mass Spectrometer Leak Test (MSLT)_____

Expiration Date _____

_____ _____
LT-III (L) Print: Name/Sign / Date

THIS CERTIFICATE WILL BE SURRENDERED WHEN (A) LEAVING EMPLOYMENT OF THE ABOVE FACILITY, (B) TRANSFERRED TO A POSITION WHERE THE CERTIFICATE IS NOT REQUIRED, (C) REFUSED RENEWAL OF CERTIFICATE AT PERIODIC EXAMINATION, (D) WHEN CERTIFICATE IS REVOKED.

Attachment 2 – Minimum Training and Experience Requirements for LT-II (L) Qualification

TABLE B

HLD Process	Experience Requirements	Formal Training
MSLT	100 hours	40 hours

NOTES:

1. An individual may be qualified directly to LT-II by satisfying requirements of Table B.

2. The experience factor in months is based on a normal forty (40)-hour workweek (175 hours per month). When work is performed in excess of the 40-hour workweek, credit may be based upon total hours. Records substantiating experience shall be kept on either a monthly or hourly basis.

Attachment 3 – Minimum Training and Experience Requirements for LT-III (L) Qualification

Condition 1
4 year degree in Engineering or Science

HLD Process	Experience	Formal Training
MSLT	1 year equivalent to a LT-II	40 hours

Condition 2
2 years of Engineering or Science

HLD Process	Experience	Formal Training
MSLT	2 years equivalent to a LT-II	40 hours

Condition 3
No Engineering or Science

HLD Process	Experience	Formal Training
MSLT	4 years equivalent to a LT-II	40 hours

Attachment 4 – CCP Annual Record of Eye Examination

Page 1 of 1

Name _____ **LT Level** _____

Date Examined	Examined By (Print & Sign Name)	Results (Circle One)	
		PASS	FAIL

Candidate/ CCP Training: Please notify the LT-III (L) if this exam is failed.

NOTE:

1. A visual acuity examination shall be administered to the candidate prior to the initial qualification and thereafter on an annual basis or at more frequent intervals, if required. A professional optometrist, medical doctor, nurse, or any other qualified designee shall administer this examination. The candidate shall have natural or corrected near distance acuity in at least one eye, capable of reading J-2 (at a minimum) letters on a standard Jaeger test chart at a distance of not less than 30.5 cm (12 in). The individual shall receive a color vision examination to verify the capability of distinguishing color and differentiating contrast between colors normally used.

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CCP-TP-001

Revision 21

CCP
Project Level
Data Validation and Verification

EFFECTIVE DATE: 06/06/2013

Mike Ramirez

PRINTED NAME

APPROVED FOR USE

RECORD OF REVISION

Revision Number	Date Approved	Description of Revision
4	12/14/2001	Revised to reflect the use of an electronic data management system at some sites. A new Section 4.4 was created; minor changes to Section 4.7; references and records updated, and Attachments 1 through 4 revised.
5	03/08/2002	Minor editorial changes; added a new Section 4.8, and a new Attachments 7 through 11.
6	05/15/2002	Description of Revision: Changes made due to the Revision of DOE/WIPP-02-3122, *Contact-Handled Transuranic Waste Acceptance Criteria for the Waste Isolation Pilot Plant* (CH-WAC) and changes to the Permit Modification to be implemented June 1, 2002. Plus planned changes due to process improvement. Multiple section changes as well as Attachment changes.
7	01/13/2003	Updated title of CCP-PO-005. Updated attachments 1 through 12.
8	02/03/2003	Additions to Attachment 4 and Attachment 5, DAC requirements. Resolved CBFO comments.
9	07/10/2003	Text and attachments to include Homogeneous Solid/Soil Waste Sampling and Checklists. Added steps to validate BDRs through P-TS. Separated electronically fillable forms and updated references in procedure.
10	08/28/2003	Revised sections 2.1, 2.6, 3.2, 4.3, and 5.1.
11	03/23/2005	Revised to incorporate LANL Off-Site Source Recovery Project (OSRP) requirements. Deleted Section 4.5, e-QA forms, Attachments 1 through 4 due to closure of Argonne National Laboratory (ANL)-East. Revised CCP Records Custodian and Facility Records Custodian responsibilities and actions.
12	05/25/2006	Revised to address Carlsbad Field Office (CBFO) Document Review Record (DRR) comments.
13	07/21/2006	Revised Attachments 10, 11, 13, 14, and 15 in response to Corrective Action Report (CAR) Number CAR-LANL-0006-06.
14	11/16/2006	Revised to implement the Waste Isolation Pilot Plant Hazardous Waste Facility Permit requirements resulting from the Section 311/Remote-Handled (RH) Permit Modification Request (PMR). Addressed Carlsbad Field Office (CBFO) Document Review Record (DRR) comments.
15	11/22/2006	Minor revision to correct header in Attachment 12.

RECORD OF REVISION (Continued)

Revision Number	Date Approved	Description of Revision
16	04/26/2007	Clarification of note in Section 4.3 for quarterly reports.
17	09/24/2007	Revised to clarify the references in the attachments and to remove the 25%RPD limit for solids/soils co-located cores/samples from Attachments 6, 7, 8 and 9. Revised to remove Visual Examination (VE) Expert decisions and signature and date. Modifications were made to Sections 4.4, 4.5, and Attachments 6 through 9 to discuss the F-test and control charts.
18	08/09/2010	Revised to address Hazardous Waste Facility Permit modification, and other editorial and freeze file changes.
19	12/29/2010	Revised to clarify independent technical reviewer (ITR) Independence and to update references to the *Waste Isolation Pilot Plant Hazardous Waste Facility Permit.*
20	09/27/2012	Revised to remove references to P-TS. Also revised due to CAR-LANL-0005-12 and CBFO CAR 12-033.
21	06/06/2013	Revised to address Class 2 Hazardous Waste Facility Permit Modification, which was approved by New Mexico Environmental Department (NMED) on March 13, 2013.

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Attachment 4 – CCP SPM Off-Site Source Recovery Sealed Source Radiological Characterization Project Level Validation Checklist and Summary 30

1.0 PURPOSE

Waste characterization data generated by characterization activities are validated and verified in compliance with CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan* (QAPjP) and CCP-PO-002, *CCP Transuranic Waste Certification Plan*. The format of CCP-PO-001 parallels that of the *Waste Isolation Pilot Plant Hazardous Waste Facility Permit,* NM 4890139088 TSDF, Attachment C, *Waste Analysis Plan* (WAP). Characterization data requiring review, validation and verification includes Nondestructive Examination (NDE), Nondestructive Assay (NDA), Sealed Sources Radiological Characterization Data, and Visual Examination (VE).

1.1 Scope

NOTE

Remote-handled data review and validation is addressed in the appropriate TP-500 series procedure.

Gas Generation Testing (GGT) data review and validation are not addressed in this procedure. Refer to CCP-PO-016, *CCP Gas Generation Testing Program Quality Assurance Project Plan* for guidance.

This procedure defines the activities required to perform data validation and verification at the Central Characterization Program (CCP) Project Office. This procedure is applicable to all personnel performing data validation and verification. The Site Project Manager (SPM) is responsible for conducting the data validation and verification activities described in this procedure. Compliance with this procedure ensures that each batch data report (BDR) complies with the requirements of the CCP-PO-001 and CCP-PO-002.

2.0 REQUIREMENTS

2.1 References

Referenced Documents

- *Waste Isolation Pilot Plant Hazardous Waste Facility Permit*, NM 4890139088-TSDF, Attachment C, *Waste Analysis Plan*
- CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*
- CCP-PO-002, *CCP Transuranic Waste Certification Plan*
- CCP-PO-003, *CCP Transuranic Authorized Methods for Payload Control (CCP CH-TRAMPAC)*
- CCP-PO-016, *CCP Gas Generation Testing Program Quality Assurance Project Plan*
- CCP-QP-002, *CCP Training and Qualification Plan*
- CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control*
- CCP-QP-008, *CCP Records Management*
- CCP-QP-029, *CCP Corrective Action Management*

2.2 Training Requirements

Personnel performing this procedure will be trained and qualified in accordance with CCP-QP-002, *CCP Training and Qualification Plan* prior to performing this procedure.

2.3 Equipment List

2.3.1 None.

2.4 Precautions and Limitations

2.4.1 None.

2.5 Prerequisite Actions

2.5.1 None.

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2.6 Definitions

2.6.1 None.

2.7 Project Office Integrated Data Center (IDC) (where available)

2.7.1 The IDC provides the capability of tracking BDRs for review.

2.7.2 The IDC provides, as a minimum, the following:

[A] Link to a scanned copy of the BDR.

[B] Status of the BDR.

[C] HOLD status of the BDR.

[D] Status of Nonconformance Reports (NCRs).

3.0 RESPONSIBILITIES

NOTE

Implementation of this procedure requires the following positions: Data Generation Level (DGL) Personnel, SPM, CCP Records Custodian, and Facility Records Custodian.

3.1 SPM

3.1.1 Reviews 100 percent of the BDRs generated as a result of waste characterization activities prior to any of the waste associated with the data reviewed being shipped to the Waste Isolation Pilot Plant (WIPP).

3.1.2 Ensures the DGL Independent Technical Reviewer (ITR) reviews, validations, and verifications have been performed by verifying completed review checklists and appropriate signatures.

3.1.3 Ensures BDR review checklists are complete.

3.1.4 Ensures data are within established data assessment criteria and meet all applicable Quality Assurance Objectives (QAOs) as defined by CCP-PO-001.

3.1.5 Ensures BDRs are complete and data are properly reported (e.g., data are reported in the correct units, and correct significant figures).

3.1.6 Prepares the applicable CCP SPM Project Level Data Validation Summary.

3.1.7 Releases, by signature and date, the BDR upon completion of the SPM review.

3.1.8 Generates NCRs in accordance with CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control* and Corrective Action Reports (CARs) in accordance with CCP-QP-029, *CCP Corrective Action Management* as required.

3.1.9 Reviews NCRs and verifies corrective actions, as needed.

3.1.10 Determines if U.S. Department of Energy (DOE)/Carlsbad Field Office (CBFO) reporting is required for NCRs/CARs generated at the SPM level.

[A] Makes notifications to DOE/CBFO, and ensures actions are completed as required.

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3.2 CCP Records Custodian

3.2.1 Receives corrected BDR or BDR pages from the Facility Records Custodian, as necessary, in accordance with CCP-QP-008, *CCP Records Management*.

3.3 Facility Records Custodian

3.3.1 Enters BDR into the IDC.

3.3.2 Receives, processes, and transmits corrected BDR or BDR pages to CCP Records Custodian, when applicable, in accordance with CCP-QP-008.

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4.0 PROCEDURE

4.1 BDR Receipt

Facility Records Custodian

4.1.1 Enter BDR into the IDC.

NOTE
Steps in Section 4.2 may be performed in any order.

4.2 SPM BDR Review

NOTE
Section 4.2 must be completed for 100 percent of the BDRs transmitted to the SPM.

The SPM must perform a comprehensive review of the data (e.g., correct units, significant figures, as well as ensuring that data assessment criteria are met).

SPM

4.2.1 Initiate BDR review in the IDC as follows:

[A] Log into the IDC.

[B] Select BDR to review (e.g., the IDC Daily Hot Lists).

[C] Click on START SPM REVIEW.

[D] Compare Container Identifications (IDs) in the BDR to the Container IDs included in the IDC.

[E] **IF** any Container IDs from the BDR are missing from the IDC **OR** DO **NOT** match those entered into the IDC, **THEN** contact the CCP Records Custodian/Facility Records Custodian, **AND** resolve the problem.

[E.1] Place BDR on HOLD by selecting, PLACE BDR ON HOLD, if necessary, **AND** enter reason for HOLD in the Comments/Qualifiers Section by selecting ADD/EDIT COMMENTS.

[E.2] **WHEN** the problem is resolved,
THEN select REMOVE HOLD FROM BDR in the IDC.

[E.3] Compare NCRs included in the BDR to the NCRs in the IDC, if applicable.

[E.4] **IF** any NCRs are missing from the IDC **OR** DO **NOT** match those entered into the IDC for the BDR,
THEN contact the NCR Coordinator, **AND** resolve the problem.

[E.5] Place BDR on HOLD by selecting, PLACE BDR ON HOLD, if necessary, **AND** enter reason for HOLD in the Comments/Qualifiers Section by selecting ADD/EDIT COMMENTS.

[E.6] **WHEN** the problem is resolved,
THEN select REMOVE HOLD FROM BDR in the IDC.

NOTE

Containers for Newly Generated Waste will **NOT** appear in the Acceptable Knowledge (AK) Tracking Spreadsheet on the CCP secure file transfer protocol (sftp) site for VE Technique BDRs. All Newly Generated Waste containers should be listed in the AK Tracking Spreadsheet at the time of validation for all other BDR types.

NOTE

Reports derived from the IDC Search function use the AK Tracking Spreadsheets and can be used to verify Container IDs.

[F] Compare Container IDs in the BDR to the approved AK Tracking Spreadsheet on the CCP sftp site.

[G] **IF** any Container IDs are included in the BDR that are **NOT** on the approved and posted AK Tracking Spreadsheet,
THEN contact the AK Expert.

[G.1] Place BDR on HOLD by selecting, PLACE BDR ON HOLD, if necessary, **AND** enter reason for HOLD in the Comments/Qualifiers Section by selecting ADD/EDIT COMMENTS.

[G.2] **WHEN** the problem is resolved,
THEN select REMOVE HOLD FROM BDR in the IDC.

4.2.2 Select the appropriate SPM checklist for the BDR being reviewed.

4.2.3 Record the BDR Number at the top of the appropriate SPM checklist.

4.2.4 Record the Examination Date(s) at the top of the appropriate SPM checklist.

4.2.5 Verify that the DGL ITR reviews, validations, and verifications have been performed as evidenced by the completed review checklist and appropriate signature release.

4.2.6 Verify the BDR is complete.

4.2.7 Verify that data are within established data assessment criteria and meet all applicable QAOs: Precision, Accuracy, Completeness, Comparability, and Representativeness.

NOTE

To answer questions regarding specific criteria being met, (i.e., QAOs, QCs), the SPM must ensure that the information presented in the BDR meets the requirements identified in CCP-PO-001, CCP-PO-002, and CCP-PO-003, *CCP Transuranic Authorized Methods for Payload Control (CCP CH-TRAMPAC)*.

4.2.8 Answer each question on the appropriate SPM checklist after verifying that the specific criteria have been met.

NOTE

All containers listed in the BDR will be listed on the SPM checklist.

4.2.9 **IF** any question is answered NO,
THEN evaluate the impact, **AND** perform steps 4.2.11 and 4.2.14, as appropriate.

4.2.10 **IF** any question is answered NA or NO,
THEN provide justification in the Comments/Qualifiers Section of the appropriate SPM checklist, as applicable. If a question includes criteria for “NA,” a comment is not required.

NOTE

Editorial corrections may be made to the BDR by the Operator, ITR, SPM or a Designee as directed by these personnel. The extent of editorial corrections permitted by a Designee is identified in CCP-QP-008. Data affecting changes are ONLY made by DGL personnel. Any data affecting changes made by DGL personnel will require a re-review by the Operator, ITR, and SPM.

4.2.11 **IF** editorial inconsistencies, mistakes, omissions, etc., are noted during the SPM review, that DO **NOT** change the characterization data,
THEN notify DGL personnel of required corrections, **AND** edit the BDR in accordance with CCP-QP-008.

[A] Place BDR on HOLD by selecting, PLACE BDR ON HOLD, if necessary, **AND** enter reason for HOLD in the Comments/Qualifiers Section by selecting ADD/EDIT COMMENTS.

DGL Personnel

[B] Perform editorial corrections, as needed.

[C] Resubmit corrected BDR or BDR pages to the Facility Records Custodian in accordance with CCP-QP-008.

Facility Records Custodian

[D] Receive, process, and transmit or maintain corrected BDR or BDR pages in accordance with CCP-QP-008.

[E] Notify SPM to continue review.

4.2.12 **IF** required changes CAN **NOT** be adequately documented on the SPM checklist,
THEN include additional information on an additional sheet of paper as needed.

4.2.13 **IF** additional information is placed after an SPM checklist,
THEN indicate, on the appropriate SPM checklist, that additional information is being provided, **AND** paginate the inserted documentation to show which checklist it is associated with (e.g., SPM-1).

NOTE

Corrections to BDRs mandated by Project Office NCRs will not proceed until DGL has been provided a copy of the validated and dispositioned Project Office NCR.

4.2.14 **IF** data affecting inconsistencies, mistakes, omissions, etc., are noted during the SPM review, that impact or change the characterization data,
THEN Initiate an NCR in accordance with CCP-QP-005:

[A] Ensure copy of approved Project Office NCR is provided to DGL documenting required changes in the NCR disposition.

DGL Personnel

[B] Correct the deficiency.

[C] ITR Re-review in accordance with the applicable procedure, **AND** resubmit corrected BDR or BDR pages, and copy of the NCR, to CCP Records for processing in accordance with CCP-QP-008.

4.2.15 Record comments in the box at the end of the appropriate SPM checklist or record NA.

4.2.16 Print name, sign, and date the appropriate SPM checklist.

4.2.17 End SPM review in IDC.

4.2.18 Submit completed SPM checklist to CCP Records for processing in accordance with CCP-QP-008.

4.2.19 If SPM re-review is required,

[A] Insert corrections.

[A.1] **IF** revised page contains correction or additional information,
THEN replace the BDR record page with the corrected page.

OR

[A.2] **IF** additional corrected pages are inserted in the numbered section of the BDR,
THEN supercede pages, **AND** properly paginate the inserted documentation in accordance with CCP-QP-008.

[B] Select RE-REVIEW button in the IDC, if necessary.

[C] Perform a re-review of the corrected BDR.

[D] Verify that all criteria have been met and the review is complete.

[E] Select REMOVE HOLD ON BDR in the IDC, if necessary, **AND** complete review in the IDC.

4.2.20 Print name, sign name, enter reason for re-review, and enter date completed on the appropriate SPM checklist in the re-review signature area.

4.2.21 **WHEN** all criteria have been verified, **AND** the review is complete, **THEN** select END SPM BDR REVIEW in the IDC.

NOTE

Additional information is information that is added to the back of the SPM checklist after receipt at the Project Level. Additional information can be in the form of e-mail authorizations for administrative changes, letters or e-mails of clarification to posed questions (This list is not all inclusive).

4.2.22 **IF** additional information is placed after an SPM checklist, **THEN** indicate, on the appropriate SPM checklist, that additional information is being provided, **AND** paginate the inserted documentation to show which checklist it is associated with (e.g., SPM-1).

4.2.23 Forward the completed SPM checklist, and any additional information, to the CCP Records Custodian/Facility Records Custodian.

<u>CCP Records Custodian/Facility Records Custodian</u>

4.2.24 Receive, process, and transmit or maintain in accordance with CCP-QP-008.

4.3 Quarterly Repeat of DGL Data Review, Validation, and Verification

NOTE

The SPM shall ensure that a repeat of the DGL data review, validation, and verification of data generated to meet the requirements of CCP-PO-001 is performed quarterly for a minimum of one randomly chosen waste container. The SPM uses this exercise to document that the DGL data review, validation, and verification is being performed in accordance with applicable procedures.

SPM

4.3.1 Randomly select one waste container for a repeat of the DGL data review, validation, and verification for one RTR and VE BDR generated in the last quarter.

NOTE

The following documents will be included in the quarterly DGL data review, validation, and verification: the original data reported, any nonconformances generated prior to ITR, reviews, and QC Data Sheets. The BDR Batch Narrative will **NOT** be included.

4.3.2 Retrieve a copy of the BDR from CCP Records.

NOTE

When possible, a different ITR will be used for the quarterly DGL data review, validation, and verification of the selected waste container.

4.3.3 Assemble the mini-container package.

4.3.4 Document the container selection and the assignment of the DGL ITR by interoffice memorandum.

4.3.5 Submit a copy of the mini-container package to the Host site for re-review.

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NOTE

DGL Personnel will review submitted data and generate new Tables of Contents, BDR Batch Narratives and DGL Checklists. Any discrepancies will be noted in the BDR Batch Narrative.

SPM

4.3.6 Perform a review of the re-submitted data in accordance with Section 4.2.

4.3.7 Compare the original BDR submitted for the selected container with the re-submitted data.

4.3.8 Document the comparison, by interoffice memorandum, to CCP Records.

4.3.9 **IF** discrepancies or problems that affect data quality are noted during the review,
THEN perform the following:

[A] Initiate an NCR in accordance with CCP-QP-005.

[B] Notify the appropriate facility personnel.

4.3.10 Submit the re-reviewed package, associated information, and copy of interoffice memorandum to CCP Records.

Facility Records Custodian/CCP Records Custodian

4.3.11 Receive, process, and transmit the reviewed package, associated information, and copy of interoffice memoradum in accordance with CCP-QP-008.

5.0 RECORDS

5.1 Records generated during the performance of this procedure are maintained as Quality Assurance (QA) records in accordance with CCP-QP-008. The records are the following:

5.1.1 QA/Lifetime

[A] Attachment 1, CCP SPM Visual Examination Project Level Validation Checklist and Summary

[B] Attachment 2, CCP SPM Radiography Project Level Validation Checklist and Summary

[C] Attachment 3, CCP SPM Nondestructive Assay Project Level Validation Checklist and Summary

[D] Attachment 4, CCP SPM Off-Site Source Recovery Sealed Source Radiological Characterization Project Level Validation Checklist and Summary

[E] Interoffice memorandum for the Quarterly Repeat of DGL Data Review BDR

[F] Container selection and the assignment of the DGL ITR interoffice memoramdum

5.1.2 QA/Nonpermanent

[A] Project Office Integrated Data Center (IDC)

Attachment 1 – CCP SPM Visual Examination Project Level Validation Checklist and Summary

BDR Number: _____ **Examination Date(s):** _____

Description of Criteria Reviewed	Criteria Met?			Comments/Qualifiers
	YES	NO	NA	
1. Is the completed, signed and dated Independent Technical Reviewer Checklist included in the BDR, and the independent technical reviewer was not involved in the generation or recording of the data under review? **Reference Source: CCP-PO-001, C3-4**				
2. Does the BDR contain all items addressed in the BDR Table of Contents? **Reference Source: CCP-PO-001, C3-4**				
3. Does the BDR include a listing of all container numbers in the batch? **Reference Source: CCP-PO-001, C3-4**				
4. List all containers that have met QAOs. **Reference Source: CCP-PO-001, C3-4**				Container Numbers:
5. Is the current implementing procedure and revision number included in the BDR? **Reference Source: CCP-PO-001, Table C3-3**				
6. Is the BDR date included? **Reference Source: CCP-PO-001, Table C3-3**				
7. Is there a reference to or copy of any associated NCRs (if any) in the BDR? **Reference Source: CCP-PO-001, Table C3-3**				
8. Are there 20 or fewer containers in the batch? **Reference Source: CCP-PO-001 C3-4**				
9. Are the data properly reported (i.e., data are reported in correct units and with correct significant figures). **Reference Source: CCP-PO-001 C3-4**				
10. Is there evidence of verification that the physical form matches the Waste Matrix Code? **Reference Source: CCP-PO-001, Table C3-3**				
11. Is there evidence of verification that the physical form matches the waste stream description? **Reference Source: CCP-PO-001, Table C3-3**				
12. Are prohibited items absent? **Reference Source: CCP-PO-001, Table C3-3**				

Attachment 1 – CCP SPM Visual Examination Project Level Validation Checklist and Summary (Continued)

BDR Number: _____ **Examination Date(s):** _____

Description of Criteria Reviewed	Criteria Met?			Comments/Qualifiers
	YES	NO	NA	
13. Does observable liquid, if present, meet the criteria of the TSDF-WAC? **Reference Source: CCP-PO-001, C-1**				
14. Were discrepancies between the Visual Examination operator and the ITR with regards to identification of waste matrix code, liquids in excess of the TSDF-WAC, or compressed gases reconciled? NA if no discrepancies. **Reference Source: CCP-PO-001, C3-2**				
15. Are the training requirements met for the VE Expert and VE Operators who have signed the data forms? **Reference Source: CCP-PO-001, C3-8**				
16. Is evidence of a satisfactory audio/video test included in the BDR? NA [not applicable] for VE Method for Newly Generated Waste. **Reference Source: CCP-PO-001, C1-2**				
17. If the VE was not recorded using audio/video media, does the data sheet contain the signature of two qualified operators who observed for themselves the waste being placed into the container? NA if audio/video used. **Reference Source: CCP-PO-001, C1-2**				
18. Are the weights/estimated weights for the 12 waste material parameters reported in kilograms (kg)? **Reference Source: CCP Technical Procedures**				
19. Are the descriptions for each waste material parameter included in the BDR? **Reference Source: CCP-PO-001, C1-2**				
20. Is the gross weight reported (in kg) for each container included in the BDR? **Reference Source: CCP Technical Procedures**				
21. Is the number of layers of confinement recorded? **Reference Source: CCP-PO-001, C1-2**				
22. Is sufficient information included in the BDR to determine the packaging configuration? **Reference Source: CCP-PO-001, C1-2**				

Attachment 1 – CCP SPM Visual Examination Project Level Validation Checklist and Summary (Continued)

BDR Number: _____ **Examination Date(s):** _____

Description of Criteria Reviewed	Criteria Met?			Comments/Qualifiers
	YES	NO	NA	
23. Is the type and number of filters recorded? **Reference Source: CCP-PO-001, CCP Technical Procedures**				
24. Is the size of the rigid liner vent hole recorded? NA if no liner lid. **Reference Source: CCP-PO-001, CCP Technical Procedures**				
25. For Los Alamos National Laboratory (LANL) Sealed Sources, does the characterized waste container meet the definition of sealed sources per Title 10 Code of Federal Regulations (CFR) 30.4 and Title 10 CFR 835.2 (effective January 1, 2004) evidence of which is assembled as part of AK documentation? **Reference Source: CCP Technical Procedures**				
26. For LANL Sealed Sources, are sealed sources the only non-packaging items in the waste container? **Reference Source: CCP-TP-069, 4.1.4**				
27. For LANL Sealed Sources, are the sealed sources a U.S. Department of Transportation (DOT) Special Form Class 7 (Radioactive Material) per Title 49 CFR 34.27 (effective January 1, 2004) and the certification of which is assembled as part of the AK documentation? **Reference Source: CCP Technical Procedures**				
28. For LANL Sealed Sources, is the integrity of each sealed source validated by documented contamination survey results to meet the requirements of Title 10 CFR 34.27 (effective January 1, 2004), and assembled as part of AK documentation? **Reference Source: CCP Technical Procedures**				

Attachment 1 – CCP SPM Visual Examination Project Level Validation Checklist and Summary (Continued)

BDR Number: _____ **Examination Date(s):** _____

Description of Criteria Reviewed	Criteria Met?			Comments/Qualifiers
	YES	NO	NA	
29. For LANL Sealed Sources, is each sealed source a rigid sealed container less than or equal to 4 L in size or in a rigid sealed container less than or equal to 4 L? **Reference Source: CCP Technical Procedures**				
30. For LANL Sealed Sources, AK documentation does not indicate the use of volatile organic compounds (VOCs) or VOC-bearing materials as constituents of sealed sources? **Reference Source: CCP Technical Procedures**				
31. For LANL Sealed Sources, the outer casing of each sealed source is of a non VOC-bearing material which is verified using the VE technique at the time of packaging? **Reference Source: CCP Technical Procedures**				

Comments:

The container QC checks were properly performed and meet the Quality Assurance Objectives (QAOs). Proper procedures were followed during data reduction and analysis. The batch is complete, acceptable, and includes all supporting data and documentation required by the QAPjP.

SPM Printed Name Signature Date

Checklist is to be re-signed only when a re-review is performed.

SPM Printed Name	Signature	Reason	Date
SPM Printed Name	Signature	Reason	Date

Attachment 2 – CCP SPM Radiography Project Level Validation Checklist and Summary

BDR Number: _____ **Examination Date(s):** _____

Description of Criteria Reviewed	Criteria Met?			Comments/Qualifiers
	YES	NO	NA	
1. Is the completed, signed, and dated Independent Technical Reviewer Checklist included in the BDR, and the independent technical reviewer was not involved in the generation or recording of the data under review? **Reference Source: CCP-PO-001, C3-4**				
2. Does the BDR contain all items addressed in the BDR Table of Contents? **Reference Source: CCP-PO-001, C3-4**				
3. Does the BDR include a listing of all the container numbers in the batch? **Reference Source: CCP-PO-001, C3-4**				
4. List all containers that have met QAOs. **Reference Source: CCP-PO-001, C3-4**				Container Numbers:
5. Does the BDR identify the current implementing procedure and revision number? **Reference Source: CCP-PO-001, Table C3-3**				
6. Is there a reference to or copy of any associated NCRs (if any) in the BDR? NA if no NCRs. **Reference Source: CCP-PO-001, Table C3-3**				
7. Are there 20 or fewer containers in the batch? **Reference Source: CCP-PO-001, C3-4**				
8. Are the data properly reported (i.e., data are reported in correct units and with correct significant figures)? **Reference Source: CCP-PO-001, C3-4**				
9. Is there evidence of verification that the physical form matches the Waste Matrix Code? **Reference Source: CCP-PO-001, Table C3-3**				

Attachment 2 – CCP SPM Radiography Project Level Validation Checklist and Summary (Continued)

BDR Number: _____ **Examination Date(s):** _____

Description of Criteria Reviewed	Criteria Met?			Comments/Qualifiers
	YES	NO	NA	
10. Is there evidence of verification that the physical form matches the waste stream description? **Reference Source: CCP-PO-001, Table C3-3**				
11. Are prohibited items absent? **Reference Source: CCP-PO-001, Table C3-3**				
12. Does observable liquid, if present, meet the criteria of the TSDF-WAC? **Reference Source: CCP-PO-001, C-1**				
13. Were discrepancies between two operators with regard to identification of waste matrix code, liquids in excess of the TSDF-WAC, or compressed gases through replicate scans and independent observations reconciled? NA if no discrepancies. **Reference Source: CCP-PO-001, C3-2**				
14. Are the training qualifications for all radiography personnel acceptable? **Reference Source: CCP-PO-001, C3-8**				
15. Was evidence of the video/audio check included in the BDR? **Reference Source: CCP-PO-001, C1-1**				
16. Was the Lines-Pair Resolution Test or Sieve Test Check included in the BDR? **Reference Source: CCP Technical Procedures**				
17. Was a replicate scan performed once per day, or once per batch, whichever is LESS frequent? **Reference Source: CCP-PO-001, C1-1**				
18. Was an independent observation performed once per day, or once per batch, whichever is LESS frequent? **Reference Source: CCP-PO-001, C1-1**				

Attachment 2 – CCP SPM Radiography Project Level Validation Checklist and Summary (Continued)

BDR Number: _____ **Examination Date(s):** _____

Description of Criteria Reviewed	Criteria Met?			Comments/Qualifiers
	YES	NO	NA	
19. Were the replicate scan and independent observation performed on different waste containers? **Reference Source: CCP-PO-001, C1-1**				
20. Were the personnel performing the replicate scan and independent observation different from the individual who performed the original? **Reference Source: CCP-PO-001, C1-1**				
21. Does the BDR include an estimate of each material parameter weight in kg for each container? **Reference Source: CCP Technical Procedures**				
22. Does the BDR include a description of each material parameter for each container? **Reference Source: CCP Technical Procedures**				
23. Is the container gross weight recorded in kilograms (kg) for each container in the BDR? **Reference Source: CCP Technical Procedures**				
24. Was the Scale Weight Calibration Check included in the BDR? **Reference Source: CCP Technical Procedures**				
25. Was the Scale Weight Check included in the BDR? **Reference Source: CCP Technical Procedures**				

Comments:

The container QC checks were properly performed and meet the Quality Assurance Objectives (QAOs). Proper procedures were followed during data reduction and analysis. The batch is complete, acceptable, and includes all supporting data and documentation required by the QAPjP.

SPM Printed Name	Signature	Date

Checklist is to be re-signed only when a re-review is performed.

SPM Printed Name	Signature	Reason	Date
SPM Printed Name	Signature	Reason	Date

Attachment 3 – CCP SPM Nondestructive Assay Project Level Validation Checklist and Summary

BDR Number: _____ **Examination Date(s):** _____

Description of Criteria Reviewed	Criteria Met?			Comments/Qualifiers
	YES	NO	NA	
1. Are the background measurements performed and recorded daily and included in the BDR? **Reference Source: CCP-PO-002, Attachment 1, A.4.2**				
2. Is the efficiency/energy calibration and resolution check performed and recorded daily and included in the BDR? **Reference Source: CCP-PO-002, Attachment 1, A.4.2**				
3. Were the performance checks and backgrounds done prior to the analysis of the samples? **Reference Source: CCP-PO-002, Attachment 1, A.4.2**				
4. Are the required QC checks specified on the ITR checklist within acceptable limits? **Reference Source: CCP-PO-002, Attachment 1, A.4.2**				
5. Is the matrix drum performed at least once per operational week? **Reference Source: CCP-PO-002, Attachment 1, A.4.2**				
6. List all containers that have met all QC criteria thresholds. **Reference Source: CCP-PO-002, Attachment 1, A.5.2**				Container Numbers:
7. Is there evidence of participation in the PDP program or any relevant approved comparison program? **Reference Source: CCP-PO-002, Attachment 1, A.4.1**				
8. Are the personnel training records acceptable? **Reference Source: CCP-PO-002, Attachment 1, A.4.1**				
9. Is a standard cover sheet included in the BDR? **Reference Source: CCP Technical Procedures**				
10. Is there reference to or copy of associated NCRs included in the BDR? NA if no NCRs associated with BDR. **Reference Source: CCP-QP-005**				

Attachment 3 – CCP SPM Nondestructive Assay Project Level Validation Checklist and Summary (Continued)

BDR Number: _____ **Examination Date(s):** _____

Description of Criteria Reviewed	Criteria Met?			Comments/Qualifiers
	YES	NO	NA	
11. Is the method used for radioassay identified by the implementing procedure(s) and revision number(s) referenced for each container in the BDR? **Reference Source: CCP Technical Procedures**				
12. Is the current software revision number correct for each container in the BDR? **Reference Source: CCP-QP-022**				
13. Is the completed, signed, and dated Independent Technical Reviewer Checklist included in the BDR, and the independent technical reviewer was not involved in the generation or recording of the data under review? **Reference Source: CCP-PO-002, Attachment 1, A.5.1**				
14. Is the correct Waste Matrix Code referenced in the BDR? **Reference Source: CCP Technical Procedures**				
15. Is the method of expressing TMU specified in the BDR? **Reference Source: CCP-PO-002, 3.3.1**				
16. Does the instrument performing TRU/low-level waste measurement have an LLD of 100 nCi/g or less? **Reference Source: CCP-PO-002, Attachment 1, A.3**				
17. Are the ten WIPP tracked radionuclides of 241Am, 238Pu, 239Pu, 240Pu, 242Pu, 233U, 234U, 238U, 90Sr, 137Cs estimated activities and masses, including their associated TMU reported on each radioassay data sheet? **Reference Source: CCP-PO-002, 3.3.1**				
18. Is 235U (in order to calculate FGE) reported as present or absent on each radioassay data sheet? **Reference Source: CCP-PO-002, Attachment 1, A.3**				
19. If 235U is reported as present, is 234U reported as present? NA, if 235U is not present. **Reference Source: CCP Technical Procedures**				
20. Is the TRU alpha activity concentration and associated TMU reported for each container in the BDR? **Reference Source: CCP-PO-002, 3.3.1**				

Attachment 3 – CCP SPM Nondestructive Assay Project Level Validation Checklist and Summary (Continued)

BDR Number: _____ **Examination Date(s):** _____

Description of Criteria Reviewed	Criteria Met?			Comments/Qualifiers
	YES	NO	NA	
21. Is the TRU alpha activity concentration limit of >100 nCi/g met for containers in the BDR? **Reference Source: CCP-PO-002, 3.3.3**				
22. Is the Total Pu239 FGE (g) and associated TMU reported for each container in the BDR? **Reference Source: CCP-PO-002, 3.3.1**				
23. Is the FGE plus two times the TMU less than or equal to the limits for containers in this BDR? 200 FGE for 55-gal drums/325 FGE for SWBs. Note: TMU equals one standard deviation. **Reference Source: CCP-PO-002, Table A-3**				
24. Is the decay heat reported for each container in the BDR? **Reference Source: CCP-PO-002, 3.3.1**				
25. Are all the appropriate QC forms (background, efficiency checks, control charts, and matrix drum) included in the BDR? **Reference Source: CCP-PO-002, Attachment 1, A.5.2**				
26. Is the name of the testing facility included in the BDR? **Reference Source: CCP-PO-002, Attachment 1, A.5.2**				
27. Is the batch number included in the BDR? **Reference Source: CCP-PO-002, Attachment 1, A.5.2**				
28. Is a listing of all container numbers in the BDR? **Reference Source: CCP-PO-002, Attachment 1, A.5.2**				
29. Does the BDR contain a BDR Table of Contents? **Reference Source: CCP-PO-002, Attachment 1, A.5.2**				
30. Are the testing report data sheets including the waste container number for each container included in the BDR? **Reference Source: CCP-PO-002, Attachment 1, A.5.2**				
31. Is the title “Radioassay Data Sheet” included for each container in the BDR? **Reference Source: CCP-PO-002, Attachment 1, A.5.2**				

Attachment 3 – CCP SPM Nondestructive Assay Project Level Validation Checklist and Summary (Continued)

BDR Number: _____ **Examination Date(s):** _____

Description of Criteria Reviewed	Criteria Met?			Comments/Qualifiers
	YES	NO	NA	
32. Is the date of radioassay included for each container in the BDR? **Reference Source: CCP-PO-002, Attachment 1, A.5.2**				
33. Is the operator and reviewer signature release and date included for each container in the BDR? **Reference Source: CCP-PO-002, Attachment 1, A.5.2**				
34. Is the total Pu239 equivalent activity (Ci) reported for each container in the BDR? **Reference Source: CCP-PO-002, Attachment 1, A.5.2**				
35. Are the NDA net weights within 5% of the NDE net weight or the VE net weight, whichever is applicable, for each container in the BDR? **Reference Source: CCP Technical Procedures**				

Comments:

The container QC checks were properly performed and meet the Quality Assurance Objectives (QAOs). Proper procedures were followed during data reduction and analysis. The batch is complete, acceptable, and includes all supporting data and documentation required by CCP-PO-002.

SPM Printed Name	Signature	Date

Checklist is to be re-signed only when a re-review is performed.

SPM Printed Name	Signature	Reason	Date
SPM Printed Name	Signature	Reason	Date

Attachment 4 – CCP SPM Off-Site Source Recovery Sealed Source Radiological Characterization Project Level Validation Checklist and Summary

BDR Number: _____ **Examination Date(s):** _____

Description of Criteria Reviewed	Criteria Met?			Comments/Qualifiers
	YES	NO	NA	
1. Are the personnel training records acceptable? **Reference Source: Site applicable LOQI**				
2. Does the Batch Data Report (BDR) include the name of the facility? **Reference Source: CCP-PO-002**				
3. Does the BDR include a standard cover sheet? **Reference Source: CCP-PO-002**				
4. Does the BDR include a Table of Contents? **Reference Source: CCP-PO-002**				
5. Does the BDR include a batch number? **Reference Source: CCP-PO-002**				
6. Does the BDR include a listing of all waste container numbers in the batch? **Reference Source: CCP-PO-002**				
7. List all containers. **Reference Source: CCP-PO-002**				Container Numbers:
8. Does the BDR include a Container Characterization Report sheet(s) for each container in the batch? **Reference Source: CCP-PO-002**				
9. Is there a reference to or copy of associated NCRs (if any) in the BDR? NA if no NCRs associated with the BDR. **Reference Source: CCP-PO-002**				
10. Does the BDR include the implementing procedure and revision numbers? **Reference Source: CCP-PO-002**				
11. Does the BDR include a completed, signed, and dated Independent Technical Review Checklist, and the independent technical reviewer was not involved in the generation or recording of the data under review? **Reference Source: CCP-PO-002**				
12. Does the waste meet the definition of sealed sources per 10 CFR 30.4 and 10 CFR 835.2 (effective January 1, 2004) and documentation included with the AK information? **Reference Source: CCP-PO-001, C4-2**				

Attachment 4 – CCP SPM Off-Site Source Recovery Sealed Source Radiological Characterization Project Level Validation Checklist and Summary (Continued)

BDR Number: _____ **Examination Date(s):** _____

Description of Criteria Reviewed	Criteria Met?			Comments/Qualifiers
	YES	NO	NA	
13. Is the sealed source a US DOT Special Form Class 7 (Radioactive Material) per 49 CFR 34.27 (effective January 1, 2004) and is this documented in the AK information? **Reference Source: CCP-PO-001, C4-2**				
14. Is the integrity of each sealed source validated by documented contamination survey results to meet the requirements of 10 CFR 34.27 (effective January 1, 2004), and is assembled as part of AK documentation? **Reference Source: CCP-PO-001, C4-2**				
15. Does the AK information document that no VOC or VOC-bearing material are constituents of the waste? **Reference Source: CCP-PO-001, C4-2**				
16. Does the AK information document that the outer casing of the sealed source is a non-VOC bearing material and is this verified during VE? **Reference Source: CCP-PO-001, C4-2**				
17. Is the Title "Characterization Data Sheet" included on each data sheet? **Reference Source: CCP-PO-002**				
18. Is the waste container number included on each data sheet? **Reference Source: CCP-PO-002**				
19. Is the run date included on each data sheet? **Reference Source: CCP-PO-002**				
20. Is the TRU alpha activity concentration (Ci/g) included on each data sheet? **Reference Source: CCP-PO-002**				
21. Is the Total Pu-239 equivalent activity (PE-Ci) included on each data sheet? **Reference Source: CCP-PO-002**				
22. Is the Total FGE (g) and associated TMU included on each data sheet? **Reference Source: CCP-PO-002**				
23. Is the Decay Heat (W) and associated TMU included on each data sheet? **Reference Source: CCP-PO-002**				
24. Are the activities and/or masses of individual radioisotopes and associated TMUs (curies and/or grams) included on each data sheet? **Reference Source: CCP-PO-002**				

Attachment 4 – CCP SPM Off-Site Source Recovery Sealed Source Radiological Characterization Project Level Validation Checklist and Summary (Continued)

BDR Number: _____ **Examination Date(s):** _____

Description of Criteria Reviewed	Criteria Met?			Comments/Qualifiers
	YES	NO	NA	
25. Is the method of expressing TMU specified? **Reference Source: CCP-PO-002**				
26. Are the ten WIPP tracked radionuclides of 241Am, 238Pu, 239Pu, 240Pu, 242Pu, 233U, 234U, 238U, 90Sr, 137Cs identified and reported as present or absent? **Reference Source: CCP-PO-002**				
27. Is 235U (in order to calculate FGE) reported as present or absent? **Reference Source: CCP-PO-002**				
28. Is the TRU Alpha activity concentration >100 nCi/g? **Reference Source: CCP-PO-002**				
29. Is the Fissile Mass ≤ FGE limit? **Reference Source: CCP-PO-002**				
30. If 235U is reported as present, is 234U reported as present? NA if 235U is not present. **Reference Source: CCP-PO-002**				

Comments:

The container QC checks were properly performed and meet the Quality Assurance Objectives (QAOs). Proper procedures were followed during data reduction and analysis. The batch is complete, acceptable, and includes all supporting data and documentation required by CCP-PO-002.

SPM Printed Name	Signature	Date

Checklist is to be re-signed only when a re-review is performed.

SPM Printed Name	Signature	Reason	Date
SPM Printed Name	Signature	Reason	Date

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CCP-TP-002

Revision 26

CCP
Reconciliation of DQOs and Reporting Characterization Data

EFFECTIVE DATE: 06/19/2013

Mike Ramirez

PRINTED NAME

APPROVED FOR USE

RECORD OF REVISION

Revision Number	Date Approved	Description of Revision
18	11/16/2006	Revised to implement the Waste Isolation Pilot Plant Hazardous Waste Facility Permit requirements resulting from the Section 311/Remote-Handled (RH) Permit Modification Request (PMR). Addressed Carlsbad Field Office (CBFO) Document Review Record (DRR) comments.
19	12/22/2006	Revised to clarify Waste Stream Profile Form contents.
20	08/18/2008	Revised Section 4.2.1 to incorporate Central Characterization Project (CCP) Standing Order CCP-SO-32. Updated several document/procedure titles. Minor changes to Section 5.0.
21	08/04/2009	Revised to answer Waste Isolation Pilot Plant (WIPP) Form 09-050, and add changes to Sections 3 and 4 and make any other editorial changes needed.
22	06/30/2010	Revised for Class 2 Modification Request WIPP Hazardous Waste Facility Permit EPA I.D. Number NM4890139088.
23	12/29/2010	Revised to implement the revision of the *Waste Isolation Pilot Plant Hazardous Waste Facility Permit*.
24	12/28/2011	Revised to make editorial changes. Replacing Waste Stream Profile Form (WSPF) change notice with revision to WSPF. Revising instructions for completing WSPF package.
25	02/11/2013	Revised to include timeframe for transmitting the waste stream profile form package to records. Also revised to make editorial changes needed.
26	06/19/2013	Revised to implement the Permit Modification Request Class 2 approved by New Mexico Environment Department (NMED) dated March 13, 2013.

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1.0 PURPOSE

Upon completion of waste characterization activities, and prior to shipment of waste, the Central Characterization Program (CCP) is required to reconcile the data in accordance with the requirements of CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan* (QAPjP). Data reconciliation is required in order for the CCP Site Project Manager (SPM) to complete and submit a Waste Stream Profile Form (WSPF)
(see Attachment 2, CCP Waste Stream Profile Form, for an example).

1.1 Scope

This procedure provides data reconciliation with the data quality objectives (DQOs) following data validation and verification at the CCP Project Office. This reconciliation is performed at the waste stream or waste stream lot level. This procedure provides the instructions for the completion of the WSPF Package for submittal to the U.S. Department of Energy (DOE) Carlsbad Field Office (CBFO) for permittee review and CBFO approval prior to shipment.

2.0 REQUIREMENTS

2.1 References

Baseline Documents

- DOE/WIPP 01-3194, *CH-TRU Waste Content Codes* (*CH-TRUCON*)
- DOE/WIPP 90-045, *RH-TRU Waste Content Codes* (*RH-TRUCON*)
- CCP-PO-002, *CCP Transuranic Waste Certification Plan*
- CCP-PO-003, *CCP Transuranic Authorized Methods For Payload Control* (*CCP CH-TRAMPAC*)
- CCP-PO-505, *CCP Remote-Handled Transuranic Waste Authorized Methods for Payload Control* (*CCP RH-TRAMPAC*)

Referenced Documents

- *Waste Isolation Pilot Plant Hazardous Waste Facility Permit, Waste Analysis Plan*
- DOE/WIPP-02-3122, *Transuranic Waste Acceptance Criteria For The Waste Isolation Pilot Plan*
- 40 CFR 261, *Identification and Listing of Hazardous Waste,* Subpart C, *Characteristics of Hazardous Waste.*
- 40 CFR 261, *Identification and Listing of Hazardous Waste,* Subpart D, *Lists of Hazardous Wastes*
- DOE/TRU-11-3425, *Annual Transuranic Waste Inventory Report – 2011*
- CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*
- CCP-QP-002, *CCP Training and Qualification Plan*
- CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control*
- CCP-QP-008, *CCP Records Management*
- CCP-TP-005, *CCP Acceptable Knowledge Documentation*

2.2 Training Requirements

2.2.1 Personnel performing this procedure will be trained and qualified in accordance with CCP-QP-002, *CCP Training and Qualification Plan*, prior to performing this procedure.

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3.0 RESPONSIBILITIES

3.1 Site Project Manager (SPM)

3.1.1 Ensures that all data generated and used in decision making meet the DQOs

[A] Assesses whether data of sufficient type, quality, and quantity have been collected.

NOTE

The WSPF Package consists of the WSPF, the Characterization Information Summary (CIS) and the Summation of Aspects of the Acceptable Knowledge (AK) Summary.

3.1.2 Completes and submits the WSPF package and required revisions.

3.1.3 Prepares the Waste Stream Characterization Package per CCP-PO-001, Section C3-6b(3) upon request from the DOE CBFO.

3.2 Acceptable Knowledge Expert (AKE)

NOTE

As the waste stream is characterized, the Acceptable Knowledge Expert (AKE) is responsible for corroborating the AK information with the characterization data collected. For the final data reconciliation (conducted in accordance with this procedure), the AKE provides assistance to the SPM.

3.2.1 Compiles the AK information for the waste stream being characterized.

3.2.2 Creates the AK summary which is used to create the Summation of Aspects of the AK summary.

3.2.3 Assigns a unique waste stream number for each waste stream based on information in the DOE/TRU-11-3425, *Annual Transuranic Waste Inventory Report* (ATWIR) and/or information from the Host site.

3.2.4 Reviews and concurs with the WSPF Package and subsequent revisions.

3.3 Host Site Subcontract Technical Representative (STR)

3.3.1 If required by the site-specific interface document, reviews, and concurs with the WSPF Package.

4.0 PROCEDURE

NOTE

The attachments in this document are examples of the requirements. The examples identify the minimum information required in the final approved report.

NOTE

Steps DO **NOT** need to be followed in sequence.

SPM

4.1 Assigning the WSPF Number

NOTE

The unique number will be limited to a maximum of 20 alpha-numeric characters. The first two characters will be the two letter site designator, and the remaining characters should coincide, to the maximum extent possible, with the title page of the AK Summary Report.

4.1.1 Assign the Waste Stream Number to the WSPF per the AK Summary Report.

NOTE

The Waste Stream Number is recorded on all applicable attachments.

4.2 Compilation and Evaluation of DQO Parameters

4.2.1 For the lot to be processed, select an appropriate number of containers that have completed CCP Project Office verification and validation from the waste stream population.

[A] Ensure that all of the containers selected are from the same waste stream by comparing the container numbers/waste stream identification numbers with the AK Tracking Spreadsheet for the subject site.

[B] Ensure all containers from any waste stream that requires Gas Generation Testing (GGT) meet one of the following requirements:

[B.1] The container is on an approved GGT Batch Data Report (BDR) and that the BDR is the most recent.

[B.2] The container is included in an approved Long Term Objective population.

[C] Ensure all containers from any waste stream that require Flammable Gas Analysis (FGA) for Transportation Sampling are on an approved FGA for transportation BDR and that the BDR is the most recent:

[D] Ensure all data to be used for certification was generated using certified equipment.

[E] Ensure that each of the BDRs chosen to certify the containers is the most recent BDR available for that characterization process (i.e., real-time radiography [RTR] or visual examination [VE], nondestructive assay [NDA], FGA, Dose-to-Curie [DTC]), Radiological Characterization.

4.2.2 Obtain copies of the following documents from CCP Records, as applicable:

- Documentation of Radiological Properties (e.g., NDA BDR), VE, RTR, FGA **AND/OR** an AK Sufficiency Determination
- Previous records of data completion and reconciliation with DQOs (see Attachment 1, CCP Reconciliation with Data Quality Objectives for an example)
- Previously completed CIS submitted to records on interoffice memo

4.2.3 Determine if sufficient data have been collected to determine if program-required waste parameters have been met, by completing the CCP Reconciliation with Data Quality Objective Attachment 1, using the attached instructions.

4.2.4 **IF** sufficient data has been collected,
THEN enter the Waste Stream Number and Lot Number on the CCP Reconciliation with Data Quality Objective.

4.2.5 **IF** data DOES **NOT** meet the criteria on the CCP Reconciliation with Data Quality Objective,
THEN sufficient data has **NOT** been collected to fully characterize the waste stream, therefore, determine the additional waste characterization that needs to be performed **AND** direct the appropriate site facility to collect the additional data.

NOTE

The CCP Reconciliation with Data Quality Objective contains multiple questions for each entry. If there are discrepancies between questions or if entries are Not Applicable (N/A), comments will be added to the form explaining how criteria are met.

4.2.6 Complete the CCP Reconciliation with Data Quality Objective, using the attached questions.

4.2.7 Print name, sign, and date the CCP Reconciliation with Data Quality Objective.

4.2.8 Place the CCP Reconciliation with Data Quality Objective in the holding file.

4.3 Preparing Waste Stream Profile Form (WSPF)

NOTE

The current approved revision of the waste stream AK Summary should be used in preparing or revising the WSPF.

4.3.1 **IF** a WSPF exists for the waste characterization data being reconciled,
THEN GO TO Section 4.7.

4.3.2 Ensure all characterization data obtained from CCP Records for the waste stream in question have gone through project level validation (i.e., signed SPM checklists).

4.3.3 Prepare a CCP WSPF (see CCP Waste Stream Profile Form, for an example) using the instructions included in Attachment 2.

4.3.4 Review, print name, sign, and date the WSPF.

4.4 Completing the Characterization Information Summary (CIS)

4.4.1 Record the Waste Stream Number and Lot Number, including the list of site specific/CCP procedures, revisions, and dates used in characterizing the containers in the lot, on the CCP Characterization Information Summary Cover Page (see Attachment 3, CCP Characterization Information Summary Cover Page for an example).

4.4.2 Complete the cross-reference listing the container numbers to each BDR (see Attachment 4, CCP Correlation of Container Identification Numbers to Batch Data Report Numbers for an example).

[A] For items **NOT** analyzed enter N/A.

[B] Print name, sign, and date the CCP Correlation of Container Identification Numbers to Batch Data Report Numbers.

4.4.3 **IF** the AK Summary for the waste stream identified the U.S. Environmental Protection Agency (EPA) Hazardous Waste Number (HWN) U134 (hydrofluoric acid), **THEN** address in CCP RTR/VE Summary of Prohibited Items (see Attachment 5, CCP RTR/VE Summary of Prohibited Items for an example) that any liquid identified is a prohibited item per the applicable operating procedure and is **NOT** acceptable by the Treatment, Storage, and Disposal Facility (TSDF).

4.4.4 Complete the CCP RTR/VE Summary of Prohibited Items to document that prohibited items are **NOT** present in the waste stream or waste stream lot and to verify the physical form of the waste matches the waste stream description as determined by AK.

NOTE

If CBFO approves, VE may be performed on S3000 and S4000 when the material is not removed from the characterized container.

4.4.5 Complete the justification for the selection of radiography and/or VE as the appropriate method for characterizing the waste.

4.4.6 Print name, sign, and date CCP RTR/VE Summary of Prohibited Items.

4.5 Summation of Aspects of the AK Summary

4.5.1 Obtain an approved copy of the AK Summary for the subject waste stream in order to create a summary level version of the AK Summary, entitled the Summation of Aspects of the AK Summary (Summation).

4.5.2 Create the Summation and include the following information: waste stream name and number, point of generation, waste stream volume (current and projected), generation dates, TRUCON codes, Summary Category Group, Waste Matrix Code(s) (WMC) and Waste Matrix Code Group, other ATWIR information, waste stream description, areas of operation, generating processes, Resource Conservation and Recovery Act (RCRA) determinations, radionuclide information, method for determining Waste Material Parameter (WMP) weights per unit of waste contact-handled ([CH] only), all references used to generate the Summation, and any other information required by CCP-PO-001.

4.5.3 Include a list of any approved AK Sufficiency Determinations for the waste stream.

4.6 Submitting the WSPF Package to DOE CBFO

4.6.1 Compile the WSPF Package consisting of the following:

- WSPF
- CIS
- Summation

4.6.2 Forward a copy to the AKE for review and concurrence.

4.6.3 **IF** required by the appropriate site-specific Interface Document, **THEN** forward a copy to the STR for review and concurrence.

4.6.4 **IF** comments are received from the AKE **AND/OR** STR, **THEN** resolve the comments, **AND** forward a copy of the resolution to the reviewer(s) for concurrence.

4.6.5 **AFTER** concurrence(s) is/are received, **THEN** continue with this section.

4.6.6 Transmit the WSPF Package via e-mail to the DOE CBFO electronic mail (email) site at site.documents@wipp.ws for permittee review and CBFO approval.

4.6.7 **IF** comments are received from the permittees, **THEN** repeat steps 4.6.2 through 4.6.6 until comments have been resolved.

4.6.8 Submit approved WSPF Package to CCP Records in accordance with CCP-QP-008, *CCP Records Management,* with an interoffice memo within 30 calendar days of WSPF approval.

4.7 Subsequent Data Reconciliation

4.7.1 Obtain a copy of the WSPF Package from CCP Records.

4.7.2 Perform applicable steps of Sections 4.2 and 4.4.

NOTE

A revision required to the WSPF package that results in the addition of EPA HWNs will require the waste stream to be suspended until DOE approves the revised WSPF.

4.7.3 **IF** the waste DOES **NOT** meet the WSPF Package description, **THEN** revise the WSPF Package, **OR** assign the waste to a new waste stream.

[A] **IF** subsequent data collection reveals discrepancies that identify different EPA HWNs,
THEN the Waste Stream Profile will be revised.

[B] **IF** subsequent data collection reveals discrepancies that indicate the waste belongs to a different waste stream,
THEN initiate a nonconformance report (NCR) in accordance with CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control*.

NOTE

A revision required to the WSPF Package that DOES **NOT** result in addition of EPA HWNs (application of additional TRUCON Content codes, or addition of material parameter weight estimates per unit of waste) will not require the waste stream to be suspended.

[C] **IF** the WSPF Package requires a revision,
THEN make the appropriate changes in accordance with guidance provided in the CCPWSPF, **AND** submit the WSPF revision to CCP Records and DOE CBFO in accordance with the applicable steps in Section 4.6.

[D] **IF** the waste DOES **NOT** match the subject WSPF Package (i.e., have common physical form, contain similar hazardous constituents, and were generated from a single process or activity discrepancies are noted that identify different EPA HWNs or indicate that the waste belongs to a different waste stream),
THEN perform the following:

[D.1] Notify the AKE that the subject waste must be redefined to a separate waste stream in accordance with the applicable steps of CCP-TP-005, *CCP Acceptable Knowledge Documentation*, Section 4.8.

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[D.2] Generate a new WSPF Package in accordance with Sections 4.2 through 4.6.

4.7.4 Provide documentation of the waste stream lot data reconciliation to CCP Records that includes the CCP CIS and CCP Reconciliation with Data Quality Objective.

4.8 Completing the Waste Stream Characterization Package

4.8.1 When requested by DOE CBFO, prepare the Waste Stream Characterization Package for the requested waste stream.

4.8.2 Obtain a copy of the subject WSPF Package from CCP Records.

4.8.3 Obtain copies of the subject CISs for each of the waste stream lots associated with the subject waste stream from CCP Records.

4.8.4 Obtain a complete copy of the AK Summary for the subject waste stream from CCP Records.

4.8.5 Obtain copies of the BDRs as requested by DOE CBFO from CCP Records.

4.8.6 Obtain copies of other data requested by DOE CBFO from CCP Records.

4.8.7 Assemble the information, **AND** transmit to DOE CBFO.

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5.0 RECORDS

5.1 Records generated during the performance of this procedure are maintained as quality assurance (QA) Records in accordance with CCP-QP-008. The records are the following:

<u>QA/Lifetime</u>

[A] Characterization Information Summary with attached interoffice memorandum

[A.1] Attachment 1 – CCP Reconciliation with Data Quality Objective

[A.2] Attachment 3 – CCP Characterization Information Summary Cover Page

[A.3] Attachment 4 – CCP Correlation of Container Identification Number to Batch Data Report Numbers

[A.4] Attachment 5 – CCP RTR/VE Summary of Prohibited Items

[B] Waste Stream Profile Form Package

[B.1] Attachment 2 – CCP Waste Stream Profile Form – includes Interoffice Memorandum of Submittal from the SPM

[B.2] CIS for the lot addressing the applicable analysis data

[B.3] Summation of Aspects of the AK Summary, if applicable

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Attachment 1 – CCP Reconciliation with Data Quality Objective (Example)

Sampling Completeness

RTR:
Number of valid samples: _____Number of total samples analyzed: _____
Percent Complete: _____(QAO is 100%)

NDA:
Number of valid samples: _____Number of total samples analyzed: _____
Percent Complete: _____(QAO is 100%)

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Attachment 1 – CCP Reconciliation with Data Quality Objective (Example) (Continued)

Waste Stream#: _____ Lot #: _____

	Y/N/NA	Reconciliation Parameter			
1.		Waste Matrix Code.			
2.		Waste Material Parameter Weights.			
3.		The transuranic (TRU) activity reported in the BDRs for each container demonstrates with a 95 percent probability that the container of waste contains TRU radioactive waste.			
4.		AK Sufficiency. Is there an approved AK sufficiency Determination for this waste stream?			
5.		The data demonstrates whether the waste stream exhibits a toxicity characteristic under Title 40 *Code of Federal Regulations* (CFR), Part 261, *Identification and Listing of Hazardous Waste,* Subpart C, *Characteristics of Hazardous Waste*.			
6.		Does the waste stream contain listed waste found in 20.4.1.200 NMAC incorporating 40 CFR Part 261, Subpart D, *Lists of Hazardous Wastes*?			
7.		Waste stream can be classified as hazardous or nonhazardous.			
8.		The overall completeness, comparability, and representativeness quality assurance objectives (QAOs) were met for each of the testing procedures as specified in CCP-PO-001Sections C3-1 through C3-2 prior to submittal of a WSPF for a waste steam or waste stream lot.			
			Completeness	**Comparability**	**Representativeness**
		Radiography			
		VE			
Comments					

SPM Printed Name _____ Signature _____ Date _____

Attachment 1 – CCP Reconciliation with Data Quality Objective (Example) (Continued)

Instructions for completing form:

Prior to completing Blocks 1 through 13, the SPM or Designee shall complete the Sampling Completeness portion of Attachment 1.

For each waste container and process, verify that:

- The waste container, by serial number, is included in the BDR shown for each characterization methodology listed in Attachment 4, CCP Correlation of Container Identification Numbers to Batch Data Report Number.
- The BDR has gone through project level validation and verification and has received SPM approval.
- The waste container was not removed from the BDR via NCR.

This information is recorded on Attachment 1 under the Sampling Completeness.

This process confirms that the samples are valid and that there is analysis data in the BDRs to support the determination, by the SPM, of program-required waste parameters for the total number of samples collected.

1. Waste Matrix Code. Is the waste matrix code assigned to the waste stream in the AK Summary Report supported by the radiography and/or VE testing BDRs?

2. Waste Material Parameter Weights. Are the waste material parameters listed in the AK Summary reported in kilograms for each of the waste material parameters identified in the waste stream?

3. TRU Radioactive Waste. Does the TRU activity reported in the BDR for each container demonstrate compliance with CCP-PO-002, *CCP Transuranic Waste Certification Plan*?

4. AK Sufficiency Determinations requested for the waste stream? If the answer is Yes, record request in comments field and document the use of the AK Sufficiency Determination as objective evidence for answering Yes to other DQOs.

5. Toxicity Characteristic. Does the waste exhibit a toxicity characteristic under 40 CFR Part 261, Subpart C?

6. Listed Waste. Does the waste stream contain listed waste found in 20.4.1.200 NMAC incorporating 40 CFR Part 261, Subpart D?

7. Hazardous Waste Determination. Can the waste stream be classified as hazardous or nonhazardous?

Attachment 1 – CCP Reconciliation with Data Quality Objective (Example) (Continued)

8. Completeness, Comparability, and Representativeness. Have the overall completeness, comparability, and representativeness quality assurance objective (QAOs) for each of the testing, processes been met for the waste stream or waste stream lot by answering each of the following questions:

- Completeness:
  - RTR: Is there an audio/videotape (or equivalent media) of the radiography examination and a validated radiography data form for 100 percent of the containers subject to radiography?
  - VE: A validated VE data form will be obtained for 100 percent of the waste containers subject to VE.
- Comparability: RTR and VE:
  - Was the correct approved version of the procedure used by qualified operators to acquire, verify, and validate the data?
- Representativeness: Was the correct approved version of the procedure used to control:
  - RTR: Viewing test image, resolving discrepancies between two operators
  - VE: Reconciling any discrepancies between the operator and the Independent Technical Reviewer

Attachment 2 – CCP Waste Stream Profile Form (Example)

(1) Waste Stream Profile Number:						
(2) Generator site name:					(3) Generator site EPA ID:	
(4) Technical contact:					(5) Technical contact phone number:	
(6) Date of audit report approval by New Mexico Environment Department (NMED):						
(7) Title, version number, and date of documents used for WIPP-WAP Certification:						
(8) Did your facility generate this waste?	YES		NO			
(9) If no, provide the name and EPA ID of the original generator:						
Waste Stream Information						
(10) WIPP ID:					(11) Summary Category Group:	
(12) Waste Matrix Code Group:					(13) Waste Stream Name:	
(14) Description from the ATWIR:						
(15) Defense TRU Waste:	YES		NO			
(16) Check One:	CH		RH			
(17) Number of SWBs (17a) Number of SLB2	(18) Number of Drums				(19) Number of Canisters	
(20) Batch Data Report numbers supporting this waste stream characterization:						
(21) List applicable EPA Hazardous Waste Numbers:						
(22) Applicable TRUCON Content Numbers:						
(23)**Acceptable Knowledge Information**						
(For the following, enter the supporting documentation used [i.e., references and dates])						
Required Program Information						
(23A) Map of site:						
(23B) Facility mission description:						
(23C) Description of operations that generate waste:						
(23D) Waste identification/categorization schemes:						
(23E) Types and quantities of waste generated:						
(23F) Correlation of waste streams generated from the same building and process, as applicable:						
(24) Waste certification procedures:						
(25) Required Waste Stream Information						
(25A) Area(s) and building(s) from which the waste stream was generated:						
(25B) Waste stream volume and time period of generation:						
(25C) Waste generating process description for each building:						
(25D) Waste Process flow diagrams:						
(25E) Material inputs or other information identifying chemical/radionuclide content and physical waste form:						
(25F) Waste Material Parameter Weight Estimates per unit of waste						
(26) Which Defense Activity generated the waste:						
	Weapons activities including defense inertial confinement fusion				Naval Reactors development	
	Verification and control technology				Defense research and development	
	Defense nuclear waste and material by products management				Defense nuclear material production	
	Defense nuclear waste and materials security and safeguards and security investigations					

Attachment 2 – CCP Waste Stream Profile Form (Example) (Continued)

(27) Supplemental Documentation:	
(27A) Process design documents:	
(27B) Standard operating procedures:	
(27C) Safety Analysis Reports:	
(27D) Waste packaging logs:	
(27E) Test plans/research project reports:	
(27F) Site databases:	
(27G) Information from site personnel:	
(27H) Standard industry documents:	
(27I) Previous analytical data:	
(27J) Material safety data sheets:	
(27K) Sampling and analysis data from comparable/surrogate Waste:	
(27L) Laboratory notebooks:	
Confirmation Information	
For the following, when applicable, enter procedure title(s), number(s) and date(s)	
(28)	Radiography:
	Visual Examination:
(29) Comments: For a list of the waste characterization procedures used and date of respective procedures see the list of procedures on the attached CIS.	

Reviewed by AK Expert: **YES** ☐ **Date:**_____

Reviewed by STR (if necessary): **YES** ☐ **N/A** ☐ **Date:**_____

Waste Stream Profile Form Certification:

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

Signature of Site Project Manager	Printed Name	Date

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Attachment 2 – CCP Waste Stream Profile Form (Example) (Continued)

CCP WASTE STREAM PROFILE PACKAGE

A WSPF Package should be completed as early as possible (once sufficient data has been obtained [e.g., at least one lot]) and submitted to DOE CBFO for approval.

The SPM, in completing the WSPF, should seek the assistance and participation of the AKE in the preparation of the form and attachments.

The WSPF package submitted to DOE CBFO for approval contains three parts. The first part is the WSPF itself. The second part is the CIS Report for the waste stream or waste stream lot used to support the WSPF. The last part is the *Summation of Aspects of the AK Summary Report*, to support the WSPF. The completion of the first and third parts of the package is addressed in these instructions. Completion of the CIS is addressed in CCP-TP-002, *CCP Reconciliation of DQOs and Reporting Characterization Data*, and associated forms.

Instructions for completing the Waste Steam Profile Form:

Obtain an approved copy of the current WSPF Package from CCP Records; for new WSPFs, it will be blank.

Line numbers indicated below refer to the number in the parenthesis on the CCP WSPF.

The brackets [ ] indicate the primary source of the information requested if not otherwise referred to within the instruction.

Line 1:

Assign a site-specific waste stream profile number to each form generated. The number should normally coincide, to the extent possible, as it appears on the title page of the AK Summary Report. The SPM is responsible for selecting the number after referring to the AK Summary Report. The number should start with the applicable two-digit site designator. The number should be limited to 20 alpha-numeric characters maximum. Indicate waste stream lots with a period and sequentially numbered digits added to the waste stream profile number.

Line 2:

Enter the name of the site where the waste is currently stored. [AK Summary Report]

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Attachment 2 – CCP Waste Stream Profile Form (Example) (Continued)

Line 3:

Enter the EPA Identification (ID) Number of the site listed in Line 2. The ID number, if not included in the AK Summary Report, can be obtained from the EPA Regional office in which the site is located. The AKE should assist in the acquisition of this information.

Line 4:

Enter the name of the technical contact for this site. This is the individual to be contacted if there are questions concerning the data reported on the form, usually the SPM.

Line 5:

Provide the telephone number of the person identified in Line 4.

Line 6:

Enter the date of the most recently approved audit report approval by NMED. If the site has been audited but an audit report has not yet been approved by DOE CBFO, contact the CCP Project Manager. If DOE CBFO has approved the audit report and is awaiting approval by New Mexico Environmental Department (NMED), submit the WSPF package to DOE CBFO for distribution to the Waste Isolation Pilot Plant (WIPP) Review Team.

Line 7:

List the site-specific waste program documents (such as CCP-PO-001, the CCP-PO-003, Interface, etc.) listing the current revision.

Line 8:

Check the appropriate box. [AK Summary Report]

Line 9:

If the site where the waste is currently stored is not the site where the waste was generated, then provide the name and EPA identification number of the site where the waste was generated. [The AK Summary Report should provide the information as to where the waste was generated. The ID number, if not included in the AK Summary Report, can be obtained from the EPA Regional Office in which the site is located. The AKE should assist in the acquisition of this information.]

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Attachment 2 – CCP Waste Stream Profile Form (Example) (Continued)

If the waste was generated at the site where it is currently stored, place an N/A in this box.

Line 10:

Enter the WIPP identification number from the current revision of the Annual Transuranic Waste Inventory Report (ATWIR) that best describes the waste stream being certified. CCP may split or combine ATWIR waste streams for the purposes of defining waste sampling populations. If CCP has split or combined ATWIR waste streams, all contributing ATWIR waste streams listed on the WSPF should also be indicated on the Summation of Aspects of AK Summary Report.

If there is no corresponding WIPP ID number listed in the ATWIR or if the ATWIR information is in error or no longer applies, enter None Available. If there is no corresponding WIPP ID number listed in the ATWIR, contact the AKE for assistance. (A copy of the ATWIR may be found in the WIPP Technical Library in the Skeen Whitlock Building.)

Line 11:

Enter the Summary Category Group identified in the AK Summary Report as representing this waste stream.

Line 12:

Enter the Waste Matrix Code (WMC) Group identified in the AK Summary Report as representing this waste stream. Use only WMC Groups identified in the *Waste Isolation Pilot Plant Hazardous Waste Facility Permit, Waste Analysis Plan* (WIPP-WAP).

Line 13:

Enter the name of the waste stream from the AK Summary Report.

Line 14:

Enter the waste stream description from the ATWIR (preferred) or AK Summary Report.

Attachment 2 – CCP Waste Stream Profile Form (Example) (Continued)

Line 15:

Check the appropriate box. [AK Summary Report]

If the answer to this question is NO, stop work and notify the CCP Program Manager immediately. This waste can not be disposed of at the WIPP Site.

Line 16:

Check the appropriate box.

CH=contact-handled TRU waste
RH=remote-handled TRU waste

[AK Summary Report for the waste stream identified above.]

Line 17:

Enter the number of standard waste boxes in this waste stream (current and projected). [AK Summary Report] If there are no standard waste boxes in the waste stream, N/A should be entered.

Line 17a:

Enter the number of standard large box 2s (SLB2s) in this waste stream (current and projected). [AK Summary Report] If there are no SLB2s in the waste stream, N/A should be entered.

Line 18:

Enter the total number of drums in the waste stream (current and projected). Enter the number of Ten-Drum Overpacks (TDOPs), 85-gallon drums and 100-gallon drums if applicable (current and projected). [AK Summary Report]

If there are no drums (e.g., only SWBs, SLB2s, or Canisters) in the waste stream, N/A should be entered.

Line 19:

Enter the number of canisters in this waste stream (current and projected). [AK Summary Report]

If there are no canisters in the waste stream, N/A should be entered.

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Attachment 2 – CCP Waste Stream Profile Form (Example) (Continued)

Line 20:

List the TRU Waste BDR numbers used to support the completion of this WSPF. This list shall include every container and the associated BDRs from each process in the waste stream OR every container in the waste stream lot and the associated BDRs from each process used in that characterization (for example NDA, RTR, HSG, VE, etc). Reference may be made to the CIS (Attachment 3 and contents) (The CIS for the waste stream, or waste stream lot associated with the WSPF, is submitted as part of the WSPF package to DOE CBFO for approval).

Line 21:

List each EPA HWN that is present in the waste stream. Each EPA HWN must be listed in the WIPP Hazardous Waste Facility Permit, Attachment C, Table C-9, Hazardous Waste Permit Application, Part A. Each EPA HWN must be justified in the Waste stream specific AK Summary Report. The AKE should assist in this determination.

Line 22:

Enter all of the TRUCON Content Numbers, from the current revision of the content codes document applicable to this waste stream. [AK Summary Report]

Line 23: A-F

Reference all of the appropriate sections, figures, or pages in the current revision of the AK Summary Document (including the document title, number, revision number, and effective date) for this waste stream where the listed information can be found in the AK document.

Line 24:

List all of the waste stream certification procedures applicable to this waste stream. Include procedure numbers, revision numbers, titles, and effective date. This list should contain all revisions of a document that were used during the characterization of the waste. References may be made to the CIS, Attachment 3.

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Attachment 2 – CCP Waste Stream Profile Form (Example) (Continued)

Line 25 A-F:

Reference all of the appropriate sections, figures, or pages in the current revision of the AK Summary Document (including the document title, number, revision number, and effective date) for this waste stream where information listed can be found in the AK document.

Line 26:

Check all that apply that describes the defense activities that generated the waste.
[AK Summary Report]

Line 27 A-L:

Sites must provide the appropriate references to the site-specific documents that contain documentation that is used to support the use of AK for TRU waste characterization. Items in this section must be given the same level of consideration as the items in the Required Program Information and Required Waste Stream Information sections. This information may either be inserted into the block or referenced as listed on a continuation sheet. The AKE should provide appropriate lists of documents for use in completing Line 27. Only those documents referenced in the AK Source Documents List in the Summation of Aspects should be included in these lists.

Using information from the AK Record or from a document that is traceable to the AK record, provide a reference for the following parameters:

(A) Process design document (e.g., Title II Design).

(B) Standard operating procedures, including procedure date and reference number, that may include a list of raw materials or reagents, a description of the process or experiment generating the waste, and a description of the process or experiment generating the waste, and a description of waste generated and how the wastes are managed at the point of generation.

(C) Preliminary and final safety analysis reports and technical safety requirements.

(D) Waste packaging records.

(E) Test plans or research project reports that describe reagents and other raw materials used in experiments.

(F) Site databases (e.g., chemical inventory database for Superfund Amendments and Reauthorization Act Title III requirements).

(G) Information from site personnel (e.g., documented interviews).

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Attachment 2 – CCP Waste Stream Profile Form (Example) (Continued)

(H) Standard industry documents (e.g., vendor information).

(I) Analytical data relevant to the waste stream, including results from fingerprint analyses, spot checks, routine verification sampling, or other processes that collect information pertinent to the waste stream. This may also include new information acquired apart from the confirmatory process, which supplements required information (e.g., visual examination not performed in compliance with the WIPP-WAP, radiography screening for prohibited items).

(J) MSDSs, product labels, or other product package information.

(K) Sampling and analysis data from comparable or surrogate waste streams (e.g., equivalent nonradioactive materials).

(L) Laboratory notebooks that detail the research processes and raw materials used in an experiment.

Line 28:

List the most current revisions of the approved applicable procedure(s) by the title, number, revision number, and effective date in the appropriate block.

Line 29:

For a list of the waste characterization procedures used and date of respective procedures, see the list of procedures on the attached CIS.

Instructions for completing the Summation of Aspects of the AK Summary Report:

This summation should be as succinct as possible and consistent with the AK Summary Report.

Example:

SUMMATION OF ASPECTS OF AK SUMMARY REPORT: WASTE STREAM NTXXXXXXX

Overview

The overview is an executive summary of the summation. It should contain general information about where the waste was generated, where it is stored, reference to the WSPF number and the AK Summary Report from which the information is compiled, etc. In addition, the overview should contain summary level information that the waste stream is derived from defense related activities.

Waste Stream Identification Summary

This section should contain, as a table, the information identified below, if applicable.

Waste Stream Name
Waste Stream Number

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Attachment 2 – CCP Waste Stream Profile Form (Example) (Continued)

Dates of Waste Generation
Waste Stream Volume (current and projected by container)
Summary Category Group
Waste Matrix Code Group
Waste Matrix Code
TRUPACT-II Content code (TRUCON)
TRUPACT-III Content Code
ATWIR ID Number

Waste Stream Description and Physical Form

This section should contain information regarding what the waste consists of generally. For instance: the source of the waste - nonline laboratory trash that is heterogeneous debris and includes plastics, rubber, paper, glass, etc.

Point of Generation

Location

Specifically where the waste was generated:
Facility, description of the site, state, area designation, building number, production line, etc.

Area and/or Buildings of Generation

Short summary regarding the buildings or areas or productions lines, etc. that generated the waste.

Generating Processes

Description of Waste Generating Processes

This section should be a more detailed description of where and how the waste is generated. It can be building by building, process line by process line, or any other grouping that makes sense. These descriptions should be complete enough for understanding yet still striving for brevity.

Waste Stream Material and Chemical Inputs

A Table of Chemicals, for which an EPA HWN has been assigned. Include at least one identified use for each chemical.

Attachment 2 – CCP Waste Stream Profile Form (Example) (Continued)

RCRA Determinations

Historical Waste Management

The Historical Waste Management section is used to explain site policies or previous RCRA designation of the waste and how CCP uses those determinations. Explanations of how the site physically managed the waste and discussion of waste tracking or other management programs are optional. Include a discussion of duplicated CBFO approved waste streams generated under other certified programs.

Hazardous Waste Determinations

The AKE should assist in the hazardous waste determination. Include discussions in appropriate section below for instances where EPA HWNs are added as a result of confirmation activities.

The following text should be used to begin the discussions of ignitable, corrosive, and reactive characteristics.

Ignitability, Corrosivity, Reactivity

The waste material in this waste stream does not meet the definition of ignitable, corrosive, and reactive as defined in 40 CFR 261.21.

The waste in this waste stream is not liquid and does not contain unreacted corrosive chemicals; therefore, it does not meet the definition of corrosivity found in 40 CFR 261.22.

The waste material in the waste stream does not meet the definition of reactivity in 40 CFR 261.23. The materials are stable and will not undergo violent chemical change without detonating. The materials will not react violently with water, form potentially explosive mixtures with water, nor generate toxic gases, vapors, or fumes when mixed with water. Include other text such as the absence of sulfides and cyanides as appropriate.

Provide adequate detail to describe the absence of ignitable, corrosive, or reactive waste in the waste stream. Ensure the discussion closes with a statement such as, “The containers in the waste stream will be evaluated in accordance with the WIPP-WAP using radiography (and/or VE) prior to shipment to ensure the waste is not ignitable, reactive, or corrosive.

Ignitable (D001) wastes are prohibited from disposal at WIPP. Any potential D001 wastes in the waste stream must be evaluated and a determination of whether or not to apply the D001 number must be made.

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Attachment 2 – CCP Waste Stream Profile Form (Example) (Continued)

Special care must be taken to address items such as metal powders which are not normally thought of as ignitable.

Some chemicals, to which the D001 EPA HWN is applied, may be identified in the AK. The D001 number is applied due to ignitability. The SPM must be able to address the ignitability of these wastes and determine that the characteristic of ignitability does not apply.

If the SPM can not positively state at the conclusion of this section that "The waste number for ignitability (D001) does not apply to this waste stream," contact the CCP Project Manager.

Corrosive (D002) wastes are prohibited from disposal at WIPP. Any potential D002 wastes in the waste stream must be evaluated and a determination of whether or not to apply the D002 number must be made.

If the SPM can not positively state at the conclusion of this section that "The waste number for Corrosivity (D002) does not apply to this waste stream," contact the CCP Project Manager.

Reactive (D003) wastes are prohibited from disposal at WIPP. Any potential D003 wastes in the waste stream must be evaluated and a determination of where or not to apply the D003 number must be made.

If the SPM can not positively state at the conclusion of this section that "The waste number for Reactivity (D003) does not apply to this waste stream," contact the CCP Project Manager.

Toxicity Characteristic

Determine if the waste in this waste stream meets the definition of toxicity as defined in 40 CFR 261.24. For each chemical listed in CFR 261.24, determine if the EPA HWN should be applied to the waste stream.

If it is not possible to identify a specific source of the chemical, but the determination is made to apply the number, state that the number is being applied based on the information available.

Listed Waste

F-Listed Waste

Determine if the waste in this waste stream meets the requirements for listing as an F-Listed (Hazardous Waste from Non-Specific Sources) as defined in 40 CFR 261.31. For each chemical listed in CFR 261.31, determine if the EPA HWN should be applied to the waste stream.

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Attachment 2 – CCP Waste Stream Profile Form (Example) (Continued)

If it is not possible to identify a specific reason to apply the number for a chemical, but never the less the determination is made to apply the number, state that the number is being applied based on the information available.

K-Listed Waste

K-Listed wastes (Hazardous Waste from Specific Sources) are unlikely in waste to be shipped to WIPP. If K wastes are included, document as below for P- and U-Listed wastes.

P- and U-Listed Wastes

P- and U-Listed wastes are lists of chemicals that if present in the waste as pure un-used commercial chemical products would require the application of the EPA HWN.

Determine if the waste in this waste stream meets the requirements for listing as a P- or U-Listed as defined in 40 CFR 261.33. For each chemical listed in CFR 261.33, determine if the EPA HWN should be applied to the waste stream.

If it is not possible to identify a specific reason to apply the number for a chemical, but never the less the determination is made to apply the number, state that the number is being applied based on the information available.

Hydrofluoric acid (U134) and Beryllium (P015) are of special interest and must be addressed in every WSPF.

Polychlorinated Biphenyls

Evaluate the presence of Polychlorinated Biphenyls (PCBs) in the waste.

Prohibited Items

Include the appropriate prohibited items discussion from the AK Summary Report including a discussion as to how the prohibited items will be identified and remediated prior to shipment (such as radiography or VE).

Method for Determining Waste Material Parameter Weights per Unit of Waste

Describe the method used for determining waste material parameter weight estimates per unit of waste and include the WMP estimates table.

List of Any AK Sufficiency Determinations Requested for the Waste Stream

List applicable AK sufficiency determinations.

Attachment 2 – CCP Waste Stream Profile Form (Example) (Continued)

Transportation

Briefly discuss DOE/WIPP-02-3122, *Transuranic Waste Acceptance Criteria For The Waste Isolation Pilot Plant* (WIPP-WAC) transportation requirements as they pertain to identified TRUCON codes as dictated by the waste stream.

Beryllium

Address the WIPP-WAC requirements for beryllium.

Radionuclide Information

Present the two most prevalent isotopes expected from the waste stream (CH only). Insert radionuclide table from the AK Summary Report.

Include a brief discussion on payload management per the WIPP-WAC, Appendix E.

Source Documents

Insert reference list from AK Summary Report.

Revision to the Waste Stream Profile Form Package

If a revision to the WSPF Package is needed, a revised WSPF is created. Reasons for revising the WSPF Package include:

- Addition of EPA HWNs
- Application of additional TRUCON Content codes
- Addition of material parameter weight estimates per unit of waste

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Attachment 3 – CCP Characterization Information Summary Cover Page (Example)

Waste Stream: #: _____ Lot #: _____

AK Expert Review: _____ Date: _____

SPM Review: _____ Date: _____

SPM signature certifies that through Acceptable Knowledge testing and/or analysis that the waste identified in this summary is not corrosive, ignitable, reactive, or incompatible with the TSDF.

A summary of the Acceptable Knowledge regarding this waste stream containing specific information about the corrosivity, reactivity, and ignitability of the waste stream is included as an attachment to the Waste Stream Profile Form. By reference, that information is included in this lot.

List of procedures used:

Attachment 4 – CCP Correlation of Container Identification Number to Batch Data Report Numbers (Example)

Waste Stream #: ______________________________ Lot #: __________

Container ID Number	NDA BDR	RTR BDR	VE BDR	Payload Management/ Overpack Yes

_________________________ _________________________ __________
Signature of Site Project Manager Printed Name Date

Attachment 5 – CCP RTR/VE Summary of Prohibited Items (Example)

CCP RTR/VE Summary of Prohibited Items

Waste Stream Number: _____ Lot(s)#: _____

Container Number	RTR Prohibited Items [a,b]	Visual Examination Prohibited Items [a,b]	Does the Physical Form of the Waste Match the Waste Stream Description as Determined by AK
a. See Batch Data Reports b. If AK has assigned U134 to this waste stream, then any liquids in these containers are prohibited items (not acceptable by the TSDF)			
Justification for the selection of RTR and/or VE:			

Site Project Manager Signature Printed Name Date

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CCP-TP-005

Revision 25

CCP
Acceptable Knowledge Documentation

EFFECTIVE DATE: 06/19/2013

Mike Ramirez

PRINTED NAME

APPROVED FOR USE

RECORD OF REVISION

Revision Number	Date Approved	Description of Revision
4	01/17/2002	Revised to delete the requirement for signing the AK Summary and other minor changes. Added cis & trans-1,2-Dichloroethylene, Attachment 5.
5	01/24/2002	Minor change to Attachment 14 due to the following: Signature lines were struck and approved by all levels of review in previous revision. When preparing document to be issued signature lines were inadvertently left in and must now be removed. Printed name and "approved for use" are being inserted to reflect the CCP Procedure format.
6	07/23/2002	Revised document to: • Comments based on CH-WAC revision • Accommodate comments from an assessment at SRS Document Review Record for Technical and Quality Assurance • Comments from a Program Evaluation at ANL-E
7	09/06/2002	Revised document to: • Minor editorial changes to 2.1, 4.2, 4.3, and 4.4 Changes to 4.4.17 to comply with WAP requirements and Program Evaluation Changes to 4.4.26 to comply with Program Evaluations for NTS.
8	09/19/2002	Revised document based on comments from the ANLE Certification Audit and a CBFO Adequacy Review; revised Sections 3.1, 4.2, 4.3, 4.4, 4.5 and Attachments 7, 10, and 11.
9	09/26/2002	Revised document based on comments from the NTS Certification Audit; revised Sections 4.3, 4.4, 4.5, and 4.6.
10	10/24/2002	Revised step 3.2.13; added Section 3.6 and steps 4.7.18 and 4.7.19; and revised Attachment 10 based on comments from the SRS Recertification Audit.
11	02/05/2003	Revised document to address CAR #02-087 and CAR # 02-088 from the ANL-E Certification Audit. Revised steps 4.4.1 and added NOTE. Revised steps 4.4.17, 4.4.20, 4.4.24, 4.4.26, and 4.5.1 [D.2]

RECORD OF REVISION (Continued)

Revision Number	Date Approved	Description of Revision
12	03/26/2003	Revised step 4.4.8 and preceding NOTE.
13	11/18/2003	Revised document to: - Perform minor editorial changes throughout document. Clarify that Attachments are example forms. Remove Attachments 11 and 12 to create electronically fillable forms of these attachments. Add Section 3.7 to include responsibility of Nondestructive Assay (NDA) Subject Matter Expert (SME) to perform assessment with the Acceptable Knowledge Expert. Update steps 4.4.17 and 4.4.18 to require that the uses and limitations of the radionuclide Acceptable Knowledge information is reviewed by the NDA SME. Add Section 4.9 to address CAR-SRS-006-03 for the process used to document the addition of containers to existing waste streams. Added a new Section 4.3.3 identifying the use of Memorandum to CCP Central Records. Added a new Section 4.6.3 to incorporate preparation of a letter/memorandum to Site Project Manager summarizing AK information; revision of Sections 4.6.4 and 5.1.1[J] to incorporate the addition of 4.6.3. Deleted Section 4.1.3 Process Equipment Description from the AK Summary Report Content Guide. - Modified Attachment 5.
14	11/19/2004	Revised document to: - Perform minor editorial changes and technical clarifications throughout document. - Revised procedure to address WIPP WAC Revision 1 and 2 changes relating to beryllium, payload container management, high plutonium content waste/material, and PCB requirements (Sections 1.0 and 4.4.24). - Revised Section 4.8.1 to allow for resolution of discrepancies within the AK Summary Report. - Deleted redundant records management requirement to attach copies of the AK Source Document Discrepancy reports to all affected sources. - Deleted step 4.4.8[B].

RECORD OF REVISION (Continued)

Revision Number	Date Approved	Description of Revision
15	03/31/2005	Revised document to incorporate WIPP WAP AK requirements for LANL sealed sources. Addressed CBFO comments.
16	02/27/2006	Revised document to: Incorporate minor editorial changes and technical clarifications throughout the document. Add Sections 4.10 and 4.11 to address creation and maintenance of the Container Tracking Spreadsheet on the FTP (CAR-INL-0003-05). Replace revised Attachments 5 and 10 based on recent audit discussions.
17	06/05/2006	Revised to allow the use of attachments to this procedure during the management of Remote-Handled (RH) Acceptable Knowledge (AK) in accordance with DOE/WIPP-02-3214, *Remote-Handled TRU Waste Characterization Program Implementation Plan* (WCPIP). Revised Attachment 6, Waste Form, Waste Material Parameters, Prohibited Items, and Packaging – Example Form per Los Alamos National Laboratory (LANL) Certification Audit A-06-11.
18	11/16/2006	Revised to implement the Waste Isolation Pilot Plant Hazardous Waste Facility Permit requirements resulting from the Section 311/Remote-Handled (RH) Permit Modification Request (PMR). Addressed Carlsbad Field Office (CBFO) Document Review Record (DRR) comments.
19	07/06/2010	Revised document to address the Waste Isolation Pilot Plant (WIPP) Form WF09-171 from an internal Central Characterization Project (CCP) audit and to incorporate minor editorial changes and technical clarifications noted as a result of various Acceptable Knowledge audits.
20	11/01/2010	Revised to allow new and updated attachments and source documents to be submitted anytime after the initial submittal.
21	12/29/2010	Revised to implement the revision of the *Waste Isolation Pilot Plant Hazardous Waste Facility Permit*.
22	04/21/2011	Revised to address changes in Revision 2 of the *Remote-Handled Tru Waste Characterization Program Implementation Plan* (WCPIP). Incorporated editorial changes and technical clarifications throughout procedure.
23	06/30/2011	Revised to clarify what constitutes a record as part of the resolution to resolve CBFO CAR11-043.

RECORD OF REVISION (Continued)

Revision Number	Date Approved	Description of Revision
24	11/28/2011	Revised to address comments from inspectors during U.S. Environmental Protection Agency (EPA) Baseline Inspection EPA-SNL-CCP-RH-06.11-8 (June 6/8, 2011). Also revised to incorporated lessons learned from Carlsbad Field Office (CBFO) records surveillance.
25	06/19/2013	Revised to incorporate Nuclear Waste Partnership (NWP) transition changes and to implement the Permit Modification Request Class 2 approved by New Mexico Environment Department (NMED) dated March 13, 2013.

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1.0 PURPOSE

The *Waste Isolation Pilot Plant Hazardous Waste Facility Permit, Waste Analysis Plan* (WIPP-WAP), authorizes the use of acceptable knowledge (AK) in appropriate circumstances to delineate waste streams and to characterize hazardous waste. WIPP WAP AK requirements are addressed in CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*, and implemented through this procedure. DOE/WIPP-02-3122, *Transuranic Waste Acceptance Criteria for the Waste Isolation Pilot Plant* (WIPP-WAC), AK requirements are addressed in CCP-PO-002, *CCP Transuranic Waste Certification Plan*. Additionally, implementation of this procedure will generate information required by CCP-PO-003, *CCP Transuranic Authorized Methods for Payload Control* (*CCP CH-TRAMPAC*) and CCP-PO-505, *CCP Remote-Handled Transuranic Waste Authorized Methods for Payload Control* (*CCP RH-TRAMPAC*). This procedure applies to Central Characterization Program (CCP) personnel who perform AK activities for retrievably stored and newly generated transuranic (TRU) waste streams that may be eligible for disposal at Waste Isolation Pilot Plant (WIPP).

1.1 Scope

This procedure describes the processes the CCP uses to compile, review, evaluate, update, and report AK documentation. The procedure also describes how the CCP determines AK Sufficiency, AK accuracy; re-evaluates AK documentation when necessary; resolves AK documentation discrepancies, and uses AK to delineate waste streams and determine whether the waste is hazardous. A waste stream is defined as waste materials that have common physical form, that contain similar hazardous constituents (similar radiological properties for DOE/WIPP-02-3214, *Remote-Handled TRU Waste Characterization Program Implementation Plan* [WCPIP] compliance), and that are generated from a single process or activity.

Only CCP personnel trained in accordance with CCP-QP-002, *CCP Training and Qualification Plan,* will compile, evaluate, and document AK information in accordance with this procedure. Sites hosting the CCP may assist CCP personnel in the collection of AK information; however, this procedure will be used by the CCP to generate the required AK in accordance with CCP-PO-001, CCP-PO-002, CCP-PO-003, and CCP-PO-505.

AK includes any documentation that describes or verifies site history, mission, and operations, in addition to waste stream-specific information used to define the generating process, waste matrix, waste quantities and contaminants (radiological and chemical).

The information acquired in the performance of this procedure is used to prepare an AK Summary Report or an AK Sufficiency Determination.

This information is provided in the following attachments:

- Attachment 1 – Acceptable Knowledge Documentation Checklist – Example Form
- Attachment 2 – Record of Communication – Example Form
- Attachment 3 – Acceptable Knowledge Source Document Summary – Example Form
- Attachment 4 – Acceptable Knowledge Information List – Example Form
- Attachment 5 – Hazardous Constituents – Example Form
- Attachment 6 – Waste Form, Waste Material Parameters, Prohibited Items, and Packaging
- Attachment 7 – Radionuclides –Example Form (CH only)
- Attachment 8 – Waste Containers List – Example Form
- Attachment 9 – Attachment 9 is no longer required and Attachment number is reserved for future use.
- Attachment 10 – Acceptable Knowledge Re-evaluation Checklist – Example Form
- Attachment 11 – Acceptable Knowledge Source Document Discrepancy Resolution – Example Form
- Attachment 12 – Example Form and Content Guide for AK Summary Reports
- Attachment 13 – CCP Waste Stream Characterization Checklist – Example Form
- Attachment 14 – CCP Acceptable Knowledge Accuracy Report – Example Form
- Attachment 15 – CCP TRU Waste Correlation and Surrogate Summary Form – Example Form

The attached forms are provided as examples for the required AK information to be prepared for CCP Records. The forms identify the minimum information that will be prepared to document the AK collection and review process described in this procedure. Attachment 4, Acceptable Knowledge Information List – Example Form, lists all of the information that was collected and considered during the preparation of an AK Summary Report. Only those sources of information that are referenced in the AK Summary Report are considered source documents and submitted to CCP Records.

Remote-Handled (RH) TRU AK management will be performed in accordance with WCPIP to address U.S. Environmental Protection Agency (EPA) requirements; and CCP-PO-001 to address WIPP-WAP requirements. The attachments for AK management in this procedure were reviewed and determined to meet or exceed the information requirements described for AK management in the WCPIP, and will be used, as appropriate, during the compilation, review, evaluation, and reporting associated with RH AK information.

2.0 REQUIREMENTS

2.1 References

Baseline Documents

- DOE/WIPP 89-004, *TRUPACT-II Content Codes* (TRUCON)

Referenced Documents

- DOE/LLW-217, *DOE Waste Treatability Group Guidance. Idaho Falls*, Idaho, INEL-Lockheed Idaho Technologies
- DOE/TRU-12-3425, *Annual Transuranic Waste Inventory Report – 2012,* (or current revision), Carlsbad, New Mexico, U.S. DOE Carlsbad Field Office
- DOE/WIPP-02-3122, *Transuranic Waste Acceptance Criteria For the Waste Isolation Pilot Plant*
- DOE/WIPP-02-3214, *Remote-Handled TRU Waste Characterization Program Implementation Plan*
- 20 NMAC 4.1, New Mexico Administrative Code
- 40 CFR Part 261, *Identification and Listing of Hazardous Waste*
- CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*
- CCP-PO-002, *CCP Transuranic Waste Certification Plan*
- CCP-PO-003, *CCP Transuranic Authorized Methods for Payload Control* (*CCP CH-TRAMPAC*)
- CCP-PO-505, *CCP Remote-Handled Transuranic Waste Authorized Methods for Payload Control* (*CCP RH-TRAMPAC*)
- CCP-QP-002, *CCP Training and Qualification Plan*
- CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control*
- CCP-QP-008, *CCP Records Management*
- CCP-QP-010, *CCP Document Preparation, Approval, and Control*
- CCP-QP-029, *CCP Corrective Action Management*

- CCP-TP-002, *CCP Reconciliation of DQOs and Reporting Characterization Data*
- CCP-TP-069, *CCP Sealed Source Visual Examination and Packaging*
- CCP-TP-101, *CCP Off-Site Source Recovery Project Sealed Source Radiological Characterization*
- 42 U.S.C. 10101, *Nuclear Waste Policy Act of 1982*, U.S. Congress
- 40 CFR part 761*, Polychlorinated Biphenyls (PCBs) Manufacturing, Processing, Distribution in Commerce, and Use Prohibitions, U.S. EPA*

2.2 Training Requirements

2.2.1 All personnel performing this procedure will be trained and qualified in accordance with CCP-QP-002, prior to performing this procedure.

3.0 RESPONSIBILITIES

3.1 Site Project Manager (SPM)

3.1.1 Ensures that trained AK Experts (AKE) are available to implement this procedure in coordination with the Host site.

3.1.2 Approves, resolves, and requests re-evaluation of AK as necessary.

3.1.3 Makes final waste stream determinations, EPA Hazardous Waste Number assignments, and compares, confirms, and approves the AK documentation.

3.1.4 Prepares the AK Accuracy Report.

3.1.5 Confirms the chemical compatibility to the assigned TRUCON code and reviews the characterization data for each waste stream.

3.2 CCP Inventory and AK Support Manager

3.2.1 Manage and direct AKEs to ensure qualified individuals are performing tasks specified.

3.2.2 Coordinate between AKE and SPM for development of AK Summary Reports and Waste Stream Profile Forms.

3.2.3 Provide site-by-site tracking of AK development to allocate AK resources as needed.

3.3 AK Expert (AKE)

3.3.1 Identifies, locates, compiles, documents, summarizes, and evaluates required AK information.

3.3.2 Delineates waste streams and assigns waste stream numbers.

3.3.3 Recommends hazardous waste determinations to the SPM.

3.3.4 Prepares and revises AK Summary Reports.

3.3.5 Collects, reviews, prepares, and submits source documents as necessary.

3.3.6 Prepares and revises the AK Sufficiency Determination Request.

3.3.7 Documents and resolves discrepancies with AK information.

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3.3.8 Records meetings, telecommunications, interviews and other communications.

3.3.9 Completes and maintains document summaries and information lists.

3.3.10 Reviews and verifies AK information.

3.3.11 Develops waste stream descriptions.

3.3.12 Assigns Summary Category Groups and Waste Matrix Codes, and estimates waste material parameter (WMP) weights.

3.3.13 Prepares auditable file of AK information.

3.3.14 Re-evaluates and updates AK as needed.

3.3.15 Reviews and concurs on the Waste Stream Profile Form (WSPF).

3.3.16 Supports the development of the AK qualification method(s) and compliance with the applicable Data Quality Objectives (DQOs) for RH wastes streams in accordance with the WCPIP.

3.4 Off-Site Source Recovery (OSR) Program

3.4.1 For Los Alamos National Laboratory (LANL) sealed sources, assists the AKE in preparing the Nondestructive Assay (NDA) Memorandum discussed in step 4.4.24.

3.5 Nondestructive Assay (NDA) Expert Analyst (EA)

3.5.1 Performs the assessment for the NDA Memorandum discussed in step 4.4.24 with the AKE.

4.0 PROCEDURE

NOTE

The data collection, documentation, and AK preparation steps can be performed in any sequence as long as the AK data collection requirements found in CCP-PO-001 are met.

NOTE

The attached forms referenced in this section are provided as examples for the required AK information to be prepared for CCP Records. The forms identify the minimum information that will be prepared to document the AK collection and review process described in this procedure. All attachments submitted must contain a header with the procedure number, revision number, procedure title, effective date, and page number as displayed in the Example Attachments. Attachments must also contain the Attachment number and title immediately following the header, as shown on the Example Attachments.

4.1 AK Documentation Management

AKE

4.1.1 As they are collected, maintain the compiled AK documents with reasonable care (protection from damage or loss).

4.1.2 Assign a unique tracking number to each document collected as AK information using the Acceptable Knowledge Information List (see Attachment 4 for an example), for each waste stream. Describe the specific convention used to assign the unique identifiers to the source documents in the AK Summary Report. Examples of source document categories are as follows:

(EXAMPLE)

C – Correspondence
D – Documents
M – Miscellaneous
P – Procedures and Published Documents
DR – Discrepancy Resolution
U – Unpublished Documents

4.2 Compiling AK Documentation

AKE

4.2.1 Locate and obtain source documents with assistance of the Host site for documents with reference sections, as applicable.

4.2.2 Compile (i.e., gather) source documents that identify TRU waste management program information in the Acceptable Knowledge Documentation Checklist , AK #s PR1-PR8 (see Attachment 1, Acceptable Knowledge Documentation Checklist - Example Form, for facilities that generated the waste stream.

NOTE

Information collected must be sufficient to accurately characterize the waste stream.

NOTE

Source documents may include published or unpublished documents, correspondence, databases, quality assurance (QA) protocols, operating procedures, work instructions, waste storage/disposal records, waste certification summaries, process flow diagrams, analytical and testing data packages from previous waste characterization activities, and other sources of information descriptive of elements on the Checklist.

4.2.3 Apply a unique waste stream number based on the information in DOE/TRU-12-3425, *Annual Transuranic Waste Inventory Report* (ATWIR), and/or information from the Host site for each waste stream (Refer to CCP-TP-002, *CCP Reconciliation of DQOs and Reporting Characterization Data*, for appropriate numbering format).

4.2.4 Compile and record source documents that identify TRU waste stream-specific information specified in the Acceptable Knowledge Documentation Checklist, AK #s WS1-WS12 for each waste stream.

4.2.5 Compile and record source documents that identify additional AK documentation specified in the Acceptable Knowledge Documentation Checklist, AK #s S1-S16.

[A] Obtain additional AK information as appropriate to augment required information and provide any other information obtained to further characterize the waste stream.

[B] All additional specific, relevant AK documentation assembled and used in the AK process, whether it supports or contradicts any required AK documentation, shall be identified and an explanation provided for its use (e.g., identification of a toxicity characteristic).

[C] Additional documentation may be used to further document the rationale for the hazardous characterization results. If discrepancies exist between additional information and the required information, assess and evaluate the information to determine the appropriate hazardous waste numbers consistent with RCRA requirements. Document the resolution of RCRA hazardous waste number assignment discrepancies on an Acceptable Knowledge Source Document Discrepancy Resolution (see Attachment 11, Acceptable Knowledge Source Document Discrepancy Resolution - Example Form), or in the AK Summary Report.

4.2.6 For LANL sealed sources, compile source documents that identify OSR-specific documentation specified in the Acceptable Knowledge Documentation Checklist, AK #s O1-O16.

[A] If source markings are needed to support radiological characterization, the SPM must verify that they have been documented in accordance with CCP-TP-069, *CCP Sealed Source Visual Examination and Packaging.*

NOTE

For RH waste streams, the documentation collected and compiled in Sections 4.1 and 4.2 may not be sufficient to meet the DQOs established for the selected parameters in accordance with the WCPIP. If there is insufficient AK information to address each of the DQOs, then either additional AK will be collected and/or the characterization methods described in the WCPIP will be initiated. A combination of AK and other characterization methods may be used to meet the WCPIP DQO requirements.

4.2.7 For RH waste, review the documentation compiled and determine which of the WCPIP DQOs that can be met using the AK information collected.

4.2.8 Collect additional AK documentation and/or identify the characterization method(s) recommended to meet the DQO in accordance with the WCPIP (see step 4.4.33[O]).

4.3 Recording AK Documentation

AKE

NOTE

There are two categories of source documents used to document AK for a waste stream. Documentation generated by CCP and documents and/or other media supplied by the generator site. Generator site provided documents and/or other media are external records created by the waste generator sites and are identified in this procedure as "historical source documents."

4.3.1 Copy the document or the pertinent information from the document that defines source document contents, including cover sheets, executive summaries, introductions, and table of contents, if available **AND** maintain this information in the working files.

NOTE

Classified material CAN **NOT** be copied. If source documents are classified, an unclassified summary will need to be provided by the Host site or the document will be developed and summarized on an Acceptable Knowledge Source Document Summary (see Attachment 3, Acceptable Knowledge Source Document Summary - Example Form), by the AKE **AND** reviewed by the Site's Authorized Derivative Classifier for release.

4.3.2 Record meetings, telecommunications, interviews, and other communication on a Record of Communication (see Attachment 2, Record of Communication - Example Form), including a detailed summary of the content of the communication and data limitations.

NOTE

To avoid redundancy, a Record of Communication form may **NOT** be required if the information is already provided on an interview-related source document.

4.3.3 As necessary, prepare a memorandum or letter to CCP Records and Record of Communication, as appropriate, documenting the method used by the AKE to review AK sources for the purpose of evaluating required AK parameters such as radionuclides, Waste Matrix Codes, assignment of EPA Hazardous Waste Numbers, estimating waste material parameter weights, etc. The memorandum must identify the sources of AK used during the evaluation and clearly document the AKE assumptions and conclusions.

NOTE

Collection and review of AK source documents is an ongoing activity. It is conducted initially during the development of the AK Summary Report and continues as additional information becomes available during subsequent waste stream characterization and management activities. Completion of the Acceptable Knowledge Source Document Summary (see Attachment 3 for an example), for the source documents is an iterative process performed during these activities.

If the source document is a collection of information (i.e., container data sheets, material safety data sheets [MSDS] sheets, etc.) provide a description in the Title field of the Attachment 3 and ensure that it matches the Title field in the AK Source Document section of the AK Summary Report.

Information documents collected but not referenced in the AK Summary Report are not required to be summarized on an Attachment 3.

4.3.4 Initiate an Acceptable Knowledge Source Document Summary for each source document that includes detail sufficient to justify the use of the information. The Acceptable Knowledge Source Document Summary must be completed by the time the associated AK Summary Report is finalized for all AK source documents referenced within the report. Identify the specific waste stream or streams that correspond to the source document in the Waste Stream Number field on Attachment 3. If a comprehensive library is used for all streams at the site, note this in this field.

[A] Source documents referenced in the AK Summary Report and their applicable attachments must be submitted to CCP Records on or before the date of issuance of the AK Summary Report as final.

4.3.5 **IF** the summary consists of multiple pages,
THEN provide the unique source document tracking number on each page **AND** paginate the number of pages (e.g., 2 of 6 pages).

4.3.6 Print name, sign, and date the Acceptable Knowledge Source Document Summary before submitting to CCP Records.

4.3.7 For source documents that CAN **NOT** be reproduced or removed from the source (e.g., classified documents or databases), indicate on the Acceptable Knowledge Source Document Summary that a copy of the source document is **NOT** available, and state the reason.

4.3.8 Include a note on the limitations of the information (e.g., if a document covers a specific period of time) on the Acceptable Knowledge Source Document Summary.

NOTE

Attachment 4 is a listing of relevant documents collected during the investigative process. Documents collected must be categorized in accordance with Step 4.1.2.

4.3.9 Create and maintain an Acceptable Knowledge Information List that includes the following:

- Site, waste stream number, and waste stream description.
- Source document tracking number
- Source document title or description
- Name of author
- Original document number, or publisher's document number (if available)
- Revision number and document date (if applicable)

4.3.10 Print name, sign, and date the Acceptable Knowledge Information List before submitting to CCP Records.

4.4 Review and Submittal of AK Documentation

AKE

4.4.1 Evaluate the waste stream to verify that the waste materials do not meet the definition of spent nuclear fuel or high-level waste as defined in the in Section 10101(3) of the *Nuclear Waste Policy Act of 1982.*

4.4.2 Evaluate the waste stream to verify that the waste materials meet the definition of defense waste defined in CCP-PO-002.

NOTE

According to CCP-PO-002, a TRU waste is eligible for disposal at WIPP if it has been generated in whole or in part by one or more of the following functions:

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

4.4.3 **IF** there is no information linking the waste stream to defense related activities or commingled with defense materials, **OR** if the waste contains spent nuclear fuel or high-level waste,
THEN notify the SPM.

4.4.4 Document the defense determination, high-level waste and spent nuclear fuel assessments in the AK Summary Report.

4.4.5 Verify that 100 percent of the information specified in Acceptable Knowledge Documentation Checklist from AK #s PR1 through PR8 and WS1 through WS12 has been compiled.

4.4.6 **IF** 100 percent of this information is **NOT** available for a particular waste stream,
THEN notify the SPM that waste is **NOT** eligible for disposal at WIPP without the collection of additional information to augment the existing AK.

4.4.7 For LANL sealed sources waste containers, verify that the information on Acceptable Knowledge Documentation Checklist, AK #s O1-O16 has been compiled.

4.4.8 Review all AK information compiled in Section 4.2 of this procedure.

4.4.9 Document and resolve discrepancies regarding AK information among AK source documents as described in Section 4.9 of this procedure.

4.4.10 Print name, sign, and date the Acceptable Knowledge Documentation Checklist once the collection and review of the required AK information has been completed.

NOTE

A waste stream is defined as waste materials that have common physical form, that contain similar hazardous constituents (similar radiological properties for WCPIP compliance), and that are generated from a single process or activity. This definition will be used to obtain information for the waste stream specific description to be written in step 4.4.34.

4.4.11 Using the definition of a waste stream from above, the waste stream-specific documentation from the Acceptable Knowledge Documentation Checklist, and, if applicable, the description from the ATWIR, define the waste stream represented by the compiled AK information, **AND** provide this description in the AK Summary Report (see Attachment 12, Example Form and Content Guide for AK Summary Reports, for a format and content guide to be used when preparing the AK Summary Report). Provide a discussion to justify combining previously identified (i.e., ATWIR or site designations), TRU mixed waste and TRU non-mixed waste streams.

NOTE

A Waste Matrix Code will be assigned based on the physical form of the waste. DOE/LLW-217, *DOE Waste Treatability Group Guidance*, describes the convention for assignment of Waste Matrix Codes for low-level waste treatability groups, and can be used as the basis for the assignment of Waste Matrix Codes that bound the waste stream.

4.4.12 Assign and describe the Waste Matrix Code assigned to each waste stream identified.

NOTE

The Waste Matrix Code Groups identified in CCP-PO-001 are:

- Solidified inorganics
- Solidified organics
- Salt waste
- Soils
- Lead/cadmium metal
- Inorganic nonmetal waste
- Combustive waste
- Graphite
- Filters
- Heterogeneous debris waste
- Uncategorized metals

4.4.13 Assign the waste stream to the appropriate Waste Matrix Code Group.

4.4.14 Assign the waste stream to the appropriate Summary Category Group as defined below:

- S3000 Homogeneous Solids – Homogeneous solids are defined as solid material, excluding soil, that does not meet the New Mexico Environment Department (NMED) criteria for classification as debris (20.4.1.800 New Mexico Administrative Code [NMAC] [incorporating 40 CFR §268.2(g) and (h)]). Included in the series of homogeneous solids are inorganic process residues, inorganic sludges, salt waste, and pyrochemical salt waste. Other waste streams are included in this Summary Category Group based on the specific waste stream types and final waste form. This Summary Category Group is expected to contain toxic metal and spent solvents. This category includes wastes that are at least 50 percent by volume homogeneous solids.

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

- S5000 Debris Wastes – This Summary Category Group includes heterogeneous waste that is at least 50 percent by volume material that meets the criteria specified in 20.4.1.800 NMAC (incorporating 40 CFR §268.2[g]). Debris means solid material exceeding a 2.36 inch (60 millimeter) particle size that is intended for disposal and that is a manufactured object, plant or animal matter, or natural geologic material. Particles smaller than 2.36 inches in size may be considered debris if the debris

is a manufactured object and if it is **NOT** a particle of S3000 or S4000 material.

4.4.15 **IF** waste DOES **NOT** include at least 50 percent of any given Summary Category Group by volume,
THEN assign the Summary Category Group constituting the greatest volume of waste for that waste stream.

4.4.16 Review the AK information to determine if the waste is listed under 20 NMAC 4.1.200 (incorporating 40 CFR 261.30), Subpart D. If so, assign the appropriate HWNs.

4.4.17 Review the AK information to determine if a toxicity characteristic 20 NMAC 4.1.200 (incorporating 40 CFR 261.20), Subpart C contaminant is identified and has **NOT** been assigned a listed HWN from step 4.4.16. Evaluate the available data and assign the toxicity characteristic HWN consistent with RCRA requirements.

4.4.18 Compare the HWNs assigned from steps 4.4.16 and 4.4.17 to the HWNs listed in CCP-PO-001, Table C-9.

4.4.19 **IF** any HWNs are **NOT** included in CCP-PO-001, Table C-9,
THEN notify the SPM.

4.4.20 Include the justification and basis for steps 4.4.16 and 4.4.17 in the TRU waste stream-specific description of AK Summary Report,
AND complete the Attachment 5.

4.4.21 Print name, sign, and date Hazardous Constituents form.

4.4.22 Assess available AK radionuclide data.

NOTE

For LANL sealed sources, the SPM must confirm sufficient radionuclide data is available in accordance with CCP-TP-101, *CCP Off-Site Source Recovery Project Sealed Source Radiological Characterization.*

4.4.23 For contact-handled (CH) waste streams and RH waste streams characterized using NDA techniques, review all source documents to determine the two most prevalent radionuclides for the waste stream, and estimated isotopic ratios for the following 10 WIPP-required radionuclides: Sr-90; Cs-137; U-233; U-234; U-238; Pu-238; Pu-239; Pu-240; Pu-242; and Am-241.

4.4.24 Prepare an NDA Memorandum to CCP Records (CH waste only), evaluating the radionuclide characterization of the waste stream. The NDA Memorandum must include a section for an assessment written with the NDA EA determining how the AK will be applied

during assay. For LANL sealed sources waste, the NDA Memorandum must be written with input from the OSR group. This assessment should include a discussion of the limitations of the radiological characterization in the AK document and a description of the required assay methods, if any. Any NDA issues for both measured and calculated radionuclides should be discussed and resolved.

4.4.25 **IF** AK is intended as the sole basis for meeting the radiological characterization requirements in CCP-PO-002, **THEN** state so in the AK Summary Report.

4.4.26 Prepare a Waste Material Parameter Evaluation Memorandum to CCP Records that estimates the waste material parameter weights for the waste stream. The expected weight percent for each waste material parameter will be calculated using historical waste generator information for the materials in the waste stream or industry documentation for similar waste inventories. This evaluation should include the technical assumptions, justification, and limitations for the estimated weight percentages.

NOTE

The WIPP-WAP allows the generator to utilize visual examination (VE) and real-time radiography (RTR), if there is insufficient AK to estimate for the waste material parameter weight percentages.

4.4.27 Complete the following forms as appropriate:

[A] See Attachment 6, Waste Form, Waste Material Parameters, Prohibited Items, and Packaging - Example Form for an example. Include the Waste Material Parameter Evaluation Memorandum described in step 4.4.26 as an addendum to Waste Form, Waste Material Parameters, Prohibited Items, and Packaging.

[B] See Attachment 7, Radionuclides - Example Form (CH only), for an example. Include the NDA Memorandum (signed by the AKE and NDA EA) described in step 4.4.24 as an addendum to Radionuclides.

[C] See Attachment 8, Waste Containers List – Example Form, (or an equivalent form, e.g., spreadsheet). Prepare or update the Container Tracking Spreadsheet as described in Section 4.11 for the containers identified in Waste Containers List and corresponding Waste Stream Container Evaluation Memorandum prepared in steps 4.10.3 and 4.10.4.

4.4.28 Print name, sign, and date all forms generated in step 4.4.27.

4.4.29 Review the waste management program AK documentation specified on the Acceptable Knowledge Documentation Checklist, **AND** write a TRU Waste Management Program Description that addresses AK #s PR1-PR8 in Acceptable Knowledge Documentation Checklist. Include the following:

- Correlation to the waste stream identification and description found in the ATWIR or indication that the waste stream was not included in the ATWIR.

- Determination of whether the TRU waste materials were generated as a result of, or mixed with materials from, defense-related activities as specified in CCP-PO-002.

4.4.30 **IF** prohibited items or incompatible materials are listed on the Waste Form, Waste Material Parameters, Prohibited Items, and Packaging,
THEN perform the following:

[A] Notify the SPM.

SPM

[B] Notify the Host site as directed in the Interface Document between CCP and that site.

AKE

4.4.31 Correlate TRU waste management program information (AK #s PR1 - PR8) and TRU waste stream-specific information (AK #s WS1 - WS12) with regard to the time of generation, waste generation processes, rate and quantity of newly generated waste (when appropriate), and areas and building or facility where the waste stream was generated (Acceptable Knowledge Documentation Checklist).

4.4.32 Identify AK source document tracking numbers, as applicable, in the TRU waste management program description and TRU waste stream-specific description.

4.4.33 Review the waste stream-specific AK documentation specified on the Acceptable Knowledge Documentation Checklist and information developed in steps 4.4.11 through 4.4.32), **AND** describe the waste stream in the AK Summary Report, including the following:

[A] Waste stream description and waste stream number. The waste stream number is limited to 20 alpha-numeric characters.

[B] Explain the selection of the Waste Matrix Code in the TRU waste stream-specific description of the AK Summary Report.

[C] Ensure the description of the waste stream is sufficient to allow the radiography and VE Operators to determine whether the waste in individual containers is included in the waste stream and the physical form of the waste matches the waste stream description.

[D] Include the justification and basis for determination of waste material parameters weights expected in the waste stream.

[E] Include the justification and basis for the method by which the radionuclide AK has been compiled.

[F] For waste streams characterized using NDA, state the method for determination of the (2) most prevalent radionuclides (see CCP-PO-002).

[G] Include the following assessment information:

- Waste identification and categorization schemes relevant to the isotopic composition of the waste
- Description of the isotopic composition of waste streams
- Physical/chemical composition that could affect isotopic distributions
- Numerical adjustments (e.g., scaling factors, decay/ingrowth corrections and secular equilibrium consideration) applied to derive isotopic compositions
- Specification of the isotopic ratios for the 10 WIPP - tracked radionuclides

- Radionuclides other than the ten WIPP-tracked radionuclides that contribute to 95 percent of the radioactive hazard for a payload container

[H] Provide justification for the assumption that the waste stream is TRU waste (i.e., it contains more than 100 nanocuries [nCi] of alpha-emitting radionuclides with half-lives greater than 20 years per gram of waste), as specified in CCP-PO-002.

[I] For waste streams with containers selected for payload management, include an assessment estimating the percentage of the TRU waste stream volume above and below 100 nanocuries per gram (nCi/g) in accordance with CCP-PO-002. The AK Summary Report must demonstrate that the waste stream has been historically managed as TRU waste, as applicable for payload management.

[J] Provide justification for determining the estimated concentration (less than or equal to 1 percent or greater than 1 percent by weight) of beryllium (metal and oxides) for each payload container within the waste stream as required in CCP-PO-002.

[K] Provide justification for determining that prohibited items are not present in the waste stream or describe the potential prohibited items and how they will be identified and remediated. Identify process controls associated with the management of prohibited items, physical form, and hazardous waste content.

[L] Provide justification for determining if any waste in the waste stream contains polychlorinated biphenyls (PCBs) in concentrations equal to or greater than 50 parts per million (ppm). Identify the type of waste containing PCB contamination (e.g., remediation, bulk product), **AND** provide justification for determining that the waste stream will **NOT** contain residual PCB liquids as defined in CCP-PO-002.

[M] For waste streams assigned the EPA Hazardous Waste Number U134 for hydrofluoric acid, provide information demonstrating neutralization of this acid, if available, as required by CCP-PO-001.

[N] **IF** correlating or surrogate information from similar materials or waste streams generated at the same site or other sites is used to support the characterization of the waste stream, **THEN** complete the CCP TRU Waste Correlation and

Surrogate Summary Form (see Attachment 15, CCP TRU Waste Correlation and Surrogate Summary Form – Example Form) **AND** describe the use of the information in the AK Summary Report.

[O] For RH waste streams, identify the AK and/or characterization methods to be used to meet the DQOs. Identify how each DQO will be met and describe the qualification method(s) selected for AK used solely to meet a specific DQO in the AK Summary Report.

4.4.34 Summarize the waste stream-specific description in Section 2.0 of the AK Summary Report. Provide a physical, chemical, and radiological description of the waste stream in Section 5.0 of the AK Summary Report (see Attachment 12 for an example format and content guide to be used when preparing the AK Summary Report). This description may be abbreviated for use on attachments as needed.

NOTE

Use the Example Form and Content Guide for AK Summary Reports in Attachment 12 to prepare the AK Summary Report. This guide provides the recommended format for preparation of the reports. However, the format of the report and content of the sections may vary, as long as the required AK elements are presented.

4.4.35 Prepare the AK Summary Report by combining the TRU waste management program description and each of the completed TRU waste stream-specific descriptions, as well as the information from forms 1-8 and Acceptable Knowledge Source Document Discrepancy Resolution (see Attachment 11 for an example), if applicable.

4.4.36 Submit the AK Summary Report to Document Services to initiate the review and approval process in accordance to CCP-QP-010, *CCP Document Preparation, Approval, and Control.*

NOTE

Electronic media for historical source documents shall be managed in accordance with CCP-QP-008, *CCP Records Management*.

4.4.37 Submit records identified in Section 5.0 to CCP Records in accordance with CCP-QP-008.

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NOTE

As the AK Summary Report is revised, resubmit report to CCP Document Services.

4.5 Waste Stream Characterization

NOTE

The following comparison may be performed for a waste stream or a waste stream lot.

SPM

4.5.1 Ensure that audit and other internal and external surveillance reports relating to CCP characterization programs are available.

4.5.2 **IF** any AK Sufficiency Determination Request has been approved by Carlsbad Field Office (CBFO) for any characterization parameter (see Section 4.7),
THEN note the approval for that parameter on the CCP Waste Stream Characterization Checklist (see Attachment 13, CCP Waste Stream Characterization Checklist - Example Form).

4.5.3 Compare the testing results from VE and Radiography, and NDA characterization activities to the waste stream AK by completing a CCP Waste Stream Characterization Checklist, to certify a waste stream (or lot) for disposal at WIPP.

[A] Radiography and VE Data

[A.1] Compare Radiography and VE results (obtained from CCP Records) in VE Data Forms, and Radiography Data Sheets to AK information in Waste Form, Waste Material Parameters, Prohibited Items, and Packaging of this procedure to verify the physical form of the waste stream and absence of prohibited items.

[A.2] **IF** AK information CAN **NOT** be resolved upon completion of these comparisons,
THEN note any inconsistencies on CCP Waste Stream Characterization Checklist, **AND** proceed with Section 4.8 of this procedure.

[B] NDA Data – CH Waste

[B.1] Compare radionuclides reported on Attachment 7 by Weight percent, Activity, or other parameters justified in the AK Summary Report with NDA Radioassay results.

[B.2] Identify the two most prevalent radionuclides.

[B.3] Compare ratios of the prevalent radionuclides identified, **AND** determine isotopic ratios for each drum in the waste stream lot.

[B.4] Report the differences between ratios expected from AK and those determined by NDA in the CCP Waste Stream Characterization Checklist.

[B.5] Identify drums in which isotopic ratios differ from those expected from AK; provide rationale in the Comment section of CCP Waste Stream Characterization Checklist, if this condition was anticipated based on AK, otherwise notify the AKE to perform a re-evaluation.

[B.6] Attach data and applicable description to CCP Waste Stream Characterization Checklist.

[B.7] **IF** AK information CAN **NOT** be resolved upon completion of these comparisons,
THEN note any inconsistencies on CCP Waste Stream Characterization Checklist, **AND** proceed with Section 4.8 of this procedure.

[C] Radiological Characterization – RH Waste

[C.1] Identify the characterization method (e.g., Dose-to-Curie) on the CCP Waste Characterization Checklist.

[C.2] Identify the drums in which the radiological characterization differ from that expected; provide rationale in the Comments section of the CCP Waste Stream Characterization Checklist, if this condition was anticipate, otherwise notify the AKE to perform a re-evaluation as described in Section 4.8 of this procedure.

[C.3] Attach data and applicable description to CCP Waste Stream Characterization Checklist.

4.5.4 **IF** AK information can be resolved upon completion of the comparisons with the testing results,
THEN print name, sign, and date CCP Waste Stream Characterization Checklist, **AND** forward it to the AKE for signature **AND** submit to CCP Records.

4.6 Determining AK Documentation Accuracy

NOTE

The quality assurance objectives (QAOs) and their applicability to AK are discussed in CCP-PO-001. Calculation of the accuracy of AK documentation is required and is performed as follows.

SPM

4.6.1 Obtain a copy of the completed CCP Waste Stream Characterization Checklist, **AND** any Acceptable Knowledge Re-evaluation Checklists (see Attachment 10, CCP Waste Stream Characterization Checklist), applicable to the waste stream or waste stream lot, and any necessary supporting documentation from CCP Records.

NOTE

The Acceptable Knowledge Accuracy Report is used to determine the percentage of containers reassigned to a new Waste Matrix Code, designated with a hazardous waste number assignment different from AK, or inconsistent with anticipated radionuclide composition determined from AK.

NOTE

For AK Accuracy Reports that are prepared for waste stream lots within a waste stream, updates to AK accuracy shall be issued periodically. Although there is no specified timeframe for AK accuracy updates, they should typically be issued annually.

4.6.2 Complete the CCP Acceptable Knowledge Accuracy Report (see Attachment 14, CCP Acceptable Knowledge Accuracy Report - Example Form), after characterization has been completed for a subset of containers in the subject waste stream or waste stream lot.

4.6.3 Prepare an AK Accuracy Memorandum summarizing the following AK accuracy information:

[A] Purpose

[B] Methodology

[C] Results of accuracy determination

[D] Other considerations, if applicable

[E] Summary

4.6.4 For RH waste, **IF** the AK accuracy falls below 90 percent for assigning containers to a Summary Category Group, **THEN** CBFO shall be notified of this significant condition adverse to quality, **AND** appropriate corrective actions implemented before proceeding with further characterization activities on the affected waste stream, in accordance with CCP-QP-029, *CCP Corrective Action Management*.

NOTE

For RH waste, significant discrepancies between the radionuclide information in the AK record and measured values will be assessed during preparation of the Acceptable Knowledge Accuracy Report. What constitutes a significant discrepancy will depend on site- and waste stream-specific considerations for each waste stream.

4.6.5 For RH waste, describe any significant discrepancies between the radionuclide information in the AK record and measured values in the Acceptable Knowledge Accuracy Report.

4.6.6 Review, print name, sign, and date **AND** submit CCP Acceptable Knowledge Accuracy Report to CCP Records. At the option of the SPM, CCP Acceptable Knowledge Accuracy Report may list only the containers with accuracy issues, as long as the complete list of containers represented by the accuracy report is included by attachment to, or referenced in, the cover memorandum or letter.

4.7 AK Sufficiency Determination

SPM/AKE

NOTE

An AK Sufficiency Determination Request to meet all or part of the waste characterization requirements may be used if AK information available for a waste stream permits.

4.7.1 Evaluate the AK information available for a waste stream to determine if an AK Sufficiency Determination is possible or desirable.

4.7.2 Prepare an AK Sufficiency Determination Request that includes the following information:

[A] An introduction that briefly describes the waste stream, the type of AK Information available, whether AK alone can be used to meet the characterization requirements.

[B] Identification of any mandatory requirements supported only by upper tier documents (i.e., there is insufficient supporting data).

[C] Description demonstrating that the AK process described in CCP-PO-001 was followed (for example, AK personnel were appropriately trained; discrepancies were documented, etc.).

[D] Information demonstrating that CCP has assessed the AK process (e.g., internal audits).

4.7.3 Obtain copies of the following information from CCP Records and attach to the AK Sufficiency Determination Request:

[A] AK Summary Report for the waste stream;

[B] Acceptable Knowledge Documentation Checklist providing an AK roadmap and cross reference between mandatory programmatic and waste stream information with references supporting these requirements.

[C] Acceptable Knowledge Information List, providing a complete reference list including all mandatory and additional AK documentation.

[D] Current revision of this procedure to demonstrate that CCP has developed a written procedure for compiling AK information and assigning hazardous waste numbers.

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[E] Relevant additional information for the required programmatic and waste stream data addressed in the AK Summary Report, as applicable or if requested by CBFO.

4.7.4 Submit the AK Sufficiency Determination Request and attachments to the SPM for approval and submittal to CBFO.

4.7.5 **IF** comments are received from CBFO,
THEN address the comments and resubmit the AK Sufficiency Determination Request.

4.8 Re-evaluating AK Documentation

NOTE

Differences in Waste Matrix Codes, state and EPA Hazardous Waste Numbers, and NDA results may exist between those previously assigned in the AK documentation and those indicated as a result of waste characterization activities performed to certify waste for disposal at the WIPP or during the confirmation performed by the Permittee. Under these circumstances, the AK information is re-evaluated and the required AK information associated with the new designation is documented. Characterization data associated with the waste is re-evaluated and changes in AK resulting from the re-evaluation are documented.

SPM

4.8.1 **IF** re-evaluation is warranted as a result of 1) inconsistencies noted during the process of comparing AK information to characterization results **OR** 2) the initiation of an nonconformance report (NCRs) that identifies potential changes to the AK of a waste stream (including NCRs generated as a result of discrepancies identified during confirmation performed by the Permittee),
THEN notify the AKE.

AKE

4.8.2 Retrieve copies of applicable characterization data and AK information from CCP Records.

4.8.3 **IF** a waste must be assigned to a different Waste Matrix Code (i.e., different waste stream or waste stream lot) based on Radiography or VE,
THEN perform the following:

[A] Review existing information based on the waste container identification number and document all differences in EPA HWN assignments. Consider all generator specific waste streams and hazardous waste number assignments; original site-specific permit requirements; and other state-enforced agreements in this analysis.

[B] **IF** differences exist in the EPA Hazardous Waste Numbers that were assigned,
THEN reassess **AND** document required applicable AK information associated with the new designation.

[C] Reassess **AND** document applicable testing data associated with the waste.

[D] Verify **AND** document that waste with a reassigned Waste Matrix Code was generated within the specified time period, area buildings and waste generating process; and that the process material inputs are consistent with the waste material parameters identified during Radiography or VE.

[E] Record all changes to the AK records on the appropriate forms and resubmit to CCP Records.

[F] **IF** unresolved discrepancies exist in the AK information for the reassigned Waste Matrix Code, EPA Hazardous Waste Numbers, or radionuclides,
THEN document the segregation of this container, **AND** define the actions necessary to fully characterize the waste.

4.8.4 **IF** testing results indicate that additional or different EPA Hazardous Waste Numbers may apply to the waste,
THEN review the existing AK and characterization information,
AND perform the following:

[A] **IF** a hazardous waste, not originally identified by AK, has been identified during testing (lead items, circuit boards, etc.),
THEN assign the applicable state and EPA Hazardous Waste Numbers unless an alternative assignment can be justified or representative quantitative data are available to preclude the assignment.

4.8.5 **IF** NDA results indicate the presence of additional radionuclides or different prevalent radionuclides in the waste,
THEN review existing AK and characterization information.

4.8.6 Document the need for changes in the appropriate comment section of the Acceptable Knowledge Re-evaluation Checklist.

4.8.7 Resolve all AK documentation discrepancies as described in Section 4.9 of this procedure.

4.8.8 Modify the AK Summary Report as appropriate.

4.8.9 Forward the completed Acceptable Knowledge Re-evaluation Checklist **AND** the revised AK Summary Report to the SPM for review and approval.

4.8.10 Submit changes to the Document Writers for distribution and approval.

SPM

4.8.11 Review the Acceptable Knowledge Re-evaluation Checklist and the revised AK Summary Report.

4.8.12 **IF** the AK Summary Report requires correction,
THEN return to AKE.

4.8.13 **IF** no correction is required,
THEN approve the Acceptable Knowledge Re-evaluation Checklist by printing name, signing, and dating the checklist.

4.8.14 Approve the revised AK Summary Report.

4.8.15 Review the WSPF to see if the change to the AK Summary Report affects the WSPF.

4.8.16 **IF** the WSPF requires change,
THEN revise the WSPF in accordance with CCP-TP-002.

4.8.17 Submit the Acceptable Knowledge Re-evaluation Checklist and revised AK Summary Report to CCP Records.

[A] Any new source documents referenced in the revised AK Summary Report and the applicable attachments must be submitted to CCP Records on or before the date of issuance of the revised AK Summary Report as final.

4.8.18 Once the re-evaluation is approved, complete the CCP Waste Stream Characterization Checklist, as described in step 4.5.3.

4.9 Resolving AK Discrepancies

NOTE
AK discrepancies may be identified during AK source document compilation, review, characterization, confirmation, and re-evaluation activities.

AKE

4.9.1 Document the nature of the discrepancy **AND** identify the documents involved for the particular waste stream or waste container on the Acceptable Knowledge Source Document Discrepancy Resolution or in the appropriate section of the AK Summary Report.

4.9.2 Use information from interviews, telephone contacts, or other correspondence or other supporting information to resolve the discrepancy.

4.9.3 Record interviews, telephone conversations, and correspondence needed to resolve discrepancy issues on a Record of Communication.

4.9.4 Print name, sign, and date a Record of Communication.

4.9.5 Complete an Acceptable Knowledge Source Document Summary for each Record of Communication form.

4.9.6 Print name, sign, and date Acceptable Knowledge Source Document Summary, attach to the Record of Communication form, **AND** submit to CCP Records.

4.9.7 Verify that process inputs (hazardous constituents and waste material parameters) are consistent with waste material parameters identified during Radiography and VE.

4.9.8 Assign **OR** revise the AK identified waste material parameters, as necessary, and document the change and the assumptions made on the Acceptable Knowledge Source Document Discrepancy Resolution.

4.9.9 Assign **OR** reassign Waste Matrix Codes, as necessary, using guidance specified in the DOE/LLW-217, **AND** document the assignment and assumptions made on the Acceptable Knowledge Source Document Discrepancy Resolution.

4.9.10 Evaluate the sources of discrepancies among sources of isotopic distribution data to determine whether the sources are credible. Identify limitations of data **AND**, if the data is **NOT** used, provide a justification on the Acceptable Knowledge Source Document

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Discrepancy Resolution. Otherwise, describe data limitations in the AK Summary Report, as applicable.

4.9.11 Assign or revise the identified radionuclides present, as necessary, **AND** document the change and the assumptions made on the Acceptable Knowledge Source Document Discrepancy Resolution.

4.9.12 Assign or revise state and EPA Hazardous Waste Number, as necessary. Assign the Hazardous Waste Numbers consistent with RCRA requirements. Document the assignment and the assumptions and justifications made on the Acceptable Knowledge Source Document Discrepancy Resolution.

4.9.13 Obtain the affected AK source documentation, as necessary.

4.9.14 Make necessary changes to Acceptable Knowledge Source Document Summary, as appropriate.

4.9.15 Complete, print name, sign, and date the Acceptable Knowledge Source Document Discrepancy Resolution documenting final disposition of the discrepancy.

4.9.16 Complete, print name, sign, and date an Acceptable Knowledge Source Document Summary for each Acceptable Knowledge Source Document Discrepancy Resolution.

4.9.17 Attach the Acceptable Knowledge Source Document Summary to the Acceptable Knowledge Source Document Discrepancy Resolution.

4.9.18 **IF** the form consists of multiple pages,
THEN add a footer identifying the page number and total number of pages.

4.9.19 Forward the form and supporting documentation (if requested) to the SPM for review and concurrence.

SPM

4.9.20 Review the Acceptable Knowledge Source Document Discrepancy Resolution and supporting documentation, as applicable, print name, sign, and date the form if the discrepancy has been resolved, **AND** forward the completed form to the AKE.

AKE

4.9.21 Confirm that the Acceptable Knowledge Source Document Discrepancy Resolution is signed and dated by the SPM.

4.9.22 Submit the original Acceptable Knowledge Source Document Discrepancy Resolution and supporting documentation, as applicable, to CCP Records.

4.9.23 Revise the AK Summary Report as needed.

NOTE

Discrepancies which CAN **NOT** be resolved by CCP will result in the container being returned to the Host site. If the discrepancy is **NOT** container-specific, containers from the subject waste stream will **NOT** be shipped to WIPP until such time as the discrepancy has been resolved. If the discrepancy is related to radiological characterization, notify the SPM that direct measurements of the impacted waste population may be required.

SPM

4.9.24 **IF** the discrepancy CAN **NOT** be resolved,
THEN issue an NCR (if not already identified in an NCR) and manage corrective actions in accordance with CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control*, CCP-QP-029, *CCP Corrective Action Management*, and the CCP/site interface document.

4.9.25 Record the NCR number on the Acceptable Knowledge Source Document Discrepancy Resolution.

4.9.26 Coordinate with the Host site to place a hold tag on, **AND** segregate waste containers associated with the NCR, if applicable, in accordance with applicable procedures.

4.9.27 Assess the potential timeframe of the noncompliance, the potentially affected waste populations, and the reassessment and recertification of the waste, if applicable.

4.9.28 Coordinate resolution of the nonconforming condition with the AKE.

4.9.29 Document information identified during the corrective action process as described in CCP-QP-005.

4.9.30 Once the discrepancy is resolved, applicable NCR(s) closed, and corrective action is completed, sign and date the Acceptable Knowledge Source Document Discrepancy Resolution **AND** forward the form to the AKE.

AKE

4.9.31 **WHEN** discrepancies are resolved, applicable NCRs are closed, **AND** corrective actions completed,
THEN review the discrepancy form, document any supporting AK information generated, assign the appropriate waste material parameters, Waste Matrix Code, radionuclides or hazardous waste numbers as applicable, **OR** justify the use of alternates and confirm that it has been signed.

4.9.32 Submit the original Acceptable Knowledge Source Document Discrepancy Resolution to CCP Records.

4.10 Updating AK for Additional Waste Stream Containers

NOTE

The following process is followed when the SPM identifies additional containers to be included in a waste stream defined in an existing AK Summary Report. The Waste Containers List identifies the AK source document number(s) designated for the Waste Stream Container Evaluation Memorandum, adding containers, if applicable.

SPM

4.10.1 Provide the AKE with a list of containers to be assessed for inclusion in an existing waste stream.

AKE

4.10.2 Collect container-specific documentation and evaluate the following information for each container:

- Waste generation location and process
- Time period of generation
- Physical form compared to the assigned Waste Material Parameters and Waste Matrix Code
- Chemical content
- Prohibited items
- Radionuclides

4.10.3 **IF** the containers are bounded by the existing AK Summary Report for the waste stream,
THEN notify the SPM **AND** submit a Waste Stream Container Evaluation Memorandum documenting the evaluation to CCP Records.

4.10.4 **IF** the containers are **NOT** bounded by the existing AK Summary Report, but should be included in the waste stream,
THEN revise the AK Summary Report; update the Waste Containers List; notify the SPM, **AND** revise and submit the updated Waste Containers List and Waste Stream Container Evaluation Memorandum documenting the evaluation to CCP Records.

4.11 Container Tracking Spreadsheet Development

AKE or Designee

4.11.1 Develop a spreadsheet which identifies the following minimum criterion for each container listed on Waste Containers List:

- Container I.D.
- Waste Stream I.D.
- Generation Date
- Vent Date
- Change Reason
- New Closure Date
- New Vent Date
- Container Type

4.11.2 Post the copy of the Container Tracking Spreadsheet to the secure file transfer protocol (sftp) site.

4.12 Container Tracking Spreadsheet Maintenance

AKE or Designee

4.12.1 **WHEN** notified of a change to the status of a container(s) identified by the SPM, CCP personnel, Host site personnel, or during the addition of containers to the waste stream inventory,
THEN evaluate the change based on the data provided.

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[A] **IF** the change is routine and DOES **NOT** adversely affect data,
THEN GO TO step 4.12.2.

[B] **IF** the change is non-routine or adversely affects data,
THEN notify the SPM to take the appropriate actions prior to proceeding to step 4.12.2.

4.12.2 Update the Container Tracking Spreadsheet and post the change to the sftp site.

4.12.3 Notify the SPM of the change.

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5.0 RECORDS

5.1 Records generated during the performance of this procedure in Section 5.1.1 are maintained as QA records. The following records will be maintained in accordance with CCP-QP-008. The records are the following:

5.1.1 <u>QA/Lifetime Records</u>

[A] Acceptable Knowledge Documentation Checklist

[B] Records of Communication

[C] Acceptable Knowledge Source Document Summary forms, and when applicable attached CCP generated source documents

[D] Acceptable Knowledge Information List

[E] Hazardous Constituents forms

[F] Waste Form, Waste Material Parameters, Prohibited Items, and Packaging forms

- Waste Material Parameter Evaluation Memorandum

[G] Radionuclides forms

- NDA Memorandum

[H] Waste Containers List

[I] Acceptable Knowledge Re-evaluation Checklist

[J] Acceptable Knowledge Source Document Discrepancy Resolution, which include Acceptable Knowledge Source Document Summary forms as attachments

[K] CCP Waste Stream Characterization Checklist

[L] CCP Acceptable Knowledge Accuracy Report, including cover memorandum or letter

- AK Accuracy Memorandum

[M] CCP TRU Waste Correlation and Surrogate Summary Form

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[N] AK Summary Reports

[O] AK Sufficiency Determination Request

[P] SPM Notifications (emails, letters, memorandums, etc.), as applicable

[Q] AK Container Tracking Spreadsheet (submitted to CCP Records after notification by the site SPM that waste shipments to WIPP have been completed)

5.1.2 Non-QA

[A] Historical Source Documents

Attachment 1 – Acceptable Knowledge Documentation Checklist - Example Form

Site(s): _____

Waste Stream Description:_____

Waste Stream Number(s): _____

Acceptable Knowledge Information	(1)AK#	Compiled? (Y/N)	Source Document Tracking Number
Mandatory generator site TRU waste program (PR) information:			
Map of the generator site that identifies TRU waste generation, treatment, and storage areas.	PR1		
Generator site mission descriptions related to TRU waste generation and management identifying defense and non-defense operations.	PR2		
Overview of the generator site and generator site TRU waste management operations in the context of the facility's mission.	PR3		
Descriptions of historical and current TRU waste generating operations, including how waste is tracked and managed and/or how operations relative to isotopic composition were tracked.	PR4		
Waste identification and/or categorization schemes and terminology used at the generator site, including codes correlating to specific isotopic distributions.	PR5		
Types and quantities of TRU waste generated, including historical generation through future projections.	PR6		
Correlation of waste streams and description of time of generation, waste generating processes, and area and building/facility where each waste stream was generated.	PR7		
Certification procedures for waste to be sent to the WIPP facility (i.e., procedures to ensure that prohibited items are documented and managed in accordance with site-specific certification plans).	PR8		
Mandatory generator site TRU waste stream (WS)-specific information:			
Waste stream designation	WS1		
Area(s) and building(s) from which the waste stream was or is generated.	WS2		
Waste stream volume and time period of generation	WS3		
Waste generating process (describe for each building) including processes associated with U134 waste generation, if applicable.	WS4		

Attachment 1 – Acceptable Knowledge Documentation Checklist - Example Form (Continued)

Waste Stream Number(s): _____

Acceptable Knowledge Information	(1)AK#	Compiled? (Y/N)	Source Document Tracking Number
Process flow diagrams. For research/development, analytical laboratory waste, or other similar processes where process flow diagrams cannot be created, a description of the waste generating processes, rather than a formal process flow diagram, may be included, if justified.	WS5		
Summary of basis and rationale for delineating each waste stream including justification for combining waste historically managed separately as TRU mixed and TRU non-mixed waste streams into a single waste stream, that is traceable to referenced documents.	WS6		
Generator site mission descriptions related to TRU waste generation and management identifying defense and non-defense operations.	WS7		
Material inputs or other information that identified the chemical contents of the waste and the stream. Includes events or processes that may have modified the chemical properties of the waste stream after generation.	WS8		
Physical waste form (e.g., glovebox materials and chemicals handled during glovebox operations, if applicable), assigned Summary Category Group, Waste Matrix Code and materials inputs, including waste material parameters present in the waste stream. Includes events or processes that may have modified the physical properties of the waste stream after generation.	WS9		
Waste identifiers assigned by the generator site (e.g., item description code, packaging identification numbers).	WS10		
Specification of the isotopic ratios for the ten WIPP-tracked radionuclides and all radionuclides other than the ten WIPP-tracked radionuclides that contribute to 95 percent of the radioactive hazard for a payload container. Chemical and physical information that could affect the waste isotopic distribution, as well as calculations used to derive the isotopic distribution.	WS11		

Attachment 1 – Acceptable Knowledge Documentation Checklist - Example Form (Continued)

Waste Stream Number(s): _____

Acceptable Knowledge Information	(1)AK#	Compiled? (Y/N)	Source Document Tracking Number	
State and EPA hazardous waste constituents in the waste stream and state and EPA Hazardous Waste Numbers assigned, including documentation regarding how the site has historically managed the waste, including the historical regulatory status of the waste (i.e., TRU mixed versus TRU non-mixed waste).	WS12			
Additional acceptable knowledge documentation (briefly describe):				
Process design documents (e.g., Title II Design)	S1			
Standard operating procedures that may include a list of raw materials or reagents, a description of the process or experiment generating the waste, and a description of the waste generated and how the wastes are managed at the point of generation	S2			
Preliminary and Final Safety Analysis Reports and technical safety requirements	S3			
Waste Packaging records	S4			
Test plans or research project reports that describe the reagents, radionuclides, and other raw materials used in experiments	S5			
Site databases (e.g., chemical inventory database for SARA Title III requirements, SNM or nuclear material databases)	S6			
Information from site personnel (e.g., documented interviews)	S7			
Standard industry documents (e.g., industry specification sheets, handbooks, reference materials, or other vendor information)	S8			
Analytical data relevant to the waste stream, including results from fingerprint analyses, spot checks, routine verification sampling or other processes that collected information pertinent to the waste stream. This may include new information (or previously collected data) which augments required information (e.g., visual examination not performed in compliance with CCP-PO-001, radiography screening for prohibited items).	S9			
Material Safety Data Sheets, product labels, or other product information	S10			
Laboratory notebooks that detail the research processes and raw materials used in an experiment	S11			
Comparable or surrogate sampling and analysis data	S12			
Other (describe)	S13			

Attachment 1 – Acceptable Knowledge Documentation Checklist - Example Form (Continued)

Waste Stream Number(s): _____

Acceptable Knowledge Information	(1)AK#	Compiled? (Y/N)	Source Document Tracking Number	
Safeguards and security, Materials Control and Accountability, and other nuclear material control system data Reports of nuclear safety or criticality accidents involving special nuclear materials (SNM)	S14			
NMMA logs or inventory records or waste disposal logs providing SNM or nuclear material information	S15			
Packaging	S16			
OSR-Specific Information (Applies only to sealed sources)				
Evidence that the waste meets the definition of a sealed source reference 10CFR30.4 and 10CFR835.2	O1			
Documentation that sources are Special Form, such as certificates DOT Special Form Class 7 per 49CFR173.403	O2			
Contamination survey results for each source reference requirements of 10CFR34.27	O3			
Source manufacturer's sales catalogues	O4			
Source purchase records	O5			
Manufacturer fabrication documents	O6			
Manufacturer drawings	O7			
Fuel capsule assembly reports	O8			
Manufacturer's operational procedures for meeting cleanliness requirements	O9			
Manufacturer's shipping documents or records	O10			
Manufacturer welding records	O11			
TRU batch material records	O12			
National database radiological information (e.g., NMMSS, NRC Device Registry)	O13			
NRC or agreement state regulatory licensing information	O14			
Documentation of physical markings on the outer source casing or labels attached to devices housing sources	O15			
Unique physical description attributed to specific source models	O16			

Attachment 1 – Acceptable Knowledge Documentation Checklist - Example Form (Continued)

Waste Stream Number(s): _____

Acceptable Knowledge Information	(1)AK#	Compiled? (Y/N)	Source Document Tracking Number
Acceptable knowledge information regarding waste generated off-site or from similar process:			
(1) AK#s are used as identifiers for program, waste stream-specific and supporting elements. The identifiers are to be used in the Acceptable Knowledge Source Document Summary and Acceptable Knowledge Information List to aid in the page location of program and waste stream-specific elements within a given document. N/A means that item is not applicable.			

Additional comments:

_____
_____
_____
_____
_____

All required AK information has been compiled and source document tracking numbers assigned.

Acceptable Knowledge Expert:_____/_____ Date: _____
Print Sign

Attachment 2 – Record of Communication – Example Form

Page 1 of 1

Corresponding Source Document Tracking No:		
Interviewer:	Date:	Time:
Interviewee:	Group/Organization: Job Title:	Phone: E-mail:
Subject:		
Summary:		
Data Limitations:		

Acceptable Knowledge Expert:_____/_____Date:_____
Print Sign

Attachment 3 – Acceptable Knowledge Source Document Summary – Example Form

Page 1 of 1

Site(s):	Source Document Tracking Number:
Waste Stream Number: (Applicable only when site library is not in use)	
Acceptable Knowledge Documentation Type: ☐ TRU Waste Management Program Information ☐ Waste Stream-Specific Information ☐ Additional Information	Category: ☐ C - Correspondence ☐ D - Documents ☐ M - Miscellaneous ☐ P - Procedure ☐ DR - Discrepancy Resolution ☐ U - Unpublished Documents
Title or Description of Source Document [a]:	
Source Document Reference Information (author(s), document and revision number, date, publisher):	

AK #[b]	Source Doc. Page #[c]	AK Information Summary

Source Document Data Limitations (if any):
Acceptable Knowledge Expert: _____ / _____ Date: _____ Print Sign
[a] Provide description for non-titled information (i.e., container paperwork, MSDS sheets, etc) [b] Obtain from Acceptable Knowledge Documentation Checklist [c] For microfilm or microfiche, identify box, tape, reel number and location.

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Attachment 4 – Acceptable Knowledge Information List – Example Form

Site(s): _____

Waste Stream Number(s): _____

Waste Stream Description: _____

Source Document Tracking Number[a/c]	Title or Description [a]	Author	Document #[b]	Document Revision # and Date

[a] From Acceptable Knowledge Source Document Summaries (Attachments 3)
[b] Or publisher's document number if available
[c] In the case where an AK Summary Report has been revised based on information in Attachment 11 - Acceptable Knowledge Source Document Discrepancy Resolution form, identify the tracking number.

Acceptable Knowledge Expert: _____ / _____ Date: _____
Print Sign

Attachment 5 – Hazardous Constituents – Example Form

Site(s): _____

Waste Stream Description: _____

Compound	Suspected Present? (Y/N)	Used as a solvent? [a] (Y/N/NA)	Associated with packaging or radiolysis? (Y/N/NA)	TC constituent concentration less than regulatory level? [a] (Y/N/NA)	TC Hazardous Waste Number [a]	F-Listed Hazardous Waste Number [a]	U- or P-Listed Hazardous Waste Number [a]	EPA Hazardous Waste Number Assigned (N/Specify HWN)	State Hazardous Waste Number [b]
Toxicity Characteristic Metal Compounds (40 CFR Part 261)									
Arsenic		N/A	N/A		D004	N/A	N/A		
Barium		N/A	N/A		D005	N/A	N/A		
Cadmium		N/A	N/A		D006	N/A	N/A		
Chromium		N/A	N/A		D007	N/A	N/A		
Lead		N/A	N/A		D008	N/A	N/A		
Mercury		N/A	N/A		D009	N/A	U151		
Selenium		N/A	N/A		D010	N/A	N/A		
Silver		N/A	N/A		D011	N/A	N/A		
1,1,1-Trichloroethane				N/A	N/A	F001/F002	U226		
1,1,2,2-Tetrachloroethane		N/A		N/A	N/A	N/A	U209		
1,1,2-Trichloro-1,2,2-trifluoroethane				N/A	N/A	F001/F002	N/A		
1,1,2-Trichloroethane				N/A	N/A	F002	U227 [c]		
1,1-Dichloroethylene		N/A			D029	N/A	U078		
1,2-Dichlorobenzene				N/A	N/A	F002	U070		
1,2-Dichloroethane		N/A			D028	N/A	U077 [c]		
1,4-Dichlorobenzene		N/A			D027	N/A	U072		
1, 4-Dioxane		N/A		N/A	N/A	N/A	U108		
2-Ethoxyethanol				N/A	N/A	F005	U359 [c]		
2-Nitropropane				N/A	N/A	F005	U171 [c]		
Acetone				N/A	N/A	F003	U002		

Attachment 5 – Hazardous Constituents – Example Form (Continued)

Compound	Suspected Present? (Y/N)	Used as a solvent? [a] (Y/N/NA)	Associated with packaging or radiolysis? (Y/N/NA)	TC constituent concentration less than regulatory level? [a] (Y/N/NA)	TC Hazardous Waste Number [a]	F-Listed Hazardous Waste Number [a]	U- or P-Listed Hazardous Waste Number [a]	EPA Hazardous Waste Number Assigned (N/Specify HWN)	State Hazardous Waste Number [b]
Volatile Organic Compounds (continued)									
Acetonitrile		N/A		N/A	N/A	N/A	U003		
Benzene					D018	F005	U019		
Butanol (n-Butyl alcohol)				N/A	N/A	F003	U031 [c]		
Carbon disulfide				N/A	N/A	F005	P022 [c]		
Carbon tetrachloride					D019	F001	U211 [c]		
Chlorobenzene					D021	F002	U037		
Chloroform		N/A			D022	N/A	U044		
Cyclohexanone				N/A	N/A	F003	U057 [c]		
Ethyl acetate				N/A	N/A	F003	U112 [c]		
Ethyl benzene				N/A	N/A	F003	N/A		
Ethyl ether				N/A	N/A	F003	U117 [c]		
Formaldehyde		N/A		N/A	N/A	N/A	U122		
Hydrazine		N/A		N/A	N/A	N/A	U133		
Isobutanol				N/A	N/A	F005	U140 [c]		
Methanol				N/A	N/A	F003	U154		
Methyl ethyl ketone					D035	F005	U159		
Methyl isobutyl ketone				N/A	N/A	F003	U161 [c]		
Methylene chloride				N/A	N/A	F001/F002	U080 [c]		
Pyridine					D038	F005	U196		
Tetrachloroethylene					D039	F001/F002	U210		
Toluene				N/A	N/A	F005	U220		
trans-1,2-Dichloroethylene		N/A		N/A	N/A	N/A	U079		
Trichloroethylene					D040	F001/F002	U228		
Trichlorofluoromethane				N/A	N/A	F001/F002	U121 [c]		
Vinyl Chloride		N/A			D043	N/A	U043		
Xylenes				N/A	N/A	F003	U239		

Attachment 5 – Hazardous Constituents – Example Form (Continued)

Compound	Suspected Present? (Y/N)	Used as a solvent? [a] (Y/N/NA)	Associated with packaging or radiolysis? (Y/N/NA)	TC constituent concentration less than regulatory level? [a] (Y/N/NA)	TC Hazardous Waste Number [a]	F-Listed Hazardous Waste Number [a]	U- or P-Listed Hazardous Waste Number [a]	EPA Hazardous Waste Number Assigned (N/Specify HWN)	State Hazardous Waste Number [b]
Semivolatile Organic Compound (40 CFR Part 261)									
2,4-Dinitrotoluene		N/A			D030	N/A	U105		
Cresols					D026	F004	U052		
Dimethyl sulfate		N/A		N/A	N/A	N/A	U103		
Hexachlorobenzene		N/A			D032	N/A	U127 [c]		
Hexachlorobutadiene		N/A			D033	N/A	U128 [c]		
Hexachloroethane		N/A			D034	N/A	U131 [c]		
Nitrobenzene					D036	F004	U169 [c]		
Pentachlorophenol		N/A			D037	F027 [c]	N/A		

Attachment 5 – Hazardous Constituents – Example Form (Continued)

Compound	Suspected Present? (Y/N)	Used as a solvent? [a] (Y/N/NA)	Associated with packaging or radiolysis? (Y/N/NA)	TC constituent concentration less than regulatory level? [a] (Y/N/NA)	TC Hazardous Waste Number [a]	F-Listed Hazardous Waste Number [a]	U- or P-Listed Hazardous Waste Number [a]	EPA Hazardous Waste Number Assigned (N/Specify HWN)	State Hazardous Waste Number [b]
Other Constituents									
Wastewater treatment sludges from electroplating operations		N/A	N/A	N/A	N/A	F006	N/A		
Spent cyanide plating bath solutions from electroplating operations		N/A	N/A	N/A	N/A	F007	N/A		
Spent cyanides stripping and cleaning bath solutions from electroplating operations		N/A	N/A	N/A	N/A	F009	N/A		
Beryllium powder		N/A	N/A	N/A	N/A	N/A	P015		
Cyanide (soluble cyanide salts)		N/A	N/A	N/A	N/A	N/A	P030		
Potassium cyanide		N/A	N/A	N/A	N/A	N/A	P098		
Potassium silver cyanide		N/A	N/A	N/A	N/A	N/A	P099		
Sodium cyanide		N/A	N/A	N/A	N/A	N/A	P106		
Vanadium pentoxide		N/A	N/A	N/A	N/A	N/A	P120		
Hydrofluoric acid		N/A	N/A	N/A	N/A	N/A	U134		
Total PCB Concentration [d]		N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Additional EPA Hazardous Constituents (List)									
Additional State Hazardous Constituents [b] (List) [e]									
Potentially Flammable VOCs (List) [e,f]		N/A							

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Attachment 5 – Hazardous Constituents – Example Form (Continued)

a Source: Title 40 Code of Federal Regulations Part 261, Identification and Listing of Hazardous Waste
b. Source: Cite applicable state regulation
c.This EPA Hazardous Waste Number is not permitted for WIPP disposal.
d. Source: Title 40 Code of Federal Regulation Part 761, Polychlorinated Biphenyls (PCBs) Manufacturing, Processing, Distribution in Commerce, and Use Prohibitions.
e. Add rows or attach additional sheets as necessary
f. Flammable VOCs included in the CH-TRAMPAC

NOTE: If any of the information requested on this form is not available or not applicable, enter N/A in the appropriate box.

Acceptable Knowledge Expert: _____ / _____ Date: _____
Print Sign

Attachment 6 – Waste Form, Waste Material Parameters, Prohibited Items, and Packaging – Example Form

Site(s): _____

Waste Stream Description: _____

Container ID Numbers: _____

Waste Stream Number:	
Physical Waste Form (e.g., debris, solidified waste)	
Summary Category Group[a]	
Waste Matrix Code Group[a]	
Waste Matrix Code[b]	
Waste Material Parameter Weights[c]	Estimated Waste Stream Weight Percent Average (attach evaluation justifying percentages)
Iron-based metals/alloys	
Aluminum-based metals/alloys	
Other metals	
Other inorganic materials	
Cellulosics	
Rubber	
Plastics (waste materials)	
Organic matrix	
Inorganic matrix	
Soils/Gravels	
Packaging materials	Present (Y/N)?
Steel	
Plastics	
Prohibited Wastes[d, e, f, g]	Present (Y/N)?
Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE. Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. Observable liquid shall not be present in a container with EPA HWN U134 assigned.	
Non-radionuclide pyrophoric materials	

Attachment 6 – Waste Form, Waste Material Parameters, Prohibited Items, and Packaging – Example Form (Continued)

Sealed containers > 4 liters	
Hazardous waste not occurring as co-contaminants with TRU mixed waste (non-mixed hazardous waste)	

Waste Stream Number: _____

Explosives	
Compressed gases	
Residual hydrofluoric acid (if U134 assigned to stream)	
Residual PCB liquids[j]	
Ignitables (EPA Hazardous Waste Number D001)	
Corrosives (EPA Hazardous Waste Number D002)	
Reactives (EPA Hazardous Waste Number D003)	
Waste incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials, or other wastes[h]	
Spent Nuclear fuel or high-level waste[i]	
Any unvented plastic bags > 4 liters that have been heat-sealed	
Additional Information (if available)	
Packaging	
Waste container type?	
Liner type?	
Is liner punctured?	
Is filter vent installed?	
Maximum number of confinement layers	

a. Source: *CCP Transuranic Waste Characterization Quality Assurance Project Plan* (CCP-PO-001) Introduction.
b. Source: *Transuranic Waste Baseline Inventory Report* (DOE/CAO-95-1121) or DOE Waste Treatability Group Guidance (DOE/LLW-217). Note: the Waste Matrix Code should not be assigned at the Summary Category Group level.
c. Source: CCP-PO-001 - Table C3-1. Attach the Waste Material Parameter Evaluation Memorandum used to estimate values include in this Table (see Section 4.4.26).
d. Source: CCP-PO-001 - Section C-1c.
e. Source: *Transuranic Waste Acceptance Criteria for the Waste Isolation Pilot Plant* (WAC)(DOE/WIPP-02-3122), Section 3
f. Source: *TRUPACT-II Content Codes* (TRUCON) (DOE/WIPP 89-004)
g. Source: *TRUPACT-II Authorized Methods for Payload Control (TRAMPAC),* Nuclear Waste Partnership, LLC
h. This waste has been approved for disposal at the WIPP by the Permittee as documented by Appendix C1 of the WIPP RCRA Part B Permit Application and the Permittee's approval and assignment of the applicable TRUCON Codes for this waste stream.
i. Source: *Nuclear Waste Policy Act of 1982* (42 U.S.C. 10101)
j. Source: Polychlorinated Biphenyls (PCBs) Manufacturing, Processing, Distribution and Commerce, and Use Prohibitions (40 CFR Part 761)

Acceptable Knowledge Expert:_____/_____ Date: _____
Print Sign

Attachment 7 – Radionuclides – Example Form

*Attach current Radiological Characterization or NDA Memorandum

Site(s): _____

Waste Stream Number(s):_____

Waste Stream Description:_____

Radionuclide	Wt %[b]	Ci[b]	Suspected Present (Yes/No)
From CCP-PO-002			
Sr-90			
Cs-137			
U-233			
U-234			
U-238			
Pu-238			
Pu-239			
Pu-240			
Pu-242			
Am-241			
Other Radionuclides (List)			
[a]Source: *Transuranic Waste Acceptance Criteria for the Waste Isolation Pilot Plant* (WAC) (DOE/WIPP-02-3122), Section 3 [b]If available			

Acceptable Knowledge Expert:_____/_____ Date: _____
Print Sign

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Attachment 8 – Waste Containers List – Example Form

(This attachment may be provided in a different format)

Site(s): _____

Waste Stream Number(s): _____

Waste Stream Description: _____

Number of Waste Containers in Waste Stream: _____

Total Existing Volume (m^3): _____

Is waste expected to be generated in the future?:_____

If yes, Estimated Future Volume (m^3): _____

Assumptions: _____

Waste Stream Container Evaluation Memo(s) for Added Containers: _____

Container Identification Number	Generation Date	Generation Point

Acceptable Knowledge Expert:_____/_____ Date: _____
Print Sign

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Attachment 9 – Attachment 9 is no longer required and Attachment number is reserved for future use

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Attachment 10 – Acceptable Knowledge Re-evaluation Checklist – Example Form

Site(s): _____
Waste Stream Number(s): _____
Waste Stream Description: _____
NCR numbers(s) if applicable: _____
Inconsistency between waste characterization and acceptable knowledge information (describe): _____
_____

Requirements	Completed? Yes/No	Additional Documentation [a]
Review existing information based on the container identification number and document all differences in EPA Hazardous Waste Number assignments. [c]		
If differences exist in the EPA Hazardous Waste Numbers that were assigned, reassess and document all required AK information associated with the new designation. [b,c]		
Reassess and document all testing data associated with the waste. [c]		
Verify and document that the reassigned Waste Matrix Code was generated within the specified time period, area and buildings, waste generating process, and that the process material inputs are consistent with the waste material parameters identified during RTR or VE.		
If NDA results indicate the presence of additional or different radionuclides in the waste, reassess and document AK and characterization information associated with the new information. [c]		
Record all changes to the AK records on the appropriate Attachments and resubmit to the CCP Facility Records Custodian.		
If unresolved discrepancies exist in the AK information for the reassigned Waste Matrix Code, EPA Hazardous Waste Numbers, or radionuclides, document the segregation of this container, and define the actions necessary to fully characterize the waste.		

a. Cite the source document, nonconformance report number, attachment, or other documentation used to support a change or no change.
b. If a toxicity characteristic contaminant is identified, it is not included as a listed waste, and analytical data regarding the concentration are not available, the corresponding EPA Hazardous Waste Number is applied.
c. Not applicable for LANL sealed source waste stream.

Acceptable Knowledge Expert:

_____ Date: _____
Print Sign

Site Project Manager:

_____ Date: _____
Print Sign

Attachment 11 – Acceptable Knowledge Source Document Discrepancy Resolution – Example Form

Page 1 of 1

Waste Stream Number(s): _____

Waste Stream Description: _____

AK Source Document Discrepancy Form Tracking Number:

Tracking #		Title	Document/Rev#	Author	Date		Page #

Nature of Discrepancy:

Resolution:

Discrepancy Resolved: [ ] Yes [ ] No

Acceptable Knowledge Expert: _____ / _____ Date: _____
Print Sign

Site Project Manager: _____ / _____ Date: _____
Print Sign

Attachment 12 – Example Form and Content Guide for AK Summary Reports

CCP-AK-SITE-XXX

Central Characterization Program
Acceptable Knowledge Summary Report
For

NAME OF THE SITE
NAME OF THE PROCESS

REVISION NUMBER
DATE

Printed Name

APPROVED FOR USE

Attachment 12 – Example Form and Content Guide for AK Summary Reports (Continued)

TABLE OF CONTENTS
LIST OF TABLES
LIST OF FIGURES
LIST OF ATTACHMENTS
LIST OF ACRONYMS AND ABBREVIATIONS

Attachment 12 – Example Form and Content Guide for AK Summary Reports (Continued)

1.0 EXECUTIVE SUMMARY

This Acceptable Knowledge (AK) Summary Report has been prepared for the Central Characterization Program (CCP) for Contact-Handled (CH) (Remote-Handled [RH]) Transuranic (TRU) waste generated and managed by *(NAME THE SITE[s])*. The waste described in this report was generated by (Building/Facility), (and the waste will be repackaged in [Building/Facility]). This report was prepared in accordance with CCP-TP-005, *CCP Acceptable Knowledge Documentation* (Reference 1), to implement the AK requirements of (**RH only** -DOE/WIPP-02-3214, *Remote-Handled TRU Waste Characterization Program Implementation Plan* [WCPIP] [Reference __]); *Waste Isolation Pilot Plant Hazardous Waste Facility Permit, Waste Analysis Plan* (WIPP-WAP) (Reference __); and DOE/WIPP-02-3122, Transuranic Waste Acceptance Criteria for the Waste Isolation Pilot Plant (WIPP-WAC) (References __).

The WIPP WAP AK requirements are addressed in CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan* (Reference __). The WIPP-WAC AK requirements are addressed in CCP-PO-002, *CCP Transuranic Waste Certification Plan* (Reference __). Additionally, this report provides the AK information required by (**CH only** - CCP-PO-003, *CCP Transuranic Authorized Methods for Payload Control [*CCP CH-TRAMPAC] [Reference __]) **OR** (**RH only -** CCP-PO-505, *CCP Remote-Handled Transuranic Waste Authorized Methods for Payload Control* [CCP RH-TRAMPAC] [Reference __]).

The CCP is tasked with certification of TRU waste for transportation to and disposal at the Waste Isolation Pilot Plant (WIPP). This report was developed in accordance with CCP-TP-005 (Reference 1) and describes how AK is collected, reviewed, and managed by the CCP. The CCP is responsible for collection, review, and management of AK documentation in accordance CCP-TP-005 and reviews and approves this AK Summary Report. CCP maintains responsibility for this AK Summary Report and all CCP-TP-005 generated forms and records as quality assurance (QA) records. In addition, CCP maintains a copy of the “historical source documents” as non-QA records.

(Brief description of the waste stream, facility[ies], and generating process/activity).

Attachment 12 – Example Form and Content Guide for AK Summary Reports (Continued)

This AK Summary Report, along with referenced supporting documents, provides a defensible and auditable record of AK for designated waste streams from the *NAME THE (FACILITY/PROCESS/ACTIVITY)*. The references and AK source documents used to prepare this report are listed in Sections 7.0 (8.0 for RH) and 8.0 (9.0 for RH). The source documents cited throughout this report are identified by alphanumeric designations corresponding to a unique Source Document Tracking Number (i.e., C001, D001, DR001, M001, P001, and U001 (as applicable to match Section 3).

This AK report includes information relating to the facility's history, mission, process operations, waste identification, characterization, and waste management practices. Information contained in this report was obtained from numerous sources, including facility safety basis documentation, historical document archives, generator and storage facility waste records and documents, and interviews with cognizant personnel.

This report and supporting source documentation provide the mandatory waste program and waste stream-specific information required by the WIPP-WAP (Reference 3). (**RH only -** This report also compiles data relevant to the applicable U.S. Environmental Protection Agency [EPA] requirements and presents the documentation necessary to satisfy each WCPIP data quality objective [DQO] and quality assurance objective [QAO] for RH TRU waste streams [Reference 2]).

Attachment 12 – Example Form and Content Guide for AK Summary Reports (Continued)

2.0 WASTE STREAM IDENTIFICATION SUMMARY

Site Where TRU Waste Was Generated and Stored: *SITE ADDRESS and EPA ID*

Facility Where TRU Waste Was Generated: *NAME OF FACILITY*

Facility Mission: *DESCRIBE THE MISSION AND HOW THE WASTE WAS GENERATED*

2.1 Waste Stream #1 (Identifier and Name)

2.2 Waste Stream #2 (Identifier and Name) (repeat following for each waste stream)

Summary Category Group: (Assign per Section 4.4.11)

Waste Matrix Code Group: (Assign per Section 4.4.10)

Waste Matrix Code: (Assign per section 4.4.9)

TRUPACT-II Content Code (TRUCON): (Obtain TRUCON Code(s) from SPM

TRUPACT-III Content Code (TRUCON): (Obtain TRUCON Code(s) from SPM

Waste Stream Description:

As described in Section 5.4.1, waste stream (number) is comprised primarily of (describe type of waste).

(Describe any other specific waste items in the waste stream, equipment, items not included above, secondary waste/chemicals introduced during packaging/repackaging.)

This waste stream was determined to contain Resource Conservation and Recovery Act (RCRA)-regulated constituents and is assigned the following EPA hazardous waste numbers (HWNs): (list HWNs) (Refer to Section 5.4.3).

(Identify the two predominant radionuclides by mass and activity for waste characterized using NDA techniques) (Refer to Section 5.4.2)

(Identify potential prohibited items and characterization method[s] selected to ensure the absence of these items in the final packaging) (Refer to Section 5.4.5).

(Describe waste packaging/repackaging and final waste container configuration) (Refer to Section 5.5).

Attachment 12 – Example Form and Content Guide for AK Summary Reports (Continued)

For CH - Waste Stream (number) meets the WIPP-WAP waste stream definition. The waste stream consists of waste materials that have common physical form, that contain similar hazardous constituents, and that are generated from a single process or activity.

For RH - Waste Stream (number) meets the WIPP-WAP and the WCPIP waste stream definitions. The waste is similar in material, physical form, hazardous constituents, and radiological properties and generated from a single process or activity.

3.0 ACCEPTABLE KNOWLEDGE DATA and INFORMATION

TRU waste destined for disposal at the WIPP must be characterized prior to shipment. Development of knowledge of the waste materials and processes that generate and control the waste is required to provide a clear and convincing argument about the characteristics of each waste stream. The AK characterization documented herein complies with the requirements of the WIPP-WAP (Reference__) (**RH only**- and the WCPIP [Reference 1]) and was developed in accordance with of CCP-PO-001, (Reference ___), and CCP-TP-005 (Reference 1).

[**RH only -** The WCPIP identifies waste characterization requirements and methods to satisfy requirements in:

- 40 Code of Federal Regulations (CFR) Part 191, *Environmental Radiation Protection Standards for the Management and Disposal of Spent Nuclear Fuel, High-Level and Transuranic Radioactive Wastes* (Reference __).

- 40 CFR Part 194, *Criteria for the Certification and Re-Certification of the Waste Isolation Pilot Plant's Compliance with the 40 CFR 191 Disposal Regulations* (Reference __).

- *Criteria for the Certification and Re-Certification of the Waste Isolation Pilot Plant's Compliance with the 40 CFR Part 191 Disposal Regulations: Certification Decision* (Reference __).

Public Law 102-579, *The WIPP Land Withdrawal Act (LWA)* (Reference __).

[Include a summary of the types and sources of AK information used].

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Attachment 12 – Example Form and Content Guide for AK Summary Reports (Continued)

The references and AK sources used to prepare this report are listed in Sections 7.0 (8.0 for RH) and 8.0 (9.0 for RH), respectively. The AK sources referenced within this report by alphanumeric designations (e.g., C001, D001, DR001, M001, P001, and U001) correspond to the Source Document Tracking Number using the following convention: (include as applicable)

- C – Correspondence
- D – Documents
- DR – Discrepancy resolution
- M – Miscellaneous
- P – Procedures and Published documents
- U – Unpublished documents

Attachment 12 – Example Form and Content Guide for AK Summary Reports (Continued)

4.0 REQUIRED PROGRAM INFORMATION

This section presents the mandatory TRU waste program information required by the WIPP-WAP and the WCPIP for waste stream (number)(References __ and __). This section provides a description of the facility and operations associated with the generation of (facility/building/operation) TRU waste. Included is a description of the (facility/building/operation), summary of the mission, defense determination, and descriptions of (other operations including D&D, maintenance, repackaging, etc.) operations associated with the generation of waste stream (number) are provided.

4.1 Facility Location
4.2 Facility Description
4.3 Facility Mission
4.4 Defense Waste Assessment
4.5 High-Level Waste and Spent Nuclear Fuel Assessment
4.6 TRU Waste Management
4.6.1 Types and Quantity of TRU Waste Generated
4.6.2 Correlation of Waste Streams Generated from the Same Building and Process
4.6.3 Waste Stream Identification, Categorization, and Delineation
4.7 Description of Waste Generating Process

4.8 Waste Certification Procedures

5.0 REQUIRED WASTE STREAM INFORMATION
(Repeat the following information in additional waste stream sections, as needed)

This section presents the mandatory TRU waste stream specific information required by the WIPP-WAP (**RH only -** and the WCPIP) for waste stream (number) (References __ and __). The area of generation, waste stream volume, period of generation, prohibited items, waste packaging, and the physical, chemical, and radiological composition of the waste stream are described.

5.1 Area and Building of Generation

5.2 Waste Stream Volume and Period of Generation

5.3 Waste Generating Activities

Attachment 12 – Example Form and Content Guide for AK Summary Reports (Continued)

5.4 Type of Waste Generated
5.4.1 Materials Related to Physical Form
5.4.1.1 Waste Matrix Code
5.4.1.2 Waste Material Parameters
5.4.2 Radiological Characterization
5.4.3 Chemical Content Identification - Hazardous Constituents
5.4.3.1 F-Listed Constituents
5.4.3.2 Toxicity Characteristic Constituents
5.4.3.3 U- and P-Listed Constituents
5.4.3.4 K-Listed Constituents
5.4.3.5 Ignitables, Reactives, and Corrosives
5.4.3.6 State Hazardous Waste Code or Number Assignment (if applicable)
5.4.4 Polychlorinated Biphenyls
5.4.5 Prohibited Items
5.5 Waste Packaging

6.0 QUALIFICATION OF AK – (**RH Only)**

As stated in CCP-PO-002, *CCP Waste Certification Plan,* (Reference __), this AK Summary Report provides a description of the characterization of this RH waste stream. CCP-AK-ORNL-XXX, *CCP RH TRU Waste Certification Plan for 40 CFR 194 Compliance and Confirmation Test Plan for Waste Stream (number)* (Reference __), describes how each DQO and QAO is met along with the rationale for selection of the AK qualification methods used. As required by the WCPIP (Reference __), the description of waste stream (number) is provided in Sections 4.0 and 5.0. The description of the confirmatory testing process, the percentage of containers that are subjected to the process, a discussion of why the process is considered representative of the waste stream, and quantitative acceptance criteria is presented in CCP-AK-ORNL-XXX (Reference __).

The CCP intends to use a combination of methods to qualify the AK information associated with the [site/facility/building] waste stream because this will make the best use of the information available (such as existing sampling and analytical data). Table XX, Waste Stream (number) Determination Summary, lists the DQOs to be addressed using AK associated with waste stream [number] relating to the defense waste, radiological, and physical waste stream determinations. The location (page number, section, etc.) of the relevant information is identified in the AK source identified in Table XX.

Table XX. Waste Stream (number) DQO Determination Summary
(Provide a summary of the AK and identify the AK sources and the characterization method for each WCPIP DQO).

Attachment 12 – Example Form and Content Guide for AK Summary Reports (Continued)

6.0 CONTAINER-SPECIFIC INFORMATION **(Section 7.0 for RH)**

(Provide a summary of the AK documentation reviewed, including a list of the container-specific information).

In accordance with procedure CCP-TP-005 (Reference 1), a CCP Waste Containers List (Attachment 8 of the procedure) is completed and maintained as a quality record for waste tracking purposes. Information tracked includes container identification number, waste stream number, and the closure date for each container.

Attachment 12 – Example Form and Content Guide for AK Summary Reports (Continued)

7.0 REFERENCE INFORMATION **[Section 8.0 for RH]**

1. CCP-TP-005, *CCP Acceptable Knowledge Documentation,* Carlsbad, New Mexico, Nuclear Waste Partnership, LLC.

2. DOE/WIPP-02-3214, *Remote-Handled TRU Waste Characterization Program Implementation Plan*, Carlsbad, New Mexico, U.S. DOE Carlsbad Field Office

3. *Waste Isolation Pilot Plant Hazardous Waste Facility Permit, Waste Analysis Plan,* New Mexico Environment Department, Santa Fe, New Mexico

4. DOE/WIPP-02-3122, *Transuranic Waste Acceptance Criteria For the Waste Isolation Pilot Plant,* Carlsbad, New Mexico, U.S. DOE Carlsbad Field Office

5. CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan,* Carlsbad, New Mexico, Nuclear Waste Partnership, LLC.

6. CCP-PO-002, *CCP Transuranic Waste Certification Plan,* Carlsbad, New Mexico, Nuclear Waste Partnership, LLC.

7. CCP-PO-003, *CCP Transuranic Authorized Methods for Payload Control (CCP CH-TRAMPAC),* Carlsbad, New Mexico, Nuclear Waste Partnership, LLC.

8. CCP-PO-505, *CCP Remote-Handled Transuranic Waste Authorized Methods for Payload Control (CCP RH-TRAMPAC),* Carlsbad, New Mexico, Nuclear Waste Partnerhsip, LLC.

10. DOE/LLW-217, *DOE Waste Treatability Group Guidance*, Idaho Falls, Idaho, INEL-Lockheed Idaho Technologies

11. 40 CFR Part 191, *Environmental Radiation Protection Standards for Management and Disposal of Spent Nuclear Fuel, High-Level and Transuranic Radioactive Wastes*, Washington, D.C., U.S. EPA

12. 40 CFR Part 194, *Criteria for the Certification and Re-Certification of the Waste Isolation Pilot Plant's Compliance with the 40 CFR Part 191 Disposal Regulations*, Washington, D.C., U.S. EPA

Attachment 12 – Example Form and Content Guide for AK Summary Reports (Continued)

13. *Criteria for the Certification and Re-Certification of the Waste Isolation Pilot Plant's Compliance with the 40 CFR Part 191 Disposal Regulations: Certification Decision*, Washington, D.C., U.S. EPA

14. Public Law 102-579, *The Waste Isolation Pilot Plant Land Withdrawal Act*, October 30, 1992 as amended by Public Law 104-201

15. 42 U.S.C 10101, *Nuclear Waste Policy Act of 1982*, U.S. Congress

Attachment 12 – Example Form and Content Guide for AK Summary Reports (Continued)

8.0 AK SOURCE DOCUMENTS **[Section 9.0 for RH]**

Document Number	Title

[INSERT ALL REFERENCED FIGURES]

Attachment 13 – CCP Waste Stream Characterization Checklist – Example Form

CCP Waste Stream Characterization Checklist

Site(s):

Waste Stream Number: Lot # (if applicable)

Waste Stream Description:

Acceptable Knowledge Information or other data points[a]	Characterization Method(s)	Acceptable Knowledge Re-evaluation Required? Yes/No[b]?	Comments[c]
Physical waste form/description			
Waste material parameters weights			
Waste percent volume consistent with nondestructive examination or visual examination data and audio/video tapes or equivalent media			
Summary Category Group assignment			
Waste Matrix Code assignment			
Absence of prohibited items			
EPA Hazardous Waste Number assignment[d]			
Toxicity characteristic code assignment			
VOCs from packaging materials or radiolysis present			
State Hazardous Waste Number assignment			
Radionuclides present			
Other radiological parameters: (specify)			

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Attachment 13 – CCP Waste Stream Characterization Checklist – Example Form (Continued)

CCP Waste Stream Characterization Checklist

Additional Comments:_____

_____

_____

_____

a. Identified in the AK Summary Report or included in the in-process record documentation (e.g., BDR's)
b. If "yes," AKE completes an *Acceptable Knowledge Re-evaluation Checklist.*
c. Identify the source of the waste testing information (e.g., VE or RTR batch data reports). Note if an AK Sufficiency Determination has been approved to meet any characterization parameter.
d. Ensure that, if a toxicity characteristic contaminant is identified, it is not included as a listed waste, and if analytical data regarding the concentration are not available, the corresponding EPA Hazardous Waste Number is applied.

Site Project Manager:

Date:

Print Sign

Acceptable Knowledge Expert:

Date:

Print Sign

Attachment 14 – CCP Acceptable Knowledge Accuracy Report – Example Form

CCP Acceptable Knowledge Accuracy Report

Site(s):_____

Waste Stream Number(s):_____

Waste Stream Description:_____

Waste Containers:	Waste Matrix Code Reassigned? (Y/N)	EPA Hazardous Waste Number Reassigned? (Y/N)	Radiological Data Consistent with AK? (Y/N)

Total containers in this report:_____
Total containers consistent with AK: _____
Percent containers consistent with AK:_____

Site Project Manager:
_____/_____ Date:_____
Print Sign

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Attachment 15 – CCP TRU Waste Correlation and Surrogate Summary Form – Example Form

CCP TRU Waste Correlation and Surrogate Summary Form

Generator/Storage Site(s):_____

Waste Stream(s):_____

Waste Used to Correlate:_____

Waste Used as Surrogate:_____

Information	Y/N	Source of Information
Is physical form identified?		
Are chemicals identified?		
Is the absence of prohibited items confirmed?		
Are radiological data described?		

Explain/Justify the Use of Correlating/Surrogate Waste Stream Information:
(Attach additional supporting information, as applicable)

_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____

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CCP-TP-082

Revision 9

CCP
Waste Container Filter Vent Operation

EFFECTIVE DATE: 07/12/2013

Mike Ramirez

PRINTED NAME

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RECORD OF REVISION

Revision Number	Date Approved	Description of Revision
0	10/02/2003	Initial Issue.
1	03/31/2004	Incorporated CBFO Comment resolutions, and updated Section 2.0-4.0 and Attachment 1.
2	04/02/2004	Incorporated LANL Facility Oversight Review Committee Comment resolutions into Sections 1.0, 2.0, and 4.0.
3	02/27/2005	Incorporated process changes to include the removal of WIPP-approved drum venting system (DVS) Filter Vents and updated equipment list. Revised to incorporate Host site-specific requirements.
4	03/21/2005	Revised to address Carlsbad Field Office (CBFO) Document Review Record (DRR) comments and to address filter replacement criteria.
5	04/13/2005	Revised to address Carlsbad Field Office (CBFO) Document Review Record (DRR) comments.
6	10/10/2005	Revised to add provision for multiple container filter change form and to incorporate Host site-specific requirements.
7	08/15/2007	Revised to include DOE/WIPP-06-3345, *Waste Isolation Pilot Plant Flammable Gas Analysis* and to delete CCP procedures that are obsolete, and to change references to drums to include sampling other containers.
8	02/22/2011	Removed elements no longer required or redundant to host site procedures.
9	07/12/2013	Revised to rearrange some steps to improve flow and added a note to allow some steps to be performed in any order and incorporated editorial comments that were needed.

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Attachment 1 – Container Filter Vent Change Out Form – Example 11

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1.0 PURPOSE

The purpose of this procedure is to describe the protocol for preparing, removing, and replacing filter vents on waste containers in designated filter vent change out areas.

1.1 Scope

This procedure defines the processes for preparing, removing and replacing filter vents on waste containers in designated filter vent areas.

2.0 REQUIREMENTS

2.1 References

Baseline Documents

- None

Referenced Documents

- CCP-QP-002, *CCP Training and Qualification Plan*
- CCP-QP-008, *CCP Records Management*

2.2 Training Requirements

2.2.1 Personnel performing this procedure will be trained and qualified in accordance with CCP-QP-002, *CCP Training and Qualification Plan* prior to performing this procedure.

2.3 Equipment List

2.3.1 Recommended Tools

[A] 15/16-in. Long Arm Hex Key

[B] 15/16-in. Square Drive Socket Hex Key

[C] Square Drive Ratchet

[D] Square Drive Socket

[E] Calibrated Torque Wrench

[F] Filter Socket

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2.3.2 Recommended Materials

[A] Loctite 271

[B] Loctite 680

[C] Cheesecloth

[D] Kimwipes

[E] Waste Isolation Pilot Plant (WIPP) approved container filter vent

[F] Room Temperature Vulcanized (RTV) Sealant **OR** Equivalent

2.4 Precautions and Limitations

2.4.1 Continuous Radiological Control Technician (RCT) coverage will be maintained during the performance of this procedure.

2.4.2 When a filter is removed, it must be replaced immediately in order to maintain the Drum Age Criteria (DAC).

2.4.3 All personnel must don appropriate Personal Protective Equipment in accordance with Host site work requirements.

2.5 Prerequisite Actions

2.5.1 Read all applicable Material Safety Data Sheets prior to performing this procedure.

2.6 Definitions

2.6.1 None.

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3.0 RESPONSIBILITIES

3.1 Operator

3.1.1 Prepares, removes, and replaces filter vents.

3.1.2 Documents filter vent change out.

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4.0 PROCEDURE

4.1 Removal and Replacement of Filter Vents

WARNING

DO **NOT** stand between the container and the High Efficiency Particulate Air (HEPA) inlet when removing a container filter vent.

NOTE

When a filter vent is removed, it must be replaced immediately in order to maintain the DAC.

4.1.1 Remove the applicable Container Traveler from the container, if necessary.

4.1.2 Verify the container(s) are at the host site designated filter change out area.

NOTE

Attachment 1, Container Filter Vent Change Out Form – Example, may be filled out for multiple containers prior to filter change out.

4.1.3 Record data on Attachment 1 – Container Filter Vent Change Out Form – Example, as follows:

[A] Container Number.

[B] New Filter vent Install Date.

[C] New Filter vent Model Number.

[D] New Filter vent Manufacture Date.

[E] New Filter vent Serial Number.

[F] Filter Torque Value

[G] Torque Wrench M&TE/Serial Number and Calibration Due Date, if applicable, **OR** N/A.

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NOTE

At Oak Ridge National Laboratory the Ventilation System Magnehelic Differential Pressure Gauge(s) for Flammable Gas Analysis (FGA) is in the FGA area.

4.1.4 Check that the Ventilation System Magnehelic Differential Pressure Gauge(s) is less than three inches H_2O, if applicable.

4.1.5 Verify the contamination control system is operational according to the host site requirements.

4.1.6 Apply Loctite 271 **OR** Loctite 680 on the first three threads of the WIPP-approved container filter vent.

4.1.7 Remove the old filter vent.

4.1.8 Clean the gasket surface on the waste container as appropriate.

CAUTION

Loctite could damage neoprene gaskets.

4.1.9 Install a WIPP-approved container filter vent with the neoprene gasket provided, if required.

4.1.10 Engage the filter threads.

4.1.11 Torque the filter vent to manufacturer's specifications.

4.1.12 **IF** a stripped thread(s) is encountered,
THEN seal the new filter vent by applying a generous amount of RTV sealant or equivalent around the base of the filter head covering its gasket and at least half the height of the filter head side wall covering the gasket, but not the vent holes.

4.1.13 **AFTER** the RTV sealant **OR** equivalent has set,
THEN make an additional seal between the filter vent and the container surface, completely covering the gasket, but **NOT** the vent holes, with RTV sealant **OR** equivalent, if applicable.

4.1.14 Request the RCT to survey the container for radiological contamination.

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4.1.15 Remove container from the negative air pressure HEPA filtration area, hood, containment room, **OR** sampling filter change-out area, if applicable.

4.1.16 Re-attach the Container Traveler (label) to the container, if necessary.

4.1.17 Repeat steps 4.1.1 through 4.1.16 until all containers are complete.

4.1.18 On Container Filter Vent Change Out Form add comments as needed or NA.

4.1.19 Review Container Filter Vent Change Out Form to ensure the form is completely filled out.

4.1.20 Print name, sign, **AND** date.

4.1.21 Forward Container Filter Vent Change Out Form to another operator for review.

4.1.22 Review Container Filter Vent Change Out Form to ensure the form is completely filled out.

4.1.23 Print name, sign, **AND** date Container Filter Change Out Form.

4.1.24 Submit Attachment 1's to CCP Records in accordance with CCP-QP-008.

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5.0 RECORDS

5.1 Records generated during the performance of this procedure are maintained as quality assurance (QA) records in accordance with CCP-QP-008. The records are the following:

5.1.1 QA/Lifetime

[A] Attachment 1 – Container Filter Vent Change Out Form

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Attachment 1 – Container Filter Vent Change Out Form – Example

Container Number	New Filter Vent Install Date	New Filter Vent Model Number	New Filter Vent Manufacturer Date	New Filter Vent Serial Number	Filter Torque Value (ft/lb or in/lb)	Comments

Torque Wrench M&TE/Serial Number:_____
Calibration Due Date: _____

Operator

_____ _____ _____
Print Name Signature Date

Operator

_____ _____ _____
Print Name Signature Date

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CCP-TP-163

Revision 4

CCP
Evaluation of Waste Packaging Records for Visual Examination of Records

EFFECTIVE DATE: 06/18/2013

Mike Ramirez

PRINTED NAME

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RECORD OF REVISION

Revision Number	Date Approved	Description of Revision
0	11/16/2006	Initial issue.
1	11/12/2008	Revised to incorporate concurrent use with CCP-TP-113, *CCP Standard Contact-Handled Waste Visual Examination*.
2	03/11/2009	Response to U.S. Environmental Protection Agency (EPA) inspection number (EPA-INL-CCP-VE-TI, Issue number INL-CCP-RH-VE-TI-002CR).
3	04/24/2012	Revised to incorporate Standing Order CCP-SO-ANLE-002.
4	06/18/2013	Revised to incorporate the Nuclear Waste Partnership (NWP) transition changes.

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1.0 PURPOSE

This procedure provides the actions to evaluate waste packaging records intended for use in visual examination (VE), for the documentation required by CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*.

1.1 Scope

This procedure establishes the process for evaluation of waste packaging records generated by organizations external to Central Characterization Program (CCP) prior to the certification program. This procedure also provides direction to VE personnel for review of waste packaging records that will be accepted for performing VE in accordance with CCP-TP-113, *CCP Standard Contact-Handled Waste Visual Examination*, and CCP-TP-500, *CCP Remote-Handled Waste Visual Examination*.

2.0 REQUIREMENTS

2.1 References

Referenced Documents

- CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*
- CCP-QP-002, *CCP Training and Qualification Plan*
- CCP-TP-113, *CCP Standard Contact-Handled Waste Visual Examination*
- CCP-TP-500, *CCP Remote-Handled Waste Visual Examination*

2.2 Training Requirements

2.2.1 Personnel performing this procedure will be trained and qualified in accordance with CCP-QP-002, *CCP Training and Qualification Plan*, prior to performing this procedure.

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2.3 Equipment List

2.3.1 None.

2.4 Precautions and Limitations

2.4.1 None.

2.5 Prerequisite Actions

2.5.1 None.

2.6 Definitions

2.6.1 None.

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3.0 RESPONSIBILITIES

3.1 Visual Examination Operator (VEO)

3.1.1 Evaluates the waste packaging record to ensure the requirements are met as defined in this procedure.

3.2 Site Project Manager (SPM)

3.2.1 Evaluates waste packaging records determined by the VEO not to meet the requirements.

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4.0 PROCEDURE

VEO

4.1 Obtain the waste packaging records to be used for characterization of transuranic (TRU) mixed waste.

4.2 Ensure the waste packaging records meet the following minimum requirements for the type of record.

4.2.1 Waste packaging recorded on video/audio media

[A] The video/audio media recorded the waste packaging event for the container such that all waste items placed into the container are recorded in sufficient detail that another trained VEO can determine what the waste items are and their associated waste material parameter.

[B] The video/audio media captured the waste container identification number.

[C] The personnel loading the waste container are identified on the video/audio media or on packaging records traceable to the loading of the waste container.

[D] The date of loading of the waste container is recorded on the video/audio media or on packaging records traceable to the loading of the waste container.

NOTE

The use of waste packaging written records generated using two operators requires the prior approval of the Carlsbad Field Office (CBFO).

4.2.2 Waste packaging performed using two generator site personnel

[A] At least two generator site personnel approved the data forms or packaging records attesting to the contents of the waste container.

[B] The data forms or packaging records contain an inventory of waste items in sufficient detail that another trained VE Operator can identify the associated waste material parameters.

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[C] The waste container identification number is recorded on the data forms or packaging records.

4.3 **IF** the waste packaging record DOES **NOT** meet the requirements listed above, **THEN** contact the SPM for further direction.

4.4 **IF** the waste packaging record meets the requirements listed above, **THEN** perform VE in accordance with CCP-TP-500 for remote-handled (RH) waste, or CCP-TP-113 for contact-handled (CH) waste.

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5.0 RECORDS

5.1 There are no records generated by the performance of this procedure.

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CCP-TP-500

Revision 12

CCP
Remote-Handled Waste
Visual Examination

EFFECTIVE DATE: 07/18/2013

Irene Joo

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RECORD OF REVISION

Revision Number	Date Approved	Description of Revision
0	02/15/2006	Initial issue.
1	04/27/2006	Revised in response to CBFO comments.
2	06/19/2006	Revised to address concerns raised during the Idaho National Laboratory (INL) Remote-Handled (RH) Audit A-06-21.
3	10/12/2006	Revised to resolve issue identified in EPA Concern ANL-CCP-RH-VE-06-001CR.
4	11/16/2006	Revised to incorporate Visual Examination Expert (VEE) decisions and signature.
5	06/01/2007	Revised to incorporate February 27, 2007, modification of the Waste Isolation Pilot Plant Hazardous Waste Facility Permit (HWFP), Attachment B-B6, Waste Analysis Plan (WAP).
6	10/25/2007	Revised in response to Central Characterization Project (CCP) Corrective Action Report (CAR) CAR-RHBCL-00002-07, to clarify questions 11 and 12 on Attachment 2, Visual Examination Independent Technical Review Checklist.
7	02/27/2008	Revised to address Carlsbad Field Office (CBFO) Corrective Action Report (CAR) 08-005.
8	07/24/2008	Clarification changes for ease of operations.
9	06/30/2010	Revised to make changes for a two shift operation and two different sets of qualified operators to be able to work on the same Remote-Handled (RH)-Visual Examination (VE). Added Table 1, Prohibited Items List, and updated language to reflect the permit modification.
10	12/29/2010	Revised to incorporate Permit Modification Independent Technical Review (ITR) language.
11	04/21/2011	Implement Revision 2 of Remote-Handled Transuranic (TRU) Waste Characterization Program Implementation Plan DOE/WIPP-02-3214.
12	07/18/2013	Revised to incorporate Nuclear Waste Partnership (NWP) transition changes.

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1.0 PURPOSE

This procedure establishes how to perform the visual examination (VE) for remote-handled (RH) transuranic (TRU) waste. This procedure also describes how to prepare and review batch data reports (BDRs) generated by VE.

This procedure provides the actions for collection of VE data and information required by CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan;* CCP-PO-002, *CCP Transuranic Waste Certification Plan;* and DOE/WIPP-02-3214, *Remote-Handled TRU Waste Characterization Program Implementation Plan* (WCPIP).

1.1 Scope

VE verifies the physical waste form, confirms the Waste Stream Description and Waste Matrix Codes provided by Acceptable Knowledge (AK), and confirms that no prohibited items are present. VE is performed by two qualified operators, which is documented on the attachments to this procedure.

VE cannot identify prohibited items imbedded in forms, such as soils and solids, when the material is not removed from the characterized container.

VE may be performed on S3000 or S4000 when the material is not removed from the characterized container if Carlsbad Field Office (CBFO) approves the method for the specific waste form, typically from a surveillance.

VE may be performed in two phases. In the first phase, VE is performed by two qualified operators at the point of generation where the waste is visually inspected, identified, and placed into small containers. At this point (after waste has been placed in small containers), the waste may no longer be visible in its packaging. The packaging could be the small containers that will eventually be packaged into a larger container or a final container. In the second phase, VE is performed when small packages are placed in a larger container or the final container, documented, and then closed rendering VE of the waste no longer possible.

In addition to being used to perform VE at the time waste is actually being placed into the waste container, this procedure may also be used to perform VE of video media of waste being placed into waste containers. In the case of VE being performed for video tapes of waste contents, the VE operators are not in direct control of the waste examination and packaging process. Consequently, the video recordings must be

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adequate and complete to identify waste materials and verify the absence of prohibited items as required in the execution of this procedure. Attachment 1, Visual Examination Data Form, for the individual containers, is completed based on the review of the video media.

All site-specific requirements for health, safety, and operations in the work place will be addressed in a site-specific operating procedure.

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2.0 REQUIREMENTS

2.1 References

Baseline Documents

- *Safety Analysis Report for the RH-TRU 72-B Waste Shipping Package,* U.S. Department of Energy Carlsbad Field Office
- CCP-PO-505, *Remote-Handled Transuranic Waste Authorized Methods for Payload Control (CCP RH-TRAMPAC)*
- DOE/WIPP 90-045, *Remote-Handled-Transuranic Waste Content Codes (RH-TRUCON)*

Referenced Documents

- DOE/WIPP-02-3214*, Remote-Handled TRU Waste Characterization Program Implementation Plan*
- CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*
- CCP-PO-002, *CCP Transuranic Waste Certification Plan*
- CCP-QP-002, *CCP Training and Qualification Plan*
- CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control*
- CCP-QP-008, *CCP Records Management*

2.2 Training Requirements

2.2.1 Personnel performing this procedure will be trained and qualified in accordance with CCP-QP-002, *CCP Training and Qualification Plan,* prior to performing this procedure.

2.3 Equipment List

2.3.1 None.

2.4 Precautions and Limitations

2.4.1 Facility Requirements

[A] This procedure augments, but DOES **NOT** supersede, applicable requirements of the facilities in which the activities are conducted.

[B] This procedure DOES **NOT** address radiological protection requirements. All activities described SHALL be conducted in accordance with work plans, procedures, or other process controls generated by the facility where the work is performed.

[C] Prior to performing work, personnel will comply with all facility requirements for visitors, as established by each Host site.

2.4.2 Conditions Adverse to Quality

[A] If a condition adverse to quality is identified, the individual(s) identifying the condition SHALL initiate a nonconformance report (NCR) in accordance with CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control*.

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3.0 RESPONSIBILITIES

3.1 Visual Examination Operator (VEO)

3.1.1 Performs the VE.

3.1.2 Assembles the BDR.

3.1.3 Completes Attachment 1(s).

3.1.4 Paginates the BDR.

3.1.5 Completes Attachment 4, Visual Examination Batch Data Report Cover Sheet.

3.1.6 Completes Attachment 5, Visual Examination Batch Data Report Table of Contents.

NOTE

The Independent Technical Reviewer (ITR) will be someone, other than the visual examination operator (VEO), who is qualified to have performed the work. ITRs shall not be involved in the generation or recording of the data.

3.2 Independent Technical Reviewer (ITR)

3.2.1 Reviews the BDR.

3.2.2 Completes Attachment 2(s), Visual Examination Independent Technical Reviewer Checklist.

3.3 Visual Examination Expert (VEE)

3.3.1 Responsible for overall direction and implementation of the VE at that facility.

3.4 Site Project Manager (SPM)

3.4.1 Reviews and approves the BDR.

3.4.2 Completes Attachment 3, Visual Examination Site Project Manager Checklist.

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4.0 PROCEDURE

NOTE

A separate Attachment 1 will be used for each small container or package used to contain waste, **AND** an Attachment 1 will be used when combining several smaller packages into a larger container.

A Testing Batch includes all data pertaining to VE for up to 20 containers without regard to waste matrix.

A separate Attachment 1 will be used if the original operators that started the VE could not complete the container (e.g., end of the shift), **AND** two different qualified operators had to resume or finish VE of the container.

Two VEOs, who are equally trained in accordance with CCP-QP-002, will confirm the contents of the waste whether video recording is used or not used.

VEO

4.1 VE for Single Packages (small packages or final containers)

4.1.1 Preparations

[A] Record the following information on Attachment 1:

[A.1] Site Identification (ID) (e.g., RHANL)

[A.2] Examination Date

[A.3] Batch Number if known, otherwise mark as N/A

[A.4] Procedure and Revision Number

[B] Prepare the recording equipment as follows (optional):

[B.1] **IF** recording equipment is to be used,
THEN operate the recording equipment in accordance with site procedures.

[B.2] Verify the recording media is labeled with the container number and date, **AND** annotate the video number on Attachment 1.

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[B.3] To verify the recording equipment is operating satisfactorily, record a short segment, **AND** review segment for clarity of image and audio, if applicable.

[B.4] Check SAT (Satisfactory), UNSAT (Unsatisfactory), or N/A on Attachment 1 to record the result of the Recording Equipment Check.

NOTE

If using video/audio media, record the waste packaging event for the container such that the waste placed into the containers are recorded in sufficient detail that a trained VEO can determine what the waste is and its associated waste material parameter.

[B.5] **IF** recording the VE,
THEN enter the Recording Start time on Attachment 1, **AND** begin recording.

4.1.2 Visual Examination (VE)

[A] **IF** a single container will be used for all of the waste to be packaged,
THEN check the Initial Container field N/A, **AND** use the Final Container fields to record steps 4.1.2[B.1] through 4.1.2[J.2].

[B] **IF** the waste will be packaged in small containers and later combined in a final container,
THEN check the Final Container field N/A, **AND** record the following in the Initial Container fields on a separate Attachment 1 for each small container:

NOTE

The Container or Package ID Number is user defined (must be unique to the package or container) but shall be such that the small containers in a final container can be distinguished from each other.

[B.1] Container or Package ID Number

[B.2] Container Type (e.g., less than 4-liter plastic bottle, plastic bag, filtered plastic bag, unsealed 5-gallon pail, 55-gallon drum)

[B.3] Waste Matrix Code as identified from AK

[B.4] Waste Stream as listed in the AK Summary Report

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[C] **IF** combining smaller containers into a larger container,
THEN GO TO Section 4.2.

NOTE

The description of the material to be placed in the package shall be sufficiently detailed to allow a reviewer to evaluate the Waste Material Parameters (e.g., crescent wrench Iron-based Metals/Alloys [IM]). The material parameters are listed in Table 2, Waste Material Parameters.

[D] Examine the waste, **AND** record the description of the material to be placed in the package in the Waste Description field on Attachment 1.

[E] Ensure the waste is placed into the package.

[F] **IF** VE of the container can **NOT** be completed by the original qualified operators that started the waste container for any reason,
THEN STOP and notify the VE Expert.

[G] Complete comment section of on Attachment 1, initial and date comments. New qualified operators SHALL initial and date comments for acceptance of waste previously placed into the waste container.

[H] **IF** different qualified operators resume or complete the VE the operators will start a separate Attachment 1 at step 4.1.2[D],
THEN complete Attachment 1 per CCP-TP-500, *CCP Remote-Handled Waste Visual Examination*.

[I] **WHEN** the waste package is full,
OR the bag has met the packaging limit,
THEN perform the following and document on Attachment 1:

[I.1] **IF** recording,
THEN STOP the recording device, **AND** enter the Recording Stop time.

[I.2] **IF** packaging waste in smaller containers that will be combined into a larger container,
THEN GO TO step 4.1.2[I.6].

[I.3] Check Y (Yes) or N (No) to record use of Rigid Liner and enter type (i.e., rigid liner thickness).

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[I.4] Check Y or N to record use of Rigid Liner Lid.

[I.5] **IF** liner lid is used,
THEN record hole size in Rigid Liner Lid.

NOTE

The fill percent of the container is based on the highest level of the bulk of the waste. Items (e.g., pipe, plastic bags) that protrude above the bulk of the waste are **NOT** to be included in the fill percent determination. The fill percent is to be recorded in five percent increments (e.g., 35%, 40%, and 45%).

[I.6] Estimate, **AND** record the fill percent.

[I.7] Determine and record the amount of organic waste in 10 percent increments by volume.

[I.8] Ensure the bag liner is closed by either VE or AK record, if applicable.

[I.9] Enter the number of Layers of Confinement for the package.

[I.10] Enter the Closure Method(s) for the individual Layers of Confinement (use the Comments field on Attachment 1 if additional room is needed). N/A if there are no Layers of Confinement.

[I.11] Ensure the lid of the waste container is installed in accordance with Host site procedures, if applicable.

[I.12] **IF** the waste stream is S3000 **OR** S4000 waste that also contains debris,
THEN visually estimate the total weight of debris in the container of waste, **AND** record the debris weight in the Comments field of Attachment 1.

[I.13] Answer the Prohibited Item/RH 72B Criteria questions on Attachment 1.

NOTE

Packaging material applies to the final container only.

[J] Certify the contents of the package by performing the following:

VEO 1

[J.1] Print name, sign, **AND** date Attachment 1 to annotate that the VE has been completed.

VEO 2

[J.2] Print name, sign, **AND** date Attachment 1 to annotate that the VE has been completed.

VEO

[K] Ensure the waste package is stored with reasonable protection from tampering.

4.2 VE for Final Packaging

NOTE

VE for Final Packaging applies when waste package(s) are to be placed into a larger container. For packages VE'd by tape review, the applicable steps in Section 4.2 are completed using AK information.

VEO

4.2.1 Prepare packages for loading as follows:

[A] Identify the packages to be placed in the larger container, **AND** obtain the Attachment 1 for those containers.

[B] Ensure all of the Attachment 1s show that the waste belongs to the same waste stream, there are NO prohibited items present, **AND** there are NO NCRs open that would require additional handling of the waste.

4.2.2 Verify each Package ID Number against the Attachment 1 prior to loading into the larger container.

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4.2.3 For each package to be loaded into the larger container, perform the following:

[A] Record the Package ID Number(s) in the Waste Description field on Attachment 1.

[B] Ensure the package is placed into the larger container.

[C] Repeat steps 4.2.3[A] and 4.2.3[B] for each package to be loaded.

[D] **IF** waste container can NOT be completed by the original qualified Operators that started the waste container for any reason,
THEN STOP AND Notify the VE Expert.

[E] Complete comment section of Attachment 1, initial and date comments. New qualified operators SHALL initial and date comments for acceptance of waste previously placed into the waste container.

[F] **IF** different qualified operators resume or complete the VE,
THEN the operators will start with a separate Attachment 1 at step 4.1.2[D] and complete Attachment 1 per CCP-TP-500.

4.2.4 **WHEN** the waste container is FULL,
OR the waste container has met the packaging limit as defined in the AK Summary Report,
THEN perform the following:

[A] **IF** recording,
THEN STOP the recording device,
AND enter the Recording Stop time on Attachment 1.

[B] Check Y or N to record use of Rigid Liner, **AND** enter type.

[C] Check Y or N to record use of Rigid Liner Lid.

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[D] **IF** liner lid is used,
THEN record hole size in Rigid Liner Lid.

NOTE

The fill percent of the container is based on the highest level of the bulk of the waste. Items (e.g., pipe, plastic bags) that protrude above the bulk of the waste are **NOT** to be included in the fill percent determination. The fill percent is to be recorded in five percent increments (e.g., 35%, 40%, and 45%).

[E] Estimate, **AND** record the fill percent.

[F] Determine and record the amount of organic waste in 10 percent increments by volume.

[G] Ensure the bag liner is closed by either VE or AK record, if applicable.

[H] Enter the number of Layers of Confinement for the package.

[I] Record the Closure Methods(s) for the individual Layers of Confinement. Use the Comments field on Attachment 1 if additional room is needed. N/A if there are no Layers of Confinement.

[J] Ensure the lid of the waste container is installed in accordance with Host site procedures, if applicable.

[K] **IF** the waste stream is S3000 OR S4000 waste that also contains debris,
THEN visually estimate the total weight of debris in the container of waste and record the debris weight in the comment field of Attachment 1.

[L] Answer the Prohibited Item/RH 72B questions on Attachment 1.

4.2.5 Certify the contents of the package by performing the following:

VEO 1

[A] Print name, sign, **AND** date Attachment 1 to annotate that the VE has been completed.

VEO 2

[B] Print name, sign, **AND** date Attachment 1 to annotate that the VE has been completed.

VEO

[C] Ensure the waste package is stored with reasonable protection from tampering.

4.3 Batch Data Report Preparation

NOTE

The Testing BDR will contain Attachment 1s for no more than 20 containers. Each container may hold several smaller packages, and each of those may potentially also hold smaller packages, resulting in a number of Attachment 1s for each container.

BDR numbering will be as follows: Site ID, process, year, next sequential number to start back at one at the beginning of the new year (e.g.,ANLRHVE05001).

VEO

NOTE

For packages VE'd by tape review, the original packaging data sheet, if available (obtained from AK), is included in the BDR and placed behind the corresponding Attachment 1 (See Attachment 6, Waste Package Data Sheet, for an example).

4.3.1 Complete Attachment 4.

4.3.2 Assemble the following data for the BDR:

[A] Attachment 5, Visual Examination Batch Data Report Table of Contents

[B] Attachment 1 for each container, original packaging data sheet (if applicable), and the associated Attachment 1s for the internal containers

[C] Attachment 2, Visual Examination Independent Technical Reviewer Checklist

[D] Copy of NCRs, if applicable

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4.3.3 Prepare the BDR as follows:

[A] Assemble and organize the BDR.

[B] Place the Internal Container Attachment 1s and original packaging data sheet if applicable, behind the Final Container Attachment 1 in which it resides.

[C] Paginate the BDR.

[D] Complete Attachment 5.

4.3.4 Submit the in process BDR to the VE Expert. The VE Expert will designate ITR.

NOTE

The independent technical review is conducted by an individual who is qualified to have performed the initial work, but who is **NOT** directly responsible for performing the work. The ITR shall not be involved in the generation or recording of the data.

ITR

4.3.5 Enter the BDR Number on Attachment 2.

4.3.6 Review the BDR to the criteria in Attachment 2, **AND** document on Attachment 2.

4.3.7 Print name, sign, and date Attachment 2.

4.3.8 Submit the completed BDR and audio/video media, when applicable, in accordance with CCP-QP-008, *CCP Records Management*.

NOTE

The historical audio/media record may be submitted on a container basis (individual audio/video record per container) or pre-submitted as a library (audio/video records which contain multiple containers) to Central Characterization Program (CCP) Records.

4.4 Site Project Manager (SPM) Review

SPM

4.4.1 Obtain copy of BDR.

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4.4.2 Enter the BDR Number on Attachment 3.

4.4.3 Review the BDR to the criteria in Attachment 3, **AND** document on Attachment 3.

4.4.4 Print name, sign, and date Attachment 3.

4.4.5 Submit the completed Attachment 3 to CCP Records in accordance with CCP-QP-008.

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5.0 RECORDS

5.1 Records generated during the performance of this procedure are maintained as Quality Assurance (QA) records in accordance with CCP-QP-008. The records are the following:

5.1.1 <u>QA/Lifetime</u>

[A] Batch Data Report (BDR):

[A.1] Attachment 1, Visual Examination Data Form(s) (There will be multiple Attachment 1s to each BDR package.)

[A.2] Attachment 2, Visual Examination Independent Technical Reviewer Checklist

[A.3] Attachment 3, Visual Examination Site Project Manager Checklist

[A.4] Attachment 4, Visual Examination Batch Data Report Cover Sheet

[A.5] Attachment 5, Visual Examination Batch Data Report Table of Contents

[A.6] Copy of NCRs, if applicable

5.1.2 <u>QA/Nonpermanent</u>

[A] VHS Tape or DVD, as applicable

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Table 1. Prohibited Items List

LIST OF PROHIBITED ITEMS
Liquid Wastes Observable liquid shall be less than 1 percent by volume of the outermost container at the time of RTR or VE. Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. Observable liquid shall not be present in a container with EPA HWN U134 assigned.
Non-Radionuclide Pyrophorics
Non-mixed hazardous waste
Incompatible wastes (Wastes that are incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials, and/or other wastes).
Explosives
Compressed Gases/Pressurized containers (e.g., aerosol cans)
Observable liquid containing Polychlorinated Biphenyls
Ignitables
Corrosives
Reactive waste
Sealed containers greater than 4 liters
Heat-sealed bags not defined in the applicable RH-TRU Payload Appendices, Table 2.5.1
Sharp or heavy objects not adequately blocked, braced, or packaged
Waste that has ever been managed as high-level waste and waste from tanks specified in Table C-8 of CCP-PO-001.

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Table 2. Waste Material Parameters

Waste Material Parameter	Description
Iron-based Metals/Alloys (IM)	Iron and steel alloys in the waste; does not include the waste container materials
Aluminum-based Metals/Alloys (AM)	Aluminum or aluminum-based alloys in the waste materials
Other Metals (OM)	All other metals found in the waste materials
Other Inorganic Materials (OIM)	Nonmetallic inorganic waste including concrete, glass, firebrick, ceramics, sand, and inorganic sorbents
Cellulosics (C)	Materials generally derived from high-polymer plant carbohydrates; (e.g., paper, cardboard, wood, and cloth)
Rubber (R)	Natural or man-made elastic rubber gloves, latex materials; (e.g., surgeons' gloves, and leaded rubber gloves)
Plastics (waste materials) (P)	Generally man-made materials, often derived from petroleum feedstock; (e.g., polyethylene and polyvinylchloride)
Organic Matrix (OGM)	Cemented organic resins, solidified organic liquids and sludges
Inorganic Matrix (IGM)	Any homogeneous materials consisting of sludge or aqueous-based liquids that are solidified with cement, calcium silicate, or other solidification agents; (e.g., wastewater treatment sludge, cemented aqueous liquids, and inorganic particulates)
Soils/gravel (S)	Generally consists of naturally occurring soils that have been contaminated with inorganic waste materials

Attachment 1 – Visual Examination Data Form

	Site ID:				
	Examination Date:		Batch Number:		
	Procedure #:		Revision #:		Video Number:
	Recording Equipment Check: ☐SAT ☐UNSAT ☐N/A		Recording Start:	Recording Stop:	
Initial Container ☐ N/A			Final Container ☐ N/A		
	Container or Package ID Number:			Container or Package ID Number:	
	Container Type:			Container Type:	
	Waste Matrix Code:			Waste Matrix Code:	
	Waste Stream:			Waste Stream:	
				Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
				Rigid Liner Vented or Hole Size:	
	Percent Fill:	Percent Organic Waste:		Percent Fill:	Percent Organic Waste:
	Layers of Confinement:	Closure Method:		Layers of Confinement:	Closure Method:
	Comments (e.g., filter information, NCRs):				

Waste Description:

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number _____

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☐	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☐	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☐	
Does the container have observable liquid containing PCBs?	☐	☐	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☐	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☐	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☐	
Is there an indication of wastes containing explosives or compressed gases?	☐	☐	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☐	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☐	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☐	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☐	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☐	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☐	
Is the waste consistent with the TRUCON Code?	☐	☐	
Comments:			
Visual Examination Operator 1: _____ Print Name _____ Signature _____ Date			
Visual Examination Operator 2: _____ Print Name _____ Signature _____ Date			

Attachment 2 – Visual Examination Independent Technical Reviewer Checklist

Batch Data Report No.: _____

1. Were data generation and reduction conducted in a technically correct manner in accordance with the methods (procedure) used?	☐ NO	☐ YES	☐ N/A
2. Was the correct revision of the operating procedure used?	☐ NO	☐ YES	☐ N/A
3. Were all the transcription errors corrected?	☐ NO	☐ YES	☐ N/A
4. Are BDR contents complete and match the Visual Examination Batch Data report Table of Contents?	☐ NO	☐ YES	☐ N/A
5. Does the BDR include VE for no more than 20 containers?	☐ NO	☐ YES	☐ N/A
6. Is all data recorded signed and dated in reproducible ink?	☐ NO	☐ YES	☐ N/A
7. Is all raw data recorded clearly, legibly, and accurately?	☐ NO	☐ YES	☐ N/A
8. Are all changes to original data lined out, initialed and dated by the individual making the changes or an individual authorized to make the change?	☐ NO	☐ YES	☐ N/A
9. Is there an adequate written description of the contents?	☐ NO	☐ YES	☐ N/A
10. Were the recording equipment checks satisfactory?	☐ NO	☐ YES	☐ N/A
11. Has each container in this BDR been evaluated for the presence of prohibited wastes?	☐ NO	☐ YES	☐ N/A
12. Has the physical waste form in each container in this BDR been evaluated against the Waste Stream Description and the Waste Matrix Code?	☐ NO	☐ YES	☐ N/A
13. Have the RH Quality Assurance Objectives (QAOs) for VE been met?	☐ NO	☐ YES	☐ N/A
Precision – reconciled discrepancies between operators or between the operator and ITR.	☐	☐	☐
Accuracy – trained operators	☐	☐	☐
Representativeness – description of container contents	☐	☐	☐
Completeness – completed data form and/or recording	☐	☐	☐
Comparability – proper training and adequate AK source documents are available for unopened containers.	☐	☐	☐
14. Were NCRs generated included in the BDR?	☐ NO	☐ YES	☐ N/A
Comments:			

Independent Technical Reviewer:

_____ _____ _____

Printed Name Signature Date

Attachment 3 – Visual Examination Site Project Manager Checklist

Batch Data Report No.: _____

1. Has all the data received an independent technical review as evidenced by a completed checklist (Attachment 2) and the appropriate ITR signature?		☐ NO	☐ YES
2. Are BDR contents complete and match the Visual Examination Batch Data Report Table of Contents?		☐ NO	☐ YES
3. Is the BDR complete (appropriately filled in forms for each container)?		☐ NO	☐ YES
4. Have the RH Quality Assurance Objectives (QAOs) for VE been met? Precision – reconciled discrepancies between operators Accuracy – trained operators Representativeness – description of container contents Completeness – completed data form and/or recording Comparability – proper training and adequate AK for unopened containers		☐ NO ☐ NO ☐ NO ☐ NO ☐ NO ☐ NO	☐ YES ☐ YES ☐ YES ☐ YES ☐ YES ☐ YES
5. Were NCRs generated included in the BDR?	☐ NO	☐ YES	☐ N/A
Comments:			

SPM:

_____ _____ _____
Printed Name Signature Date

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Attachment 4 – Visual Examination Batch Data Report Cover Sheet

Batch Data Report No.: _____ Date: _____

Waste Container ID Number:	
1	
2	
3	
4	
5	
6	
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8	
9	
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11	
12	
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15	
16	
17	
18	
19	
20	

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Attachment 5 – Visual Examination Batch Data Report Table of Contents

Batch Data Report No.: _____ Date: _____

Item	Description	Page No.
1	Visual Examination Batch Data Report Cover Sheet (Attachment 4)	
2	Visual Examination Batch Data Report Table of Contents (Attachment 5)	
3	Visual Examination Data Forms (Attachment 1)	
4	Visual Examination Independent Technical Reviewer Checklist (Attachment 2)	
5	Copy of NCRs (N/A [If not applicable])	

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Attachment 6 – Waste Package Data Sheet (Example)

RH-TRU (30 Gallon Drum)
Waste Package Data Sheet

RW 81798
AGHCF Drum #: 849

Date Loaded: 6/4/02
Seal No.: 00849
Drum Vent No.: ANL-176

Combustible: (check)
Noncombustible: ✓ (check)
Loaded By: DPM

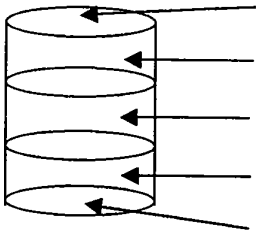
Top Waste Can No.: 324
Bottom Waste Can No.: 323
Drum packaging materials inspected by: JP
Total Weight of Loaded Drum: 115 lbs

Inner Pouch Vent No.: A-31-94
Outer Pouch Vent No.: A-56-94

Acceptable Smearable Levels: <20 dpm/100cm^2 alpha and 1000 dpm/100 cm^2 beta-gamma:

Inner Pouch Primary Seal (dpm/100 cm^2)	NCD	alpha	NCD	beta-gamma
Outer Pouch Secondary Seal (dpm/100 cm^2)	NCD	alpha	NCD	beta-gamma
Exterior of 30-gal Drum (dpm/900 cm^2) (large area smear)	NCD	alpha	NCD	beta-gamma

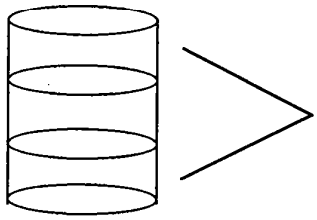
Radiation Levels from 30-gal Drum at 6 cm, R/hr, gamma:



top	~~0.75~~ 1.5
top third	4.4
middle third	4.4
bottom third	5.3
bottom	12

Survey meter used: RMS3
Serial Number: 263
Last Calibration: 3/02

Radiation Levels at Various Distances from Drum:



Distance from Drum:	1 m (3 ft)	.78 m (6 ft)
Gamma Rad. Level (mR/hr)	600	300
Survey Meter Used:	RMS3	RMS3
Serial No.:	263	263
Last Calibration:	3/02	3/02

Surveyed at the AGHCF by: S. Yan Location: AGHCF Date: 6-4-02

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CCP-TP-505

Revision 7

CCP
Removable Lid Canister Loading

EFFECTIVE DATE: 05/17/2013

Irene Joo

PRINTED NAME

APPROVED FOR USE

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RECORD OF REVISION

Revision Number	Date Approved	Description of Revision
0	12/13/2006	Initial issue.
1	03/15/2007	Revised to include 40 CFR part 761, Polychlorinated Biphenyls (PCBs) Manufacturing, Processing, Distribution in commerce, and use prohibitions: Marking of PCB's and PCB Items § 761.40 and 40 CFR 761.40, marking as references.
2	03/13/2008	Revised to incorporate Nonconformance Report (NCR) checks and editorial changes.
3	08/20/2008	Revised to incorporate addition for obtaining Removable Lid Canister (RLC) gross weights from facility specific documentation.
4	02/19/2009	Revised to align the Waste Certification Official (WCO) build list generation steps and editorial changes.
5	07/27/2009	Revised to clarify inspection steps, labeling sequencing, addition of rigging steps, and editorial changes.
6	11/16/2010	Revised to incorporate Gasket Shelf Life criteria and editorial changes.
7	05/17/2013	Revised to incorporate Nuclear Waste Partnership (NWP) transition changes and to incorporate steps for inspection requirements from RLC-MAN-0001, *Removable Lid Canister Handling and Operation Manual*.

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1.0 PURPOSE

This procedure provides technical requirements and instructions for loading remote-handed (RH) containers into the Removable Lid Canister (RLC) for shipment in the RH-Transuranic (TRU) 72-B Cask for the Central Characterization Program (CCP).

1.1 Scope

This procedure implements the requirements of RLC-MAN-0001, *Removable Lid Canister Handling and Operation Manual*.

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2.0 REQUIREMENTS

2.1 References

Baseline Documents

- Title 40 *Code of Federal Regulations* (CFR), *Protection of Environment*, Part 262, *Standards Applicable to Generators of Hazardous Waste*
- Title 40 CFR Part 262 § 262.31, *Labeling*
- Title 40 CFR Part 262 § 262.32, *Marking*
- Title 40 CFR Part 761, *Polychlorinated Biphenyls (PCBs) Manufacturing, Processing, Distribution in Commerce, and use Prohibitions*
- Title 49 CFR, *Transportation*, Part 172, *Hazardous Materials Table, Special Provisions, Hazardous Materials Communications, Emergency Response Information, Training Requirements, and Security Plans* Subpart D, *Marking* § 172.300 through 172.338
- Title 49 CFR, Part 172, Subpart E, *Labeling* § 172.400 through 172.450
- CCP-PO-002, *CCP Transuranic Waste Certification Plan*
- CCP-TP-507, *CCP Shipping of Remote-Handled Transuranic Waste*
- DOE/WIPP 02-3283, *RH Packaging Program Guidance*

Referenced Documents

- Title 10 CFR, *Energy*, Chapter III, *Department of Energy*, Part 835, *Occupational Radiation Protection Appendix D*
- Title 40 CFR § 761.40 *(Subpart C-Marking of PCBs and PCB Items)*
- CCP-PO-505, *CCP Remote-Handled Transuranic Waste Authorized Methods for Payload Control (CCP RH-TRAMPAC)*
- CCP-QP-002, *CCP Training and Qualification Plan*

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- CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control*
- CCP-QP-008, *CCP Records Management*
- DOE/WIPP 02-3284, *RH Packaging Operations Manual*
- RLC-MAN-0001*, Removable Lid Canister Handling and Operation Manual*

2.2 Training Requirements

2.2.1 CCP Personnel performing this procedure will be trained and qualified in accordance with CCP-QP-002, *CCP Training and Qualification Plan,* prior to performing this procedure.

2.3 Recommended Tools

- Six or 12-point thin wall sockets (for filter vents and pipe plugs,)
- 5/16-inch (in.) hex drive (for pintle cap screws)
- 3/8-16 UNC tap
- ½-13 UNC tap
- 5/8-in. hex drive (for sealed spring plunger installation/removal)
- Ratchet drive wrench
- Calibrated torque wrench(es) of appropriate range
- RLC Lid installation/removal tool – in certain applications a manual tool or T-bar with a 1-inch hex drive may be used to open or close the RLC
- RLC Empty Lift Fixture (WTS Drawing 411-L-013)
- Facility Grapple Assembly, lid latching tool, or appropriately rated slings (for lifting and maneuvering the RLC)
- Canister Storage Stand or equivalent
- Drum handling bags/slings (up to 3 per RLC)
- Calibrated Load Cell

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- RLC Inspection Stand or equivalent
- Flexible spatula, putty knife, or similar tool

2.4 Recommended Spare Parts

- Socket head cap screws (3/8-16 UNC x 2 in. long)
- O-ring, as applicable
- Lid Gasket (cellular rubber)
- Pipe plugs
- Filter vents, as authorization in accordance with step 2.6.8
- Sealed spring plungers

NOTE

Filter Vents and Pipe Plugs - for sealing the threads of the filter vents and pipe plugs, a thread sealant tape or compound is recommended. However, a liquid anaerobic thread sealant is acceptable.

2.5 Recommended Supplies (Commercially Available)

- Spray silicone, silicone grease, or other Nuclear Waste Partnership (NWP) approved lubricant for lubrication of gasket
- Isopropyl or denatured alcohol
- Soft lint-free cloths
- Thread lubricant
- Petroleum jelly or other NWP approved rust inhibitor/assembly aid for lubrication of lid flange and body flange only
- Touch-up paint (aerosol enamel, white)
- Thread locking compound, LOCTITE® 243 (for sealed spring plungers) or approved equivalent
- Gasket joint splicing compound, LOCTITE® 598 or approved equivalent

- Multipurpose spray adhesive (3M® 77 or NWP Engineering approved equivalent)
- General purpose adhesive remover (containing an approximate equal mixture of Naptha and Xylene)

2.6 Precautions and Limitations

2.6.1 Removable surface contamination on the outer surfaces of the RLC shall **NOT** exceed the values in Title 10 CFR, *Energy*, Chapter III, *Department of Energy*, Part 835, *Occupational Radiation Protection Appendix D* (20 disintegrations per minute [dpm]/100 square centimeters [cm^2] alpha, 200 dpm/100cm^2 beta/gamma).

2.6.2 The Transportation Certification Official (TCO) shall be notified if any of the following items are exceeded:

[A] Radiation dose rates exceed 1,000 roentgen equivalent man (rem) per hour at contact (beta+gamma+neutron).

[B] Alpha contamination survey results exceed 20 dpm/100 cm^2.

[C] Beta/gamma contamination survey results exceed 200 dpm/100 cm^2.

2.6.3 Each waste container to be canisterized shall be verified to meet RH packaging requirements before loading into the RLC.

2.6.4 If hardware replacement is required, replacement hardware shall meet the requirements of the assembly/manufacturing drawing.

2.6.5 If the use of dunnage, blocking, or bracing has been determined to be applicable to the payload, the shipper shall assume the responsibility of ensuring that large, bulky, sharp, or heavy objects are blocked or braced appropriately on a case-by-case basis. This includes the blocking or bracing of objects inside drums. Dunnage drums shall be required when the RLC payload consists of one or two drums only. All dunnage, blocking, or bracing shall meet the requirements of CCP-PO-505, *CCP Remote-Handled Transuranic Waste Authorized Methods for Payload Control (CCP RH-TRAMPAC).*

2.6.6 RLCs should be stored indoors whenever possible. If outdoor storage is unavoidable, then the RLCs should be covered and stored on blocks to prevent corrosion and the ingress of water. The user shall perform a pre-use inspection of the RLC to ensure packaging integrity has been maintained during outdoor storage.

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2.6.7 All drums shall be closed in accordance with the intended function of the drum closure mechanism. The RLC clearance diameter is 24-5/8 inch. The maximum clearance dimension of the drum and locking mechanism must fit within this dimension.

2.6.8 The RLC requires a minimum of one ¾ in. National Pipe Straight Mechanical (NPSM), gasketed filter vent; up to four filter vents may be used per RLC to achieve the minimum hydrogen diffusivity of 1.48E-5 (mols per second per mol [mols/s/mol] fraction at 25 degrees Celsius [°C]) as specified in the Safety Analysis report for the RH-TRU 72-B Shipping Package and as authorized by the CCP RH-TRAMPAC.

2.6.9 When loading the RLC canister into RH-TRU 72-B Cask and limited crane hook heights are encountered, the RLC gross weight values obtained in this procedure may be transferred to the applicable attachments in DOE/WIPP 02-3284, *RH Packaging Operations Manual*. The load cell usage in DOE/WIPP 02-3284 for weighing the RLC a second time would be optional. The weighing of the RLC using a calibrated Load Cell meets the requirement for weighing the RLC in the DOE/WIPP 02-3284, thus a second weighing operation is redundant. This will also help to reduce additional radiation exposure to the operators As Low As Reasonably Achievable (ALARA).

2.6.10 Only qualified personnel shall be permitted to handle, rig, transport, or otherwise use the packaging. The user shall be responsible for determining qualifications of individuals.

2.7 Prerequisite Actions

2.7.1 Verify equipment pre-operational inspections have been completed using site-specific procedures.

2.7.2 Verify drums are not listed on the site-specific CCP Nonconformance Report (NCR) by checking the Secure File Transfer Protocol (sftp) link. If a drum is found on the site-specific NCR, the TCO and Waste Certification Official (WCO) will be notified and the applicable loading operation on the specific RLC will be suspended, until the issue is resolved.

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3.0 RESPONSIBILITIES

3.1 Host Site Supervisor

3.1.1 Supervises preparation of the loading area by Host site personnel.

3.1.2 Coordinates loading activities.

3.1.3 Reviews and signs Attachment 1, RLC Loading Form.

3.2 Canister Loading Operator

3.2.1 Prepares the waste canister for loading.

3.2.2 Loads the waste canister per WCO loading instructions.

3.2.3 Completes and signs Attachment 1.

3.3 Radiological Control Technician (RCT)

3.3.1 Performs radiation and contamination surveys of loaded waste canisters.

3.4 Peer Verifier

3.4.1 Verifies containers to be loaded into RLC match the container numbers listed on Attachment 1.

3.4.2 Reviews and signs Attachment 1.

3.5 Transportation Certification Official (TCO)

3.5.1 Interfaces with Host site personnel when listed radiation/contamination values are exceeded.

3.5.2 Interfaces with Host site personnel when container integrity issues arise.

3.5.3 Assists in NCR generation/resolution from issues arising from packaging issues.

3.6 Waste Certification Official (WCO)

3.6.1 Selects waste containers for canisterization.

3.6.2 Provides Host site personnel with loading instructions for waste canisters.

3.6.3 Assists in disposition of NCRs.

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4.0 PROCEDURE

4.1 Preparing Waste Canister for Loading

NOTE

The RLC can be moved and stored horizontally while it is in the shipping crate. Once unpackaged, the RLC should be stored vertically and must be moved vertically with a grapple, slings, lifting tool, or snares attached to the pintle only.

NOTE

If during the unpacking operations damage is found on the exterior of the RLC, unpacking operations will be STOPPED and the supervisor/TCO will be contacted.

NOTE

Labels may be installed at anytime prior to step 4.1.3.

NOTE

During inspections, if damage is found that could affect the containment integrity of the packaging, then the supervisor/TCO will be contacted, and an NCR will be generated in accordance with CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control.*

<u>Canister Loading Operator</u>

4.1.1 RLC Unpacking

[A] Obtain RLC Loading Instructions from WCO.

[B] With the RLC crate positioned horizontally in a suitable location for unpackaging, remove the top and end panels of the crate to gain access to the RLC (if applicable).

[C] Inspect the bottom of the RLC for damage.

[D] Ensure the RLC lid is in the locked position.

[E] Using an overhead hoist/crane and the appropriately rated rigging attached to the pintle, lift the RLC out of the crate.

NOTE

If using the silo as the inspection stand, the accessible exterior surfaces of the RLC are inspected for damage, prior to placing the RLC into the silo.

[F] Place RLC into RLC Inspection Stand (or equivalent).

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[G] Secure the RLC to the RLC Inspection Stand (or equivalent).

[H] Remove the grapple/rigging from lid (if applicable).

[I] Verify absence of a HOLD TAG.

[J] Inspect all accessible exterior surfaces of the RLC for damage.

[K] Record RLC Canister ID on Attachment 1 (from WCO Loading Instruction).

[L] Verify the RLC Lid and Body Serial Numbers match, **AND** record the RLC Serial Number on Attachment 1.

[M] Retract the sealed spring plungers to allow the lid to rotate.

[N] Using the appropriate tool, rotate the lid counterclockwise approximately 22.5 degrees until the alignment mark on the lid lines up with the mark on the body labeled “U” indicating the lid is in the unlocked position and can be removed.

[O] Ensure a grapple, lid latching tool, **OR** suitable rigging, capable of lifting 500 pounds (lbs)., is attached to the lid pintle cap.

WARNING

Fingers should be kept clear of the pinch points present between lid and body.

[P] Lift the lid upward/off and clear of the RLC body shell flange.

WARNING

NO body part should extend under the suspended load (RLC lid).

[Q] Inspect the bottom surfaces of the lid to ensure there is NO scratching or gouging of the metal.

[R] Inspect the RLC lid and body flange for presence of debris **AND** remove debris if found.

[S] Set the lid down in a manner that will protect the interfacing surfaces.

[T] Ensure pipe plugs and filter(s) are removed from the lid.

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NOTE

The quantity of filters installed, from one to four, is governed by the minimum specifications for total hydrogen diffusivity (see step 2.6.8). The unused filter ports shall be sealed with ¾-in. National Pipe Thread (NPT) socket recessed pipe plugs per the following:

[U] Install filters and plugs per the following:

[U.1] Record Filter Type Number, Filter Serial Number(s), and Filter Installation Date on Attachment 1.

[U.2] Apply a generous amount of pipe thread sealant compound or sealant tape to the threads of the filter(s) to be installed.

[U.3] Install filter(s) into the threaded port(s) of the pintle base of the RLC lid.

[U.4] Torque each filter to 180 lbs-in. (15 lbs-feet [ft]) or as specified by the manufacturer.

[U.5] Apply a generous amount of pipe thread sealant compound or sealant tape to the threads of each pipe plug(s).

[U.6] Install each pipe plug into the pintle base ports, **AND** torque to 300 ± 50 lbs-in. (25 ± 4 lbs-ft).

[U.7] Remove all excess pipe plug sealant from the exterior of the container.

[U.8] Record Torque Wrench Serial Number(s) and Calibration Due Date(s) on Attachment 1.

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NOTE

Steps in Section 4.1.2 can be performed in parallel.

4.1.2 Maintenance and Inspection of RLC

NOTE

During the inspection of the container, if defective parts or components are identified, the RLC shall **NOT** be used until components are replaced with materials meeting the original specification requirements to maintain U.S. Department of Transportation (DOT) 7A certification. The Replacement parts are available from the manufacturer.

[A] Inspect the pintle cap for damage **OR** signs of fatigue, **AND** replace if such signs are found in accordance with RLC-MAN-0001.

[A.1] **IF** pintle cap screws are found to be loose, **THEN** torque pintle cap screws to 500+/- 50 lb-in (41.5 +/- 4 lb-ft).

[A.2] **IF** pintle cap screws were torqued, **THEN** record the Torque Wrench Serial Number, **AND** Calibration Due Date on Attachment 1.

[B] Inspect the sealed spring plungers in the RLC lid flange to confirm they are installed in an unimpaired condition.

[C] Inspect the gasket for defects (uneven or deformed sealing surfaces due to cuts, gouges, or missing material), **AND** replace with a new gasket when needed per the following:

[C.1] Using a flexible spatula, putty knife, or similar tool; clean the lid flange gasket seating area thoroughly by removing any residual gasket components or adhesive.

[C.2] Apply a light coat of denatured alcohol or a general purpose adhesive remover to remove residual adhesive from the lid flange gasket seating area.

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[C.3] Verify that the gasket shelf life has not expired or is within the allowable shelf life range
(See Attachment 3, Gasket Shelf Life, Storage, and Adhesive, of this procedure).

[C.4] Place the new gasket in a circle around the lid with the self-adhesive/protective tape facing the lid flange.

[C.5] Remove the self-adhesive protective tape from the gasket while seating the gasket against the lid flange.

[C.6] Verify the gasket final installation to assure the gasket and lid sealing surfaces are clean, free of dirt, foreign particles, or other contaminants.

[D] Inspect the body shell flange for cleanliness, **AND** clean if needed using denatured alcohol.

[E] Inspect RLC interior and exterior surfaces for signs of damage, distortion, or signs of corrosion.

[F] Inspect accessible areas of the RLC body and lid to ensure they are free of moisture and debris.

[G] **IF** the lid/body interfaces are dry (without lubricant),
THEN apply a light coat of spray silicone to the lid/body interfaces.

[H] **WHEN** maintenance and inspections are completed satisfactorily,
THEN print name, sign, and date Attachment 1.

4.1.3 Marking and Labeling

NOTE

Each canister shall be labeled with a unique payload canister identification (ID) number that includes a site identifier as a prefix. The characters composing the canister ID number shall be approximately two inches high and of a color contrasting with their background. Canister ID numbers shall be placed at approximately equal intervals around the circumference of the canister and within 18 inches of the top of the canister. Variances from these requirements require Carlsbad Field Office (CBFO) approval.

[A] Mark and label the RLC as follows:

[A.1] Minimum of three canister ID numbers.

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[A.2] Minimum of one Caution Radioactive Material label.

[A.3] Minimum of one, when applicable, Hazardous Waste and U.S. Environmental Protection Agency (EPA) Hazardous Waste Number(s) label.

[A.4] Minimum of one, when applicable, Polychlorinated Biphenyl (PCB) label in accordance with 40 CFR § 761.40 (*Subpart C-Marking of PCBs and PCB Items*).

NOTE

Section 4.2 is only required when the RLC is to be moved to another location for loading/storage and when other movements are required (i.e., movement of RLC into storage rack insert, hold areas, etc.).

NOTE

When movement of the RLC is required, some of the steps in Section 4.2 may have been completed previously during the process. Canister Loading Operators are to verify step completion prior to movement (i.e., verifying the lid is in the locked position, verifying the rigging is properly installed).

4.2 RLC Lid Installation/Removal for Movement in and out of Loading Area

4.2.1 RLC Lid Installation

[A] Ensure the RLC is secured in the RLC Inspection Stand (or equivalent).

CAUTION

To prevent damage to the closure interfaces, the lid must be kept as level as possible during installation.

[B] Ensure a grapple, lid latching tool, **OR** suitable rigging, capable of lifting 500 lbs., is attached to the lid pintle cap.

[C] Lift the lid above the container.

[D] Position the lid so the lid alignment mark is positioned over the mark on the body flange labeled “U.”

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NOTE

Sufficient time will be allowed for air to escape the RLC as the lid is lowered into the body.

[E] Lower the lid slowly onto the body flange until fully seated on the gasket, keeping the mark on the lid aligned with the mark on the body flange.

[F] Remove the grapple/rigging from lid (if applicable).

[G] Using the appropriate tool, rotate the lid clockwise approximately 22.5 degrees until the mark on the RLC lid aligns with the mark on the RLC body labeled “L”, and the sealed spring plungers lock into the detents of the body flange.

[H] Ensure a grapple, **OR** suitable rigging is attached to the lid pintle cap.

[I] Ensure the securing device in the RLC Inspection Stand or equivalent is released.

[J] If required, move the RLC to the loading area.

4.2.2 RLC Lid Removal

[A] Ensure the RLC is secured in the RLC Inspection Stand (or equivalent).

[B] Remove the grapple/rigging from lid (if applicable).

[C] Retract the sealed spring plungers to allow the lid to rotate.

[D] Using the appropriate tool, rotate the lid counterclockwise approximately 22.5 degrees until the alignment mark on the lid lines up with mark on the body labeled “U” indicating the lid is in the unlocked position and can be removed.

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[E] Ensure a grapple, lid latching tool, **OR** suitable rigging, capable of lifting 500 lbs., is attached to the lid pintle cap.

WARNING

Fingers should be kept clear of the pinch points present between lid and body.

[F] Lift the lid upward/off and clear of the RLC body shell flange.

[G] Set the lid down in a manner that will protect the interfacing surfaces.

[H] Remove the grapple/rigging from lid (if applicable).

4.2.3 Canisterization of Waste Containers

[A] **IF** dunnage is part of the payload,
THEN inspect to ensure the following, **AND** check appropriate blocks on Attachment 1:

- Container is empty
- Container is dry
- Container vent port plug removed

[B] **IF** dunnage is part of the payload,
THEN record dunnage container weight in lbs. on Attachment 1.

[C] Record RH Waste Container Numbers that are to be loaded into RLC on Attachment 1.

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NOTE

The sealing surfaces of the RLC will be protected from damage while loading RH waste containers.

NOTE

For reducing excess radiation exposure to the RH-TRU 72-B Cask Operators ALARA, high dose rate drums may be loaded in the bottom of the RLC. ALARA issues take precedence over weight distribution.

NOTE

To prevent the RLC from being top-heavy, drums will be loaded in the RLC such that the weight is distributed as evenly as possible so that the center-of-gravity is close to center of the RLC.

NOTE

Peer verification can occur simultaneously as the drums are removed from shielding and placed into RLC.

Operator

[D] Verify RH waste containers to be loaded into RLC match numbers on Attachment 1, **AND** initial Attachment 1.

Peer Verifier

[E] Verify RH waste containers to be loaded into RLC match numbers on Attachment 1, **AND** initial Attachment 1.

Canister Loading Operator

[F] Place specified RH waste containers and dunnage (if applicable) into the RLC using appropriate rigging.

Peer Verifier

[G] Print name, sign, and date Attachment 1.

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Canister Loading Operator

4.2.4 RLC Closure

CAUTION

To prevent damage to the closure interfaces, the lid must be kept as level as possible during installation.

[A] Ensure the RLC is secured in the RLC Inspection Stand (or equivalent).

[B] Attach a grapple, lid latching tool, **OR** suitable rigging, capable of lifting 500 Ibs., to the lid pintle cap.

[C] Lift the lid above the container.

[D] Position the lid so that the lid alignment mark is positioned over the mark on the body flange labeled “U.”

NOTE

Sufficient time will be allowed for the air to escape the RLC as the lid is lowered into the body.

[E] Lower the lid slowly onto the body flange until fully seated on the gasket, keeping the marks on the lid aligned.

[F] Remove the grapple/rigging from lid (if applicable).

[G] Using the appropriate tool, rotate the lid clockwise approximately 22.5 degrees until the mark on the RLC lid aligns with the mark on the RLC body labeled “L” and the sealed spring plungers lock into the detents of the body flange.

[H] Record RLC closure date on Attachment 1.

[I] Ensure a grapple, **OR** suitable rigging, and load cell (if applicable) are attached to the lid pintle cap.

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NOTE

Steps 4.2.4[J] and 4.2.4[K] may be omitted if certified weights of the RLC, waste drums, and any packing material is available from the generator site. The generator site documentation, with the components, weights, and calibrated load-cell information, will be submitted to the WCO, TCO, and CCP Records as part of the data package. The gross weight obtained from the generator site documentation will be recorded on Attachment 1. The words "See Attached" will be written in the load cell serial number and calibration due date blanks, on Attachment 1.

[J] Raise the RLC to obtain gross weight and record on Attachment 1.

[K] Record Load Cell serial number and Calibration Due Date on Attachment 1.

RCT

[L] Perform dose rate and contamination survey of RLC.

[M] **IF** any of the following are exceeded,
THEN notify the TCO:

[M.1] Radiation dose rate exceeds 1000 rem per hour (beta - gamma + neutron) at contact.

[M.2] Alpha contamination survey results exceed 20 dpm/100 cm^2.

[M.3] Beta/gamma contamination survey results exceed 200 dpm/100 cm^2.

[N] Place RLC into canister storage stand, silo, or 72-B Cask (as required).

[O] Document survey results on Radiological Survey Report (see Attachment 2, Radiological Survey Report for an example) per Host site procedure in accordance with Title 10 CFR 835.

Canister Loading Operator

[P] Print name, sign, and date Attachment 1.

Supervisor

[Q] Print name, sign, and date Attachment 1 signifying completion of Attachment 1.

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Supervisor or Designee

NOTE

E-mail notifications can be made in lieu of Fax notifications. E-mail addresses can be obtained by contacting the WCO.

[R] Fax copy of Attachment 1, Radiological Survey Report, and any Generator Site Documentation of RLC Gross Weight (if applicable) to WCO.

[S] Provide copy of Attachment 1, Radiological Survey Report, and any Generator Site Documentation of RLC Gross Weight (if applicable) to TCO.

[T] Submit copy of Attachment 1, Radiological Survey Report, and any Generator Site Documentation of RLC Gross Weight (if applicable) to CCP Records in accordance with CCP-QP-008.

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5.0 RECORDS

5.1 Records generated during the performance of this procedure are maintained as quality assurance (QA) records in accordance with CCP-QP-008. The records are the following:

5.1.1 <u>QA/Nonpermanent</u>

[A] Attachment 1, RLC Loading Form

[A.1] Copy of Radiological Survey Report

[A.2] Copy of Generator Site Documentation of RLC Gross Weight (if applicable)

Attachment 1 – RLC Loading Form Page 1 of 1

RLC Inspection

RLC Canister ID: _____

RLC Serial Number: _____

Filter Type Number	Filter Serial Numbers	Date Filter Installed
1	1	1
2	2	2
3	3	3
4	4	4

Pintle Cap Screws

Torque Wrench Serial Number:_____Cal Due Date:_____

Filters/Pipe Plugs

Torque Wrench Serial Number:_____Cal Due Date:_____

Maintenance/Inspections Complete

Canister Loading Operator

Printed Name_____Signature_____Date _____

Dunnage Container is empty? YES ☐ NO ☐ NA ☐

Dunnage Container is dry? YES ☐ NO ☐ NA ☐

Dunnage Container vent port plug removed? YES ☐ NO ☐ NA ☐

Dunnage Container Weight in pounds (lbs) : _____

RH Waste Container Numbers	Operator Initials	Peer Verifier Initials

Peer Verifier – Waste containers loaded into RLC match RH Waste Container Numbers listed above.

Printed Name _____Signature_____Date_____

RLC Closure Date:_____

Gross Weight in pounds (lbs) :_____
Load Cell Serial Number:_____ Calibration Due Date:_____

Canister Loading Operator

Printed Name _____Signature_____Date _____

Supervisor

Printed Name _____Signature_____Date_____

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Attachment 2 – Radiological Survey Report (Example)

Radiation & Contamination Survey Form

CM-P-RP-306 Rev. 4, Radiation/Contamination Surveys

SURVEY NO: 09-SUR-00423

PAGE 1 OF 2 PAGES

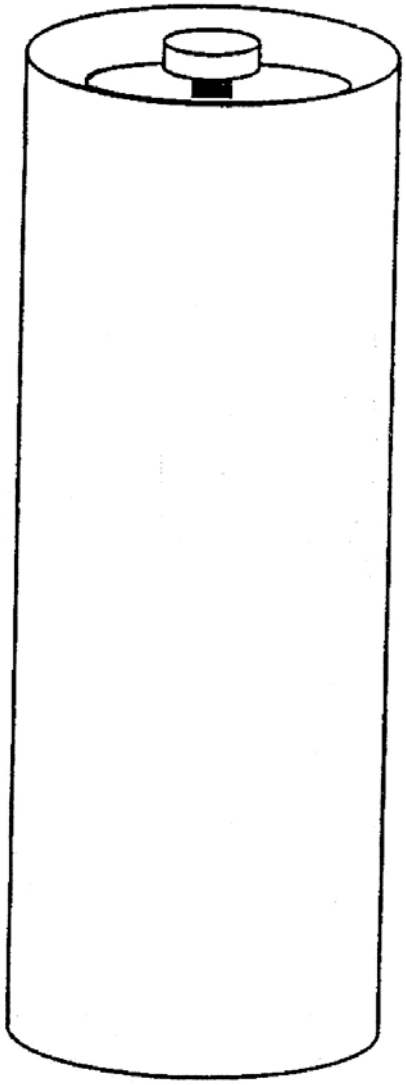
Instruments Used

Instrument Type	Serial Number	Cal Due Date	Alpha Eff.	Beta Eff.
LM 12-4 / LM 42-31	215331 / 215331	04/24/09	N/A	N/A
LM-78 / LM-78	238300 / 238300	05/14/09	N/A	N/A
Tennelec 5XLB	78474 - Unit 1	10/29/09	N/A	N/A
FHT 6020 / FHZ 612	934 / 42540 925	03/03/09	N/A	N/A
FHT 6020 / FHT 762-V	934 / 45540 100	03/03/09	N/A	N/A

LOCATION / TYPE: RH 72-B Canister

PURPOSE: Job Coverage

DATE/TIME: 02/20/09 20:13 RWP/ALARA: 09-TRU-012R0



72-B Canister
OR-ØØØ1

Highest gamma dose rate
1,900 mR/hr

Highest neutron dose rate
450 mRem/hr

Total gamma+neutron
2,350 mRem/hr

COPY

*On Contact (OC) or OC/30cm (#) Smear # LAS # Direct

REMARKS: All dose rates in mR/hr gamma and mrem/hr neutron unless otherwise noted. LAS in dpm/probe, smears in dpm/100 sq. cm.

RCT SIGNATURE: J. Styre

RCO SIGNATURE: S. Byers for M. Littleton Scott Byers Date: 2/20/09

The signature(s) on this sheet are that of the responsible technician(s) who certify that the data recorded represent the readings, measurements, and/or observations at the time indicated.

Attachment 2 – Radiological Survey Report (Example) (Continued)

T-CM-FW-P-RP-306 Radiation/Contamination Surveys **Sample Report** Page 2 of 2

Survey Number: 09-SUR-00423

Batch ID:	Smears - 200902201930	**Count Date:**	2/20/2009
Group:	A	**Count Minutes:**	0.8
Device:	S5XLB, Unit 1-SN 78474	**Count Mode:**	Simultaneous
Batch Key:	8,421	**Operating Volts:**	1440
Selected Geometry:	5/16" Stainless Steel		

Background (cpm)			Efficiency (%)			Spillover (%)		
Alpha Rate:	0.21	± 0.02	**Alpha:**	31.95	± 0.26	**Alpha to Beta:**	6.10	± 0.00
Beta Rate:	4.17	± 0.09	**Beta:**	40.54	± 0.14	**Beta to Alpha:**	0.07	± 0.00

Sample ID	Sample Type	Alpha (dpm)	Unc	Alpha MDA (dpm)	Beta (dpm)	Unc	Beta MDA (dpm)
20090220193051-A1	Unknown	-0.66	0.06	16.75	-3.67	4.66	28.00
20090220193342-A2	Unknown	-0.66	0.06	16.74	-6.96	3.30	28.00
20090220193432-A3	Unknown	-0.66	0.06	16.74	-6.96	3.30	28.00
20090220193532-A4	Unknown	-0.66	0.06	16.76	-0.38	5.70	28.00
20090220193632-A5	Unknown	-0.65	0.06	16.73	-10.25	0.23	28.00
20090220193732-A6	Unknown	-0.66	0.06	16.74	-6.96	3.30	28.00
20090220193832-A7	Unknown	-0.66	0.06	16.74	-6.96	3.30	28.00
20090220193922-A8	Unknown	3.51	4.17	16.75	-3.87	4.66	28.20
20090220194022-A9	Unknown	3.52	4.17	16.74	-7.16	3.30	28.20
20090220194122-A10	Unknown	3.52	4.17	16.74	-7.16	3.30	28.20

Reviewed by: J. STYRE / J. Styre S. Byers Scott A Byers

C:\Program Files\Tennelec Systems\Eclipse\sample report.rpt

Print Date 2/20/2009
Print Time 7:42:35PM

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Attachment 3 – Gasket Shelf Life, Storage, and Adhesive

The information in this section has been approved by the manufacturer of the RLC gaskets, and is intended to clarify the allowable shelf life of RLC gaskets based on the gasket material only, exclusive of the adhesive. Justification for use of gaskets beyond the shelf-life provided by the gasket manufacturer is based on the following:

The gasket shelf life is indicated on the Certificate of Conformance (C of C) provided by the gasket manufacturer. According to the gasket C of C, the shelf life for the RLC lid gasket is limited to two years due to the shelf life of the pressure sensitive adhesive (PSA). The RLC gasket material itself has a shelf life of up to five years, providing the gaskets have been stored in accordance with the conditions described in this section.

The PSA on the RLC gasket is used as an operational aid for holding the gasket in place during installation. The PSA serves no other purpose, and is not considered to be part of the containment boundary or the Type A packaging design.

To maximize the shelf life of RLC gaskets, the gaskets should be stored in a dry location where they are protected against light, radiation, humidity, and vapors. The ideal storage temperature is 70° Fahrenheit (F) ± 10°F although storage temperatures between 60°F and 90°F are acceptable.

RLC gaskets, whether installed or not may be used beyond the shelf life of the PSA, providing less than five years has elapsed from date of manufacture, and they meet the inspection criteria in Section 4.1.2 [C].

If the RLC gasket meets the shelf life criteria of this section and the inspection criteria in Section 4.1.2 [C], but the PSA adhesion is inadequate, spray adhesive, 3M® 77, (or NWP Engineering approved equal) may be used to adhere the gasket to the RLC lid.

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CCP-TP-506

Revision 2

CCP
Preparation of the Remote-Handled Transuranic Waste Acceptable Knowledge Characterization Reconciliation Report

EFFECTIVE DATE: 06/08/2006

Eric D'Amico

PRINTED NAME

APPROVED FOR USE

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RECORD OF REVISION

Revision Number	Date Approved	Description of Revision
0	04/28/2006	Initial issue.
1	05/05/2006	Revised to address Carlsbad Field Office (CBFO) Document Review Record (DRR) comments.
2	06/08/2006	Revised to reference the correct line numbers for completing the attachments.

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1.0 PURPOSE

Prior to shipment of Remote-Handled (RH) Transuranic (TRU) waste, the Central Characterization Project (CCP) will reconcile the data in accordance with the requirements of DOE/WIPP-02-3214, *Remote-Handled TRU Waste Characterization Program Implementation Plan* (WCPIP). Data reconciliation is required in order for the Site Project Manager (SPM) to complete the Acceptable Knowledge (AK) Characterization Reconciliation Report (CRR).

1.1 Scope

This procedure provides the methodology for data reconciliation with the Data Quality Objectives (DQOs) provided in the WCPIP, following data validation and verification by the SPM. This reconciliation is performed at the waste stream or waste stream lot level. This procedure provides instructions for the completion of the CRR. The CRR for an RH TRU waste stream shall be submitted to the U.S. Department of Energy (DOE)/Carlsbad Field Office (CBFO) for approval prior to shipment of that RH TRU waste stream to the Waste Isolation Pilot Plant (WIPP).

2.0 REQUIREMENTS

2.1 References

Baseline Documents

- *Waste Isolation Pilot Plant Land Withdrawal Act* (Public Law 102-579)

Referenced Documents

- DOE/WIPP 02-3214, *Remote-Handled TRU Waste Characterization Program Implementation Plan*
- DOE/WIPP 94-1012, *Quality Assurance Program Document*
- CCP-PO-002, *CCP Transuranic Waste Certification Plan*
- CCP-QP-002, *CCP Training and Qualification Plan*
- CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control*
- CCP-QP-008, *CCP Records Management*
- CCP-TP-005, *CCP Acceptable Knowledge Documentation*

2.2 Training Requirements

2.2.1 Personnel performing this procedure will be trained and qualified in accordance with CCP-QP-002, *CCP Training and Qualification Plan*, prior to performing this procedure.

2.3 Equipment List

2.3.1 None.

2.4 Precautions and Limitations

2.4.1 None.

2.5 Prerequisite Actions

2.5.1 Ensure the AK Summary Report for the subject waste stream of the CRR is approved.

2.6 Definitions

2.6.1 None.

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3.0 RESPONSIBILITIES

NOTE

Implementation of this procedure requires four positions as follows: Acceptable Knowledge Expert (AKE), CCP Records Custodian, Site Project Quality Assurance Officer (SPQAO), and SPM.

3.1 Site Project Quality Assurance Officer (SPQAO)

3.1.1 Reviews the AK Summary Report, confirmatory test data, and identified AK discrepancies and prepares an AK Accuracy Report.

3.2 Site Project Manager (SPM)

3.2.1 Ensures that all data generated and used in decision making meet the DQOs provided in the WCPIP.

[A] Assesses whether data of sufficient type, quality, and quantity have been collected.

[B] Determines that all DQOs and Quality Assurance Objectives (QAOs) have been met.

[C] Documents DQO and QAO compliance in the CRR and provides the CRR to DOE/CBFO prior to shipment of the waste to the WIPP.

3.3 Acceptable Knowledge Expert (AKE)

3.3.1 Compiles the AK information for the waste stream being characterized.

3.3.2 As the waste stream is characterized, confirms the AK information with the characterization data collected.

3.3.3 For the completion of the CRR (conducted in accordance with this procedure), provides assistance to the SPM.

3.3.4 Reviews the CRR.

3.3.5 Provides a signature release on Attachment 5, Remote-Handled Characterization Reconciliation Report Cover Sheet EXAMPLE, verifying that the AK information contained in the CRR is correct.

3.4 CCP Records Custodian

3.4.1 Provides records requested by the SPM and AKE during the generation of the CRR in accordance with CCP-QP-008, *CCP Records Management*.

3.4.2 Receives and processes all records generated by this procedure in accordance with CCP-QP-008.

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4.0 PROCEDURE

4.1 Establishing CRR Scope

SPM

NOTE

The CRR scope is an objective determination based on the size of the waste stream and the number of containers for which characterization has been completed and which are available to be included in the CRR.

4.1.1 Determine which containers will be included in the CRR.

4.1.2 Identify the data necessary to complete the CRR (e.g., AK Summary Report, Confirmatory Test Plan applicable to the waste stream, Batch Data Reports [BDRs], source documents), **AND** request any necessary documents from the CCP Records Custodian in accordance with CCP-QP-008.

CCP Records Custodian

4.1.3 Provide SPM with copies of any documents requested.

SPM

NOTE

The CRR number is a unique sequential number (e.g., CRR-ANLE-AERHDM-0001) that will identify the CRR, site, and waste stream.

4.2 RH CRR Container Data Work Sheet 1 (Attachment 1)

4.2.1 General Information

[A] Record information for container on Lines 1 through 19, **AND** reference the source.

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4.3 RH CRR Container Data Work Sheet 2 (VE/RTR) (Attachment 2)

4.3.1 Correlation Between Attachments

NOTE
Lines 20 through 24 are automatically populated by the link from Attachment 1.

[A] Record information for container on Lines 25 through 29, **AND** reference source.

4.4 RH CRR Data Quality Objectives (DQOs) (Attachment 3)

4.4.1 Correlation Between Attachments

NOTE
Lines 30 through 32 are automatically populated by the link from Attachment 1.

[A] Record information (qualification method [e.g., data record, peer review]) for waste stream on Lines 33 through 58, **AND** list the supporting documentation and resolution for DQOs.

[B] **IF** the DQO for any category has **NOT** been met, **THEN** generate a nonconformance report (NCR) in accordance with CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control*.

4.5 RH CRR Quality Assurance Objectives (QAOs) (Attachment 4)

4.5.1 Correlation Between Attachments

NOTE

Lines 59 through 61 are automatically populated by the link from Attachment 1.

NOTE

The sources requested to complete Attachment 4 include, but are not limited to, citing the AK section, citing the AK source documents, citing the BDR Number, sampling plan or any other data or information used to determine that the QAO has been met.

4.5.2 AK Evaluation of QAO

[A] Reference Table 4.1,Quality Assurance Objectives (QAOs) by Method for definition of Precision, Accuracy, Representativeness, Completeness, Comparability, determine if the QAOs for AK have been met, **AND** indicate the answers on Lines 62 through 66 (CCP-PO-002, *CCP Transuranic Waste Certification Plan*).

4.5.3 VE Method Evaluation of QAOs

[A] Reference Table 4.1, determine if the QAOs for AK have been met, **AND** indicate the answers on Lines 67 through 71 (CCP-PO-002).

4.5.4 Dose-to-Curie Conversion Evaluation of QAOs

[A] Reference Table 4.1, determine if the QAOs for AK have been met, **AND** indicate the answers on Lines 72 through 76 (CCP-PO-002).

4.5.5 Radiography Evaluation of QAOs

[A] Reference Table 4.1, determine if the QAOs for AK have been met, **AND** indicate the answers on Lines 77 through 81 (CCP-PO-002).

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4.5.6 NDA Evaluation of QAOs

[A] Reference Table 4.1, determine if the QAOs for AK have been met, **AND** indicate the answers on Lines 82 through 86 (CCP-PO-002).

4.5.7 Destructive Assay Evaluation of QAOs

[A] Reference Table 4.1, determine if the QAOs for AK have been met, **AND** indicate the answers on Lines 87 through 91 (CCP-PO-002).

4.5.8 Surface Dose Rate Evaluation of QAOs

[A] Reference Table 4.1, determine if the QAOs for AK have been met, **AND** indicate the answers on Lines 92 through 96 (CCP-PO-002).

4.5.9 Sampling Methodologies Evaluation of QAOs

[A] Reference Table 4.1, determine if the QAOs for AK have been met, **AND** indicate the answers on Lines 97 through 101 (CCP-PO-002).

4.5.10 **IF** the QAOs have **NOT** been met,
THEN generate an NCR in accordance with CCP-QP-005.

4.5.11 Provide an explanation for answers that contain N/A [not applicable] in the source field.

4.6 RH CRR Cover Sheet (Attachment 5)

4.6.1 Correlation Between Attachments.

NOTE

Lines 102 through 106 are automatically populated by the link from Attachment 1.

[A] Record information for the waste stream on Lines 107 through 131.

[B] Discuss any remediation activity or other relevant information in the Visual Examination/Real-Time Radiography (VE/RTR) Summary Results.

4.7 RH CRR Container Continuation Sheet (Attachment 6)

4.7.1 Use Attachment 6 for additional information needed for any line item from Attachments 1 through 5.

4.8 RH CRR SPM/AKE Comments Sheet (Attachment 7)

NOTE

Attachment 7 need **NOT** be completed if NO comments are desired.

4.8.1 Indicate any comments, clarifications, additional information necessary on Attachment 7.

4.9 Summary of Radiological Results by Container Number (Attachment 8)

NOTE

The TRU Container Activity field in Attachment 8 is a logical field populated based on the values entered in the attachment.

4.9.1 Complete Attachment 8 for each payload container by identifying the container number, associated BDR number, method used to confirm radiological data, TRU activity and associated Total Measurement Uncertainty (TMU).

4.9.2 Record any additional information for radiological data in the Comments section.

4.10 RH CRR Completion

NOTE

Attachments 1 and 2 are supplemental information for each container. Include Atachments 1 and 2 will be submitted to the Records Custodian only.

4.10.1 Complete the CRR, which consists of (in this order):

- Attachment 5
- Table of Contents
- Attachment 7 (if applicable)
- Attachment 8
- Attachment 3
- Attachment 4
- Attachment 6 (where applicable)
- A complete copy of the AK Summary Report for the waste stream
- Listing of AK discrepancies generated by an AK Qualification process and the corresponding resolutions

4.10.2 Paginate the CRR.

4.10.3 Submit the CRR to the AKE for review.

AKE

4.10.4 Review the CRR.

4.10.5 Identify any errors or omissions in references or other AK-related entries.

4.10.6 Notify the SPM of identified errors and omissions.

4.10.7 Provide any comments on Attachment 7.

[A] Print name, sign and date Attachment 7.

SPM/AKE

4.10.8 Resolve any questions identified during AKE review.

AKE

4.10.9 List any discrepancies during resolution in the SPM/AKE/SPQAO Comments section on Attachment 7.

NOTE

The AKE's signature on Attachment 5 (Cover Sheet) indicates that the AKE has reviewed the CRR and concurs with the findings and the references related to AK. All issues identified by the AKE during review have been resolved.

4.10.10 Print name, sign, and date Attachment 5 (Cover Sheet).

4.10.11 Submit the CRR to the SPQAO.

NOTE

The SPQAO's signature indicates that the SPQAO has reviewed the AK Summary Report, confirmatory test data, notes, any AK discrepancies, and that any issues identified have been resolved.

SPQAO

4.10.12 Identify any errors or omissions in references or other AK related entries.

4.10.13 Notify the SPM of identified errors and omissions.

4.10.14 Provide any comments on Attachment 7.

[A] Print name, sign and date Attachment 7.

4.10.15 Review the AK Summary Report, confirmatory test data, notes and identified AK discrepancies.

4.10.16 Resolve comments with SPM.

4.10.17 Prepare an AK Accuracy Report in accordance with CCP-TP-005, *CCP Acceptable Knowledge Documentation*.

4.10.18 Print name, sign, and date Attachment 5.

4.10.19 Submit the CRR to the SPM.

SPM

4.10.20 Resolve any questions identified during SPQAO review.

NOTE

The SPM's signature indicates that the SPM has either prepared the document personally or had responsible charge of the preparation and verifies that the information is correct. All issues identified by the AKE/SPQAO have been resolved.

SPM

4.10.21 Print name, sign, and date Attachment 5.

4.10.22 Prepare transmittal letter to DOE/CBFO.

4.10.23 Provide a copy of CRR, DOE/CBFO transmittal letter, and Attachments 1 and 2 to the CCP Records Custodian.

4.10.24 Transmit the CRR to DOE/CBFO.

CCP Records Custodian

4.10.25 Receive and process records generated by this procedure in accordance with CCP-QP-008 once CBFO has provided approval.

5.0 RECORDS

5.1 Records generated during the performance of this procedure are maintained as quality assurance (QA) records in accordance with CCP-QP-008, The records are the following:

5.1.1 QA/Lifetime

[A] CRR:

[A.1] Attachment 1, Remote-Handled Characterization Reconciliation Report Container Data Work Sheet 1

[A.2] Attachment 2, Remote-Handled Characterization Reconciliation Report Container Data Work Sheet 2 (VE/RTR)

[A.3] Attachment 3, Remote-Handled Characterization Reconciliation Report Data Quality Objectives (DQOs)

[A.4] Attachment 4, Remote-Handled Characterization Reconciliation Report Quality Assurance Objectives (QAOs)

[A.5] Attachment 5, Remote-Handled Characterization Reconciliation Report Cover Sheet

[A.6] Attachment 6, Remote-Handled Characterization Reconciliation Report Container Continuation Sheet

[A.7] Attachment 7, Remote-Handled Characterization Reconciliation Report SPM/AKE Comment Sheet

[A.8] Attachment 8, Summary of Radiological Results by Container Number

Table 4.1. Quality Assurance Objectives (QAOs) by Method

	METHODS							
	AK	**VE**	**Dose-to-Curie**	**Radiography**	**NDA**	**Destructive Assay**	**Surface Dose Rate**	**Sampling**
Precision	Precision is the agreement among a set of replicate measurements without assumption of the knowledge of a true value. The qualitative determinations, such as compiling and assessing AK documentation, do not lend themselves to statistical evaluations of precision. Therefore, a precision requirement is **NOT** established for AK.	Precision is maintained by reconciling any discrepancies between two operators (or between the operator and the independent technical reviewer) with regard to the identification of important waste characteristics (i.e., physical form of the waste and absence of residual liquid in excess of one percent by volume) within a single container. Any container with unreconciled discrepancies can **NOT** be shipped to the WIPP.	Precision shall be established and maintained within the recommendations of the manufacturer of the dose-rate instrument used. This will be demonstrated by a satisfactory source check of the instrument prior to obtaining dose rate measurements. The precision of the instrument shall be documented and factored into the TMU [Total Measurement Uncertainty] determined for the overall method.	Precision is maintained by reconciling any discrepancies between two operators with regard to the identification of important waste characteristics (i.e., physical form of the waste and absence of residual liquid in excess of one percent by volume) within a single container. Any container with unreconciled discrepancies can **NOT** be shipped to the WIPP.	Precision is reported as %RSD [percent relative standard deviation]. The %RSD shall **NOT** exceed the values listed in Table 4.2, Upper Limits for %RSD vs. Number of Replicates.	Precision is reported as RPD [Relative Percent Difference]. The RPD is derived from analysis of laboratory duplicates as listed in Table 4.3, Quality Control Requirements for Radiochemistry. The RPD shall **NOT** exceed the values listed in Table 4.3.	Precision is established and maintained within the recommendations of the manufacturer of the instrument used to measure dose.	Sampling precision is established by comparing the RPD between duplicate samples. A nonconformance report (NCR) shall be issued for any duplicate samples with RPDs greater than 25%.

Table 4.1. Quality Assurance Objectives (QAOs) by Method (Continued)

METHODS								
	AK	**VE**	**Dose-to-Curie**	**Radiography**	**NDA**	**Destructive Assay**	**Surface Dose Rate**	**Sampling**
Accuracy	Accuracy is the degree of agreement between an observed sample result and the true value. The percentage of waste containers which require reassignment to a new SCG [Summary Category Group] or new waste stream based on the reevaluation of AK or on obtaining testing, sampling and/or analysis data will be reported as a measure of AK accuracy. The sites shall, in addition, develop a methodology to compare radionuclide information from confirmation with the information in the AK record and address significant discrepancies. What constitutes a significant discrepancy will depend on site and waste stream-specific considerations. If AK accuracy falls below 90%, the site shall document this as a significant condition adverse to quality as defined by the DOE/CBFO 94-1012, *Quality Assurance Program Document* (QAPD). The site shall notify the DOE/CBFO of this condition and implement appropriate corrective actions before proceeding with further characterization activities on the affected waste stream(s).	Accuracy is maintained by requiring operators to pass a comprehensive examination with a score of 80% and demonstrate satisfactory performance in the presence of the VE Expert during the initial qualification and subsequent requalification.	Calibration shall be established and maintained within the recommendations of the manufacturer of the dose-rate instrument used. The accuracy of the instrument shall be documented and factored into the TMU determined for the overall method.	Accuracy is obtained by using a target to tune the image for maximum sharpness and by requiring operators to successfully identify 100 percent of the items in a training container during their initial qualification and subsequent requalification.	Accuracy is reported as %R [percent recovery]. Accuracy will not exceed ± 30% on a non-interfering matrix.	Accuracy is reported as %R. The %R is derived from analysis of laboratory control samples and matrix spikes as listed in Table 4.3. The % R shall **NOT** exceed the values listed in Table 4-3.	Calibration [is] established and maintained within the recommendations of the manufacturer of the dose measurement instrument used.	Sampling accuracy through the use of standard reference materials shall not be measured. Because waste containers containing RH TRU waste with known quantities of radionuclides are not available, sampling accuracy cannot be determined. Sampling accuracy as a function of sampling cross-contamination will be measured. Sampling equipment will be verified as clean by the use of standard radiological control survey methods.

Table 4.1. Quality Assurance Objectives (QAOs) by Method (Continued)

METHODS								
	AK	**VE**	**Dose-to-Curie**	**Radiography**	**NDA**	**Destructive Assay**	**Surface Dose Rate**	**Sampling**
Represent-ativeness	Representativeness is the degree to which sample data accurately and precisely represent characteristics of a population. Representativeness is a qualitative parameter that will be satisfied by ensuring that the process of obtaining, evaluating, and documenting AK information is performed in accordance with the minimum standards established in Attachment A, Acceptable Knowledge Procedure for Remote-Handled TRU Waste of the WCPIP.	The contents placed in a container will be described on the data forms.	Representativeness of the isotopic distributions will be confirmed by sampling in accordance with an approved sampling plan (see Section 4.1.8 of the WCPIP). The representativeness of the sampling shall be documented and factored into the TMU determined for the overall method.	All of the relevant contents in a container selected for radiography will be described.	Representativ e-ness is ensured through assay of each waste container when NDA is used to satisfy DQOs.	Representative-ness of Destructive Assay (DA) data shall be achieved by the collection of unbiased samples.	The measurement [is] applied to the entire waste container.	A sampling plan must be developed by the RH TRU generator site that describes the sampling strategy for obtaining representative samples.

Table 4.1. Quality Assurance Objectives (QAOs) by Method (Continued)

METHODS								
	AK	**VE**	**Dose-to-Curie**	**Radiography**	**NDA**	**Destructive Assay**	**Surface Dose Rate**	**Sampling**
Complete-ness	Completeness is an assessment of the number of waste streams or number of samples collected compared to the number of samples determined to be useable through the data validation process. The AK record shall contain 100% of the information specified in Attachment A of the WCPIP. The usability of the AK information will be assessed for completeness during audits.	The relevant waste information must be collected. The information must be documented on a videotape and/or data form, or other unalterable media.	Completeness is verified by measuring the dose rate for every container. The sites must verify that the measured dose rate is at least 10 times greater than background.	All of the relevant waste information must be assembled and must show that each of the containers in the waste stream belong to the waste stream. The information must be documented on videotape or other equivalent media and data form.	Required completeness is 100%. All NDA data used to satisfy a DQO must be valid and usable.	Completeness of DA data shall be expressed as the ratio of the number samples that are analyzed with valid results to the total number of samples that are submitted for analysis, expressed as a percent. Acceptable DA data shall be obtained for 90 percent of the samples acquired for waste characterization. Valid results for radioassay data are those that were obtained when the laboratory or testing facility demonstrated that the instrumentation and method were in control.	100% of the measurements needed to determine surface dose rate are performed and useable.	Sampling completeness shall be expressed as the number of valid samples collected as a percent of the total number of samples collected for each waste stream. The participating sampling facilities are required to achieve a minimum 90 percent completeness.

Table 4.1. Quality Assurance Objectives (QAOs) by Method (Continued)

METHODS								
	AK	**VE**	**Dose-to-Curie**	**Radiography**	**NDA**	**Destructive Assay**	**Surface Dose Rate**	**Sampling**
Compara-bility	Data are considered comparable when one set of data can be compared to another set of data. Comparability is ensured through sites meeting the training requirements and complying with the minimum standards outlined for procedures that are used to implement the AK process.	Comparability is ensured by a site meeting the training requirements and complying with the minimum standards used to implement this characterization process. In some instances, waste will be contained in opaque containers and not all items will be visible to the operator (e.g., sealed paint cans or 5-gallon buckets). If these containers are **NOT** opened during VE, source documents must be available in the AK record that allows the operator to identify the contents of the closed containers.	Standardized instructions must be used in designing and implementing the measurement program.	Comparability is ensured through a site meeting the training requirements and complying with the minimum standards used to implement the radiography process.	Comparability is ensured through a site meeting the training requirements and complying with the minimum standards used to implement the NDA process.	Comparability is ensured through a site meeting the training requirements and complying with the minimum standards used to implement the DA process.	Dose rate measurements are performed by site health physics personnel in accordance with the DOE Orders governing radiological control.	Compliance with the requirements of Section [4.1.8] of the WCPIP will ensure comparability between RH TRU waste generator sites.

Table 4.2. Upper Limits for %RSD vs. Number of Replicates

Number of Replicates	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Max %RSD	1.8	6.6	10.0	12.3	14.0	15.2	16.2	17.1	17.7	18.3	18.8	19.3	19.7	20.0

Table 4.3. Quality Control Requirements for Radiochemistry

QC Sample	Minimum Frequency	Acceptance Criteria	Corrective Action
Laboratory control samples (LCS)	One per analytical batch	75% to 125%R	See Laboratory Control Sample[a]
Method blank	One per analytical batch	Site-specific statistical control limits	See Method Blanks[b]
Laboratory duplicate	One per analytical batch	RPD 40	See Laboratory Duplicate[c]
Matrix spike (MS)	One per analytical batch for ICP-MS, as required by the test performed	50 to 150%R	See Matrix Spike and Matrix Spike Duplicate[d]
Matrix spike duplicate (MSD)	One per analytical batch, as required by the test performed	50 to 150%R RPD 40	See Matrix Spike and Matrix Spike Duplicate[d]
Radioisotopic tracers	Every sample	Site-specific statistical control limits	See Radioisotopic Tracer[e]

[a]**Laboratory Control Sample (LCS)**: An LCS is analyzed at least once per analytical batch. If a solid matrix with established control limits is used as the LCS, the established limits may be used for the acceptance criteria. The control limits will meet the criteria in Table 4-4.
[b]**Method Blanks**: A method blank is analyzed at least once per analytical batch. It contains all reagents in proportions equal to those in the samples and is carried through the analytical procedure to identify if contamination is present. Each site establishes the acceptance criteria for method blanks; if they are expressed as statistical control limits they shall meet the requirements in Table 4-4. Criteria may be absolute values, multiples of background variation, fractions of activity concentrations observed in samples, or other appropriate units.
[c]**Laboratory Duplicates**: A laboratory duplicate is analyzed at least once per analytical batch. A laboratory duplicate is a separate aliquot from the same field sample carried through the entire analytical procedure. The RPD between duplicate results is compared with the criteria.
[d]**Matrix Spike and Matrix Spike Duplicate**: Duplicate MSs on individual field samples are performed for inductively couple plasma-mass spectrometry (ICP-MS) analysis at a minimum frequency of one pair (MS plus MSD) per analytical batch. The MSDs are preferred for any analytical procedure not using radioactive tracers. The MS and MSD results are acceptable if the criteria given above for percent recovery and RPD are met.
[e]**Radioisotopic Tracer**: Some methods require that all samples, blanks, LCSs, and laboratory duplicates be spiked with radioisotopic tracers to determine chemical recoveries, counting efficiencies, or a combination thereof. Each site establishes the acceptance criteria for method blanks; if they are expressed as statistical control limits they shall meet the requirements in Table 4-4.

Table 4.4. Statistical Control Limits

	Acceptability Range	**Required Response**
Acceptable Range	Data[b] $2\sigma^a$	No action required.
Warning Range	$2\sigma^a$ < Data $3\sigma^a$	The QC measurement shall be run no more than twice. If the rerun QC measurement results in data within $\pm$ 2σ, then the QC measurements shall be documented and work may continue. If the system does not fall within $\pm$ 2σ after two QC measurements, then the required response for the Action Range shall be followed.
Action Range	Data > $3\sigma^a$	Work shall stop and the occurrence shall be documented and appropriately dispositioned (e.g., initiating an NCR). The measurement system shall be removed from service pending successful resolution of all necessary actions, and all assays performed since the last acceptable QC measurement are suspect, pending satisfactory resolution.

[a]σ – The standard deviation is only based on the reproducibility of the data check measurements themselves. This is not TMU.
[b] – Absolute Value

Attachment 1 – Remote-Handled Characterization Reconciliation Report Container Data Work Sheet 1 EXAMPLE

line #			Source
1	CRR Number	CRR-ANLE-AGHCF-S5000-001	AGHCF (Alpha Gamma Hot Cell Facility)
2	**Container Number**	743	
3	Site	INL	Waste generated at ANLE
4	Waste Stream	ID-ANLE-S5000	CCP-AK-INL-500 Rev. 1
5	Waste Matrix Code	not assigned as of 5/2/06	not available
6	Summary Category Group	**S5000 - Debris Waste**	CCP-AK-INL-500 Rev. 1
7	Radiological BDR number(s)	Dose to Curie INL060314	
8	VE BDR Number	RHINLVE060001	
9	NDE BDR Number	N/A	
10	Waste Stream Profile Number	not assigned as of 5/2/06	

PRINT

		Identify Confirmatory Testing Methods	List Confirmatory Test Plan Document Number			
11		Radiological Characterization Technical Report	CCP-AK-INL-501			LANL ICP-MS Dose-to-Curie Methodology
12						
13						
14						
15						
16						
17						
18						
19	Were alternative methods of confirmatory testing not listed above used to qualify AK?		☑ yes	☐ no	☐ NA	VE using video tape

Attachment 2 – Remote-Handled Characterization Reconciliation Report Container Data Work Sheet 2 (VE/RTR) EXAMPLE

line #					
20	CRR Number	CRR-ANLE-AGHCF-S5000-001			
21	**Container Number**	743			
22	Site	INL			
23	Waste Stream	ID-ANLE-S5000			
24	Summary Category Group	S5000 - Debris Waste			
	Waste Stream VE/RTR Information		**SOURCE**		
25	How many containers are identified in the waste stream/lot which includes this container?	**549**	**CCP-AK-INL-500 Rev. 1**		
	Container Specific VE/RTR Information	**SOURCE**			
26	Was this container packaged or re-packaged as a result of prohotibed item?		☐ yes	☑ no	☐ NA
27	Did the contents of the container match the waste stream description?	RHINLVE060001	☑ yes	☐ no	☐ NA
	Prohibited Items				
	Liquids				
28	Did this container include any liquids?		☐ yes	☑ no	☐ NA
29	If the container included liquids, did these liquids exceed 1% of the volume of the waste container?		☐ yes	☐ no	☑ NA

Attachment 3 – Remote-Handled Characterization Reconciliation Report Data Quality Objectives (DQOs) EXAMPLE

line #							
30	CRR Number	CRR-INL-AGHCF-S5000-001					
31	Site	INL					
32	Waste Stream	ID-ANLE-S5000					
	DQO					**List the Qualification Method and Supporting Sources of DQO**	**AK discrepancy/ resolutions relevent to DQO**
33	**Defense Waste Determination**	Is the waste stream identified in AK?	☑ yes	☐ no		CCP-AK-INL-500, Rev. 2	None
34		According to AK, was the Waste generated by defense activities?	☑ yes	☐ no		CCP-AK-INL-500, Rev. 2, Section 4.1.4	None
35		What is the source of the information regarding the Defense Determination?				CCP-AK-INL-500, Rev. 2, Section 4.1.4	None
36		Has the DQO been met? RH Tru Waste Characterization Program Implementation Plan Section 2.2.1.	☑ yes	☐ no		CCP-AK-INL-500, Rev. 2, Section 4.1.4	None
37	**TRU Waste Determination**	Is the TAAC greater than 100nCi/g for all containers?	☑ yes	☐ no		INLRHDTC06001 Waste Container Dose-to-Curie Conversion Record sheets	None
38		How was TRU Alpha Activity Concentration (TAAC) determined?				INLRHDTC06001 Waste Container Dose-to-Curie Conversion Record sheets	None
39		Is the Lower Limit of detection of the instument and method used to determine the TAAC 100nCi/g or less?	☐ yes	☐ no	☑ NA	LLD is not established for probes utilized for Dose-to-Curie	None
40		Is the waste in this waste stream TRU Waste?	☑ yes	☐ no		INLRHDTC06001 Waste Container Dose-to-Curie Conversion Record sheets	None
41		What is the source of the information regarding the TAAC?				INLRHDTC06001 Waste Container Dose-to-Curie Conversion Record sheets	None
42		Has the DQO been met? RH Tru Waste Characterization Program Implementation Plan Section 2.2.2.1.	☑ yes	☐ no		INLRHDTC06001 Waste Container Dose-to-Curie Conversion Record sheets	None

Attachment 3 – Remote-Handled Characterization Reconciliation Report Data Quality Objectives (DQOs) EXAMPLE (Continued)

	DQO				List the Qualification Method and Supporting Sources of DQO	AK discrepancy/ resolutions relevent to DQO
43	RH Waste Determination	Is the surface dose rate greater than 200 mrem/hr for all containers in this waste stream?	☑ yes	☐ no	Radiological Survey Report 441.45 Rev. 3	None
44		Is the surface dose rate less than or equal to 1000 rem/hr for all containers in this waste stream?	☑ yes	☐ no	Radiological Survey Report 441.45 Rev. 3	None
45		Does the calibration of the instrument used to measure the surface dose meet the requirements of the QAPD?	☑ yes	☐ no	need	None
46		What is the source of the information regarding the surface dose rate?			Provided by INL Radioloical program	None
47		Has the DQO been met? RH Tru Waste Characterization Program Implementation Plan Section 2.2.2.2.	☑ yes	☐ no	Radiological Survey Report 441.45 Rev. 3; Training records; instrument calibration records	None

Attachment 3 – Remote-Handled Characterization Reconciliation Report Data Quality Objectives (DQOs) EXAMPLE (Continued)

	DQO					List the Qualification Method and Supporting Sources of DQO	AK discrepancy/ resolutions relevent to DQO
48	Total Activity Determination	Is the activity plus two times the TMU less than or equal to 23 Ci/L for each payload container in this waste stream? Maximum of 4788 Ci per 55 gal. drum.	☑ yes	☐ no		INLRHDTC06001 Waste Container Dose-to-Curie Conversion Record sheets	None
49		What is the source of the information regarding the activity?				INLRHDTC06001 Waste Container Dose-to-Curie Conversion Record sheets	None
50		Has the DQO been met? RH Tru Waste Characterization Program Implementation Plan Section 2.2.2.3.	☑ yes	☐ no			None
51	Residual Liquids	Are there residual liquids in the waste?	☐ yes	☑ no		RHINLVE060001 Visual Examination data sheet	None
52		What is the approximate volume of the residual liquid? If none indicate none.			units	No liquids identified in containers	None
53		Do any residual liquids exceed 1% of the volume of the container? If no residual liquids indicate NA.	☐ yes	☐ no	☑ NA	No liquids identified in containers	None
54		What is the source of the information regarding residual liquids (i.e. AK, RTR, VE)?				RHINLVE060001 Visual Examination data sheet	None
55		Has the DQO been met? RH Tru Waste Characterization Program Implementation Plan Section 2.2.3.1.	☑ yes	☐ no			None
56	Physical Form	Has the Cellulose, Plastic, and Rubber (CPR) been submitted for determining the physical form of the waste?	☑ yes	☐ no		RHINLVE060001 Visual Examination data sheet	None
57		Has the information on the type and number of containers, waste forms, processes and materials that produced the waste been submitted?	☑ yes	☐ no		RHINLVE060001 Visual Examination data sheet; CCP-AK-INL-500, Rev. 2	None
58		Has the DQO been met? RH Tru Waste Characterization Program Implementation Plan Section 2.2.3.2.	☑ yes	☐ no		RHINLVE060001 Visual Examination data sheet; CCP-AK-INL-500, Rev. 2	None

Attachment 4 – Remote-Handled Characterization Reconciliation Report Quality Assurance Objectives (QAOs) EXAMPLE

line #								
59	CRR Number	CRR-INL-AGHCF-S5000-001						
60	Site	INL						
61	Waste Stream	ID-ANLE-S5000						
	Method	**QAO**	**QAO met?**			**Procedure Section**	**Source**	**WCPIP Section**
62	**AK**	Precision	☐ yes	☐ no	☑ NA	CCP-TP-506 Section 4.5.2	QAO not established for AK Precision	4.1.1.2
63		Accuracy	☑ yes	☐ no	☐ NA	CCP-TP-506 Section 4.5.2		4.1.1.2
64		Representativeness	☑ yes	☐ no	☐ NA	CCP-TP-506 Section 4.5.2		4.1.1.2
65		Completeness	☑ yes	☐ no	☐ NA	CCP-TP-506 Section 4.5.2		4.1.1.2
66		Comparability	☑ yes	☐ no	☐ NA	CCP-TP-506 Section 4.5.2		4.1.1.2
67	**VE**	Precision	☑ yes	☐ no	☐ NA	CCP-TP-506 Section 4.5.3	RHINLVE060001 Attachment 1 Signature lines	4.1.2.3
68	**Method**	Accuracy	☑ yes	☐ no	☐ NA	CCP-TP-506 Section 4.5.3	Training records (LOQI)	4.1.2.3
69	Does method apply?	Representativeness	☑ yes	☐ no	☐ NA	CCP-TP-506 Section 4.5.3	RHINLVE060001 Attachment 1	4.1.2.3
70	☑ yes ☐ no	Completeness	☑ yes	☐ no	☐ NA	CCP-TP-506 Section 4.5.3	RHINLVE060001 Data Sheets	4.1.2.3
71		Comparability	☑ yes	☐ no	☐ NA	CCP-TP-506 Section 4.5.3	Training	4.1.2.3
72	**Dose to Curie**	Precision	☑ yes	☐ no	☐ NA	CCP-TP-506 Section 4.5.4	INLRHDTC06001 Attachment 1	4.1.3.2
73	**Conversion**	Accuracy	☑ yes	☐ no	☐ NA	CCP-TP-506 Section 4.5.4		4.1.3.2
74	Does method apply?	Representativeness	☑ yes	☐ no	☐ NA	CCP-TP-506 Section 4.5.4	INLRHDTC06001 Attachment 2	4.1.3.2
75	☑ yes ☐ no	Completeness	☑ yes	☐ no	☐ NA	CCP-TP-506 Section 4.5.4	INLRHDTC06001 Attachment 2	4.1.3.2
76		Comparability	☑ yes	☐ no	☐ NA	CCP-TP-506 Section 4.5.4	CCP-TP-504	4.1.3.2
77	**Radiography**	Precision	☐ yes	☐ no	☐ NA	CCP-TP-506 Section 4.5.5		4.1.4.3
78	Does method apply?	Accuracy	☐ yes	☐ no	☐ NA	CCP-TP-506 Section 4.5.5		4.1.4.3
79	☐ yes ☑ no	Representativeness	☐ yes	☐ no	☐ NA	CCP-TP-506 Section 4.5.5		4.1.4.3
80		Completeness	☐ yes	☐ no	☐ NA	CCP-TP-506 Section 4.5.5		4.1.4.3
81		Comparability	☐ yes	☐ no	☐ NA	CCP-TP-506 Section 4.5.5		4.1.4.3
82	**Nondestructive**	Precision	☐ yes	☐ no	☐ NA	CCP-TP-506 Section 4.5.6		4.1.5.1
83	**Assay**	Accuracy	☐ yes	☐ no	☐ NA	CCP-TP-506 Section 4.5.6		4.1.5.1
84	Does method apply?	Representativeness	☐ yes	☐ no	☐ NA	CCP-TP-506 Section 4.5.6		4.1.5.1
85	☐ yes ☑ no	Completeness	☐ yes	☐ no	☐ NA	CCP-TP-506 Section 4.5.6		4.1.5.1

Attachment 4 – Remote-Handled Characterization Reconciliation Report Quality Assurance Objectives (QAOs) EXAMPLE (Continued)

	Method	QAO	QAO met?			Procedure Section	Source	WCPIP Section
86		Comparability	☐ yes	☐ no	☐ NA	CCP-TP-506 Section 4.5.6		4.1.5.1
87	Destructive	Precision	☐ yes	☐ no	☐ NA	CCP-TP-506 Section 4.5.7		4.1.5.2
88	Assay	Accuracy	☐ yes	☐ no	☐ NA	CCP-TP-506 Section 4.5.7		4.1.5.2
89	Does method apply?	Representativeness	☐ yes	☐ no	☐ NA	CCP-TP-506 Section 4.5.7		4.1.5.2
90	☐ yes ☑ no	Completeness	☐ yes	☐ no	☐ NA	CCP-TP-506 Section 4.5.7		4.1.5.2
91		Comparability	☐ yes	☐ no	☐ NA	CCP-TP-506 Section 4.5.7		4.1.5.2
92	Surface Dose	Precision	☑ yes	☐ no	☐ NA	CCP-TP-506 Section 4.5.8	Johnson Extender 2000W Telescoping G-M Probe, Appendix A, Record of Calibration	4.1.6.2
93	Rate	Accuracy	☑ yes	☐ no	☐ NA	CCP-TP-506 Section 4.5.8	Johnson Extender 2000W Telescoping G-M Probe, Appendix A, Record of Calibration and Picture of the calibration sticker on the instrument	4.1.6.2
94	Does method apply?	Representativeness	☑ yes	☐ no	☐ NA	CCP-TP-506 Section 4.5.8		4.1.6.2
95	☑ yes ☐ no	Completeness	☑ yes	☐ no	☐ NA	CCP-TP-506 Section 4.5.8		4.1.6.2
96		Comparability	☑ yes	☐ no	☐ NA	CCP-TP-506 Section 4.5.8	Employee qualification report for Cammy Montgomery	4.1.6.2
97	Sampling	Precision	☐ yes	☐ no	☐ NA	CCP-TP-506 Section 4.5.9		4.1.8.2
98	Methodologies	Accuracy	☐ yes	☐ no	☐ NA	CCP-TP-506 Section 4.5.9		4.1.8.2
99	Does method apply?	Representativeness	☐ yes	☐ no	☐ NA	CCP-TP-506 Section 4.5.9		4.1.8.2
100	☐ yes ☑ no	Completeness	☐ yes	☐ no	☐ NA	CCP-TP-506 Section 4.5.9		4.1.8.2
101		Comparability	☐ yes	☐ no	☐ NA	CCP-TP-506 Section 4.5.9		4.1.8.2

Attachment 5 – Remote-Handled Characterization Reconciliation Report Cover Sheet EXAMPLE

line #				
102	CRR Number	CRR-INL-AGHCF-S5000-001		
103	Waste Stream	ID-ANLE-S5000		
104	Site	INL		
105	Waste Matrix Code	not assigned as of 5/31/06		
106	Summary Category Group	S5000 - Debris Waste		
107	Have all DQOs been met?	☑ yes	☐ no	
108	Are any prohibited items present?	☐ yes	☑ no	
109	Are any liquids present at greater than 1% of the volume of the container?	☐ yes	☑ no	
110	Was AK qualified in accordance with the requirements of the WCPIP?	☑ yes	☐ no	
111	Are all containers Remote-handled TRU waste?	☑ yes	☐ no	
	List all container numbers used to generate the CRR	**VE BDR #**	**RTR BDR #**	**Radiological BDR #**
112	00738	RHINLVE060001	NA	INLRHDTC06001
113	00739	RHINLVE060001	NA	INLRHDTC06001
114	00740	RHINLVE060001	NA	INLRHDTC06001
115	00741	RHINLVE060001	NA	INLRHDTC06001
116	00742	RHINLVE060001	NA	INLRHDTC06001
117				
118				
119				
120				
121				
122				
123				
124				
125				
126				
127				
128				
129				
130				
131				

RTR/VE Summary Results
Visual Examination confirmed that liquids greater than 1 percent are absent from the waste and that the physical properties of the waste are consistent with ID-ANLE-S5000.

SPQAO Signature	SPQAO Printed Name	Date
AKE Signature	AKE Printed Name	Date
SPM Signature	SPM Printed Name	Date

Attachment 6 – Remote-Handled Characterization Reconciliation Report Container Continuation Sheet EXAMPLE

	CRR Number	CRR-ANLE-AGHCF-S5000-001
	Site	INL
	Waste Stream	ID-ANLE-S5000
continuation from line #	**INFORMATION**	**SOURCE**

Attachment 7 – Remote-Handled Characterization Reconciliation Report SPM/AKE Comments Sheet EXAMPLE

CRR Number	CRR-ANLE-AGHCF-S5000-001
Site	INL
Waste Stream	ID-ANLE-S5000
SPM/AKE/SPQAO COMMENTS	
Commenter shall Print their name, Sign and date comments.	

Attachment 8 – Summary of Radiological Results by Container Number EXAMPLE

Summary Radiological Results by Container Number

CRR Number	CRR-ANLE-AGHCF-S5000-001
Site	INL
Waste Stream	ID-ANLE-S5000

		Radiological Characterization Method				TRU Waste Determination			Total Activity Determination			RH Waste Determination		
Container number	BDR number	AK	DTC	DA	NDA	TRU Alpha Activity Concentration (TAAC)	Uncertainty at 1 simga	TRU waste (100 nCi/g or greater)	Activity	TMU (2 simga)	Is Activity + 2*TMU < 23 Ci/L?	Surface Dose Rate	Unit	Surface Dose Rate > 200 mrem/hr and ≤ 1,000 rem/hr?
738	INL060314	☐	☑	☐	☐	6.86E+03	5.19E+03	Yes	3.40E-02	2.65E-02	Yes	4	rem/hr	Yes
739	INL060314	☐	☑	☐	☐	1.24E-04	9.41E+03	No	5.98E-02	4.66E-02	Yes	6	rem/hr	Yes
740	INL060314	☐	☑	☐	☐	1.90E+04	1.44E+04	Yes	1.02E-01	7.94E-03	Yes	9	rem/hr	Yes
741	INL060314	☐	☑	☐	☐	1.27E+04	9623.6	Yes	7.14E-02	5.57E-02	Yes	4	rem/hr	Yes
742	INL060314	☐	☑	☐	☐	4.09E+03	1.58E+03	Yes	2.36E-02	1.84E-02	Yes	2.5	rem/hr	Yes
743	INL060314	☐	☑	☐	☐	1.39E+03	5.35E+02	Yes	7.98E-03	6.23E-03	Yes	0.5	rem/hr	Yes
		☐	☐	☐	☐			No			Yes			
		☐	☐	☐	☐			No			Yes			
		☐	☐	☐	☐			No			Yes			
		☐	☐	☐	☐			No			Yes			
		☐	☐	☐	☐			No			Yes			
		☐	☐	☐	☐			No			Yes			
		☐	☐	☐	☐			No			Yes			
		☐	☐	☐	☐			No			Yes			
		☐	☐	☐	☐			No			Yes			
		☐	☐	☐	☐			No			Yes			
		☐	☐	☐	☐			No			Yes			
		☐	☐	☐	☐			No			Yes			
		☐	☐	☐	☐			No			Yes			
		☐	☐	☐	☐			No			Yes			
		☐	☐	☐	☐			No			Yes			
		☐	☐	☐	☐			No			Yes			
		☐	☐	☐	☐			No			Yes			
		☐	☐	☐	☐			No			Yes			
		☐	☐	☐	☐			No			Yes			
		☐	☐	☐	☐			No			Yes			
		☐	☐	☐	☐			No			Yes			
		☐	☐	☐	☐			No			Yes			
		☐	☐	☐	☐			No			Yes			
		☐	☐	☐	☐			No			Yes			
		☐	☐	☐	☐			No			Yes			
		☐	☐	☐	☐			No			Yes			
		☐	☐	☐	☐			No			Yes			
		☐	☐	☐	☐			No			Yes			
		☐	☐	☐	☐			No			Yes			
		☐	☐	☐	☐			No			Yes			
		☐	☐	☐	☐			No			Yes			

Comments: N/A

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CCP-TP-507

Revision 8

CCP
Shipping of Remote-Handled Transuranic Waste

EFFECTIVE DATE: 06/27/2013

Irene Joo

PRINTED NAME

APPROVED FOR USE

RECORD OF REVISION

Revision Number	Date Approved	Description of Revision
0	11/14/2006	Initial issue.
1	05/03/2007	Revised to include 40 CFR part 761, Polychlorinated Biphenyls (PCBs) Manufacturing, Processing, Distribution in commerce, and use prohibitions: Marking of PCB's and PCB Items § 761.40 and 40 CFR 761.40, Marking as references.
2	12/04/2007	Revised to incorporate CNS 10-160B requirements and to implement new Waste Isolation Pilot Plant (WIPP) Waste Acceptance Criteria (WAC) requirements.
3	12/12/2007	Minor editorial change to correct error in section cross references.
4	09/02/2009	Revised to incorporate corrective actions from Waste Isolation Pilot Plant (WIPP) Form 09-120 (Controlled Shipment Notifications), Corrective Action Report (CAR)-RHLANL-0001-09, Land Disposal Restrictions (LDR) Form code updates, and peer verifications steps.
5	12/11/09	Revised to incorporate Waste Data System (WDS) operations, remove 10-160B steps, and various editorial changes.
6	04/20/2010	Alignment of the procedure with modifications made to the Waste Data Systems (WDS), and editorial corrections.
7	12/29/2010	Minor revision to update references to the *Waste Isolation Pilot Plant Hazardous Waste Facility Permit*.
8	06/27/2013	Revised to incorporate the Nuclear Waste Partnership (NWP) transition changes.

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1.0 PURPOSE

This procedure establishes requirements for certifying and assembling Transuranic (TRU) waste payloads and performance of shipments in the Remote-Handled (RH) TRU 72-B shipping container and ensures that the requirements of CCP-PO-505, *CCP Remote-Handled Transuranic Authorized Methods for Payload Control (CCP RH-TRAMPAC),* are met.

1.1 Scope

This procedure applies to the personnel who conduct the following transportation functions:

- The Waste Data System (WDS) data entry for transportation certification of RH TRU waste in the RH TRU 72-B.
- RH TRU 72-B payload canister verification.
- Verification of the assembled payload to be loaded into the RH TRU 72-B shipping cask.
- Preparing and certifying shipping paper, marking, labeling, and placarding associated with each shipment of RH TRU waste transported in the RH TRU 72-B shipping cask by the Central Characterization Program (CCP).
- Radiological Control Technician (RCT) or equivalent position functions associated with RH TRU 72-B packaging and transportation operations.

2.0 REQUIREMENTS

2.1 References

Baseline Documents

- CCP-PO-002, *CCP Transuranic Waste Certification Plan*
- CCP-TP-530*, CCP RH TRU Waste Certification and WWIS/WDS Data Entry*
- DOE/WIPP 90-045*, Remote-Handled Transuranic Waste Content Codes, RH TRUCON*
- DOE/WIPP 02-3122, *Transuranic Waste Acceptance Criteria for the Waste Isolation Pilot Plant*

- DOE/WIPP 02-3283, *RH Packaging Program Guidance*
- DOE/WIPP 02-3285, *RH Packaging Maintenance Manual*
- 40 CFR Part 761, *Polychlorinated Biphenyls (PCBs) Manufacturing, Processing, Distibution in commerce, and use prohibitions: Marking of PCB's and PCB Items* § 761.40
- 49 CFR, *Transportation,* Part 172, *Hazardous Materials Table, Special Provisions, Hazardous Materials Communications, Emergency Response Information, Training Requirements, and Security Plans* § 172.200, *Applicability*
- 49 CFR Part 173, *Shippers—General Requirements for Shipments and Packagings,* Subpart I, *Class 7 Radioactive Materials* § 173.401 through 173.476
- *Safety Analysis Report for the RH-TRU 72B Waste Shipping Package* (SARP) (Docket 9212, Washington, D.C., U.S. Nuclear Regulatory Commission [NRC], 2002)

Referenced Documents

- 40 CFR 262, Subpart B*, The Manifest,* and Subpart C*, Pre-Transport Requirements.*
- 40 CFR 262.31*, Labeling*
- 40 CFR 262.32*, Marking*
- 40 CFR 761.40, *Marking requirements*
- 40 CFR 268*,* Subpart A*, Land Disposal Restrictions*
- 49 CFR 172.200 through 172.205 *(Subpart C, Shipping Papers)*
- 49 CFR 172.300 through 172.338 *(Subpart D, Marking)*
- 49 CFR 172.400 through 172.450 *(Subpart E, Labeling)*
- 49 CFR 172.500 through 172.560 *(Subpart F, Placarding)*
- CCP-PO-505*, CCP Remote-Handled Transuranic Waste Authorized Methods for Payload Control (CCP RH-TRAMPAC)*
- CCP-QP-002*, CCP Training and Qualification Plan*

- CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control*
- CCP-QP-008*, CCP Records Management*
- DOE/WIPP 02-3284*, RH Packaging Operations Manual*
- *TRANSCOM 2000 Designated User Handbook*
- DOE/WIPP-09-3427, *Waste Data System User's Manual*
- *Waste Isolation Pilot Plant Hazardous Waste Facility Permit*, Attachments C-C6, *Waste Analysis Plan*

2.2 Training Requirements

2.2.1 CCP personnel performing this procedure will be trained and qualified in accordance with CCP-QP-002, *CCP Training and Qualification Plan,* prior to performing this procedure.

2.3 Equipment List

2.3.1 None.

2.4 Precautions and Limitations

2.4.1 Nonconformances related to defects or failure to comply with requirements applicable to Nuclear Regulatory Commission (NRC)-licensed packaging (e.g., RH TRU 72-B cask) shall be reported to the Carlsbad Field Office (CBFO) Office of the National TRU Program. The Waste Isolation Pilot Plant (WIPP) maintenance and operating (M&O) contractor will evaluate issues and nonconformances for reporting to the NRC under 10 CFR Part 21 or Part 71 and provide the results of this evaluation to CBFO.

[A] CCP personnel writing nonconformance reports (NCRs) identified as Transportation-related will provide a copy of these NCRs to the NWP Manager of Transportation in accordance with CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control*.

2.4.2 Filter vents, as specified in Section 2.4 of the CCP RH-TRAMPAC must be installed in payload containers and canisters (as applicable).

2.4.3 Radiation Dose Rates and Removable Surface Contamination

[A] The external radiation dose rate of a loaded RH TRU 72-B shipping cask to be shipped, shall be less than or equal to 200 millirem per hour (mrem/hr) at the surface, and less than or equal to 10 mrem/hr at two meters for beta/gamma and neutron.

[B] Removable surface contamination of individual payload canisters and a loaded RH TRU 72-B shipping cask to be shipped to WIPP shall **NOT** be greater than 20 disintegrations per minute (dpm)/100 centimeters square (cm^2) for alpha emitting radionuclides and 200 dpm/100 cm^2 for beta/gamma emitting radionuclides.

2.4.4 Controlled Shipments

NOTE

Receipt sites may use CBFO-approved site-specific Controlled Shipment Receipt Forms in place of Attachment 6, CCP Control Checklist for Receipt of RH Controlled Shipments, provided that the same information is recorded and a completed copy is returned to the applicable Transportation Certification Official (TCO).

[A] CCP RH Controlled Shipments, (Attachment 5, CCP Control Checklist for RH Controlled Shipments, and Attachment 6), will be used to control and document loading and shipping times.

2.5 Prerequisite Actions

2.5.1 Ensure that workers who will be working in a radiation area have read the applicable Radiation Work Permit (RWP) or equivalent site-specific document.

2.6 Definitions

2.6.1 **Generator** - The organization/individual that generated the waste and/or are offering the waste for transport.

2.6.2 **Land Disposal Restrictions (LDR) Notification** - Notification to a receiving facility that the waste is subject to LDR (from 40 *Code of Federal Regulations* [CFR] 268, Subpart A, *Land Disposal Restrictions*).

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2.6.3 **Shipper** - Authorized personnel who declare by signing the shipping paper that the contents of the package are fully and accurately described, packaged, labeled/placarded, and proper for conditions of transport per appropriate regulations.

2.6.4 **Shipping Paper** – Uniform Hazardous Waste Manifest (UHWM) or Straight Bill of Lading-Short Form. The shipping paper accompanies the waste during transportation.

2.6.5 **Straight Bill of Lading-Short Form** - Shipping paper used to transport non-mixed radioactive TRU waste.

2.6.6 **Uniform Hazardous Waste Manifest (UHWM)** - The U.S. Environmental Protection Agency (EPA) form 8700-22 prepared by a generator who transports, or offers for transportation, hazardous waste for off-site treatment, storage, or disposal (from 40 CFR 262, Subpart B, *The Manifest*.)

2.6.7 **Payload Canister/Container** – A fixed lid or removable lid canister (RLC) that contains waste drums or direct loaded waste that is used to ship waste in the RH TRU 72-B or a 55-gallon drum that is used to ship waste in the CNS 10-160B. These packages have Type A certifications.

2.6.8 **RH TRU 72-B Cask** – The cask used to ship the payload canister to the WIPP or other remote sites. This package has Type B certifications.

2.6.9 **Controlled Shipment** – Shipments that are controlled to a 10 day shipping period in accordance with conditions specified in Appendix 2.4 of the *RH-TRU Payload Appendices* and Section 6.2.3 of the CCP *RH-TRAMPAC*.

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NOTE

More detailed, specific interface responsibilities between CCP and the Host site are contained in site-specific interface documents, Statements of Work, etc.

3.0 RESPONSIBILITIES

3.1 CCP Transportation Certification Official (TCO)

3.1.1 Interfaces and coordinates with the generator, shipper, Site Project Manager (SPM), Waste Certification Official (WCO), and CCP Operations Leaders to plan payloads and shipments.

3.1.2 Documents and certifies that containers prepared for shipments in RH packaging meet specified shipping criteria using the Payload Transportation Certification Document (PTCD), and the WDS, as appropriate.

3.1.3 Reviews payload certification documentation to ensure compliance with applicable governing documents (associated Safety Analysis Reports, Certificates of Compliance, WIPP WAC, TRAMPAC's etc.).

3.1.4 Requests and obtains approval/authority from the WIPP to effect WIPP shipments.

NOTE

TRU waste shipping documentation includes a number of data sheets required by DOE/WIPP 02-3284, *RH Packaging Operations Manual*. CCP treats these data sheets as Quality Assurance (QA) nonpermanent records, and they form part of the overall Transportation and Shipping Packages for TRU waste. However, because the format and content of these data sheets are controlled by DOE/WIPP 02-3284, they are not included as attachments to this procedure.

3.1.5 Provides the necessary TRU waste shipping data to the Host site Shipping Coordinator.

3.1.6 Ensures all manifests and shipping papers are correct, as required.

3.1.7 Ensures all labeling, marking, and placarding is correct, as required.

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3.2 Radiological Control Technician (RCT) or Equivalent Position

3.2.1 Provides contamination and radiation surveys to the TCO for shipment certification purposes.

3.3 CCP RH Packaging and Transportation Team

3.3.1 Ensures the payload canister and the RH TRU 72-B shipping cask are prepared in accordance with the associated approved procedures.

3.3.2 Ensures visible canister/container ID labels, within a payload assembly, are an exact match to the ID numbers listed on the applicable PTCD.

3.4 Host Site Shipping Coordinator

3.4.1 Interfaces with TCO and acts as the Host site point-of-contact (POC) for operations, manifesting, and release of shipments.

3.4.2 Assists TCO in scheduling and facilitating TRU waste shipments.

3.4.3 Provides data received from TCO to the Host site transportation and material control/accountability groups (as applicable).

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4.0 PROCEDURE

NOTE

The WDS utilizes edit and limit checks when data is entered and selected. The WDS steps in Section 4.1 may be repeated until payloads and shipping compliance is satisfied.

NOTE

Steps in this procedure may be performed in parallel as applicable.

NOTE

Steps in this procedure are performed by the TCO, unless another group/discipline is mentioned in the step or a note preceding the step.

NOTE

Trained and qualified TCO's perform the WDS operation per the guidance found in DOE/WIPP-09-3427, *Waste Data System User's Manual*. The WDS manual is **NOT** required to be opened when performing the task listed below, but shall be available for reference if questions arise.

NOTE

Contact Information of organizations called out in this procedure are listed as follows. Specific email addresses can be obtained by contacting the numbers below:

WIPP Shipment Scheduler 575-234-8993 or 575-234-8230
WIPP Transportation group 575-234-8993 or 575-234-8230
WIPP RCT group 575-234-8657
WIPP Central Monitoring Room (CMR) 575-234-8863 or 575-234-8640

FAX notifications can be made in lieu of emails if needed. FAX numbers can be obtained by contacting the specific group.

4.1 WDS Data Entry/RH Shipment Certification

4.1.1 Creating Payloads Using the WDS

[A] Select the new button to create/generate a Payload Plan ID

[B] For each payload enter the following information into the WDS:

- Payload Number
- Payload Container Type
- Current Location (Site ID)

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- Destination Site (Site ID)
- Shipping Program (Site ID)

[C] Select canister until a CCP-PO-505 compliant payload is obtained.

[D] **ONCE** the virtual CCP-PO-505 compliant payload is built, **THEN** select the accept button.

[E] Select the submit button.

[F] Generate PTCD.

NOTE

Canisters designated for Controlled Shipment must be marked accordingly on PTCD. Attachment 5 will be initiated for the applicable RH TRU 72-B.

[G] Print report.

NOTE

The PTCD is signed after the RH TRU 72-B is loaded so that the final information is entered into the WDS.

[H] Review PTCD report, **AND** confirm that all payload certification parameters have been met.

4.1.2 Creating Shipments Using the WDS

[A] Enter the following information into the WDS:

- Shipment Number (From WIPP 8-week Rolling Schedule)
- Shipping Program (Site ID)
- Current Location (Site ID)
- Destination Site (Site ID)

[B] Select payload until a CCP-PO-505 compliant shipment is obtained.

NOTE

Once the submit button is selected, the confirmation process for the shipment is activated.

[C] **ONCE** the virtual CCP-PO-505 compliant shipment is built, **THEN** select save **AND** the submit button.

NOTE

Transporter, Tractor, Trailer, and CH Package numbers are obtained from the WIPP Equipment Assignment email, generated by the WIPP Transportation Group. Default values contained in the WDS system are used for Handling Material Weights and Uncertainty. Handling Material weights uncertainty is left blank in the WDS system.

[D] **WHEN** the following becomes available, **THEN** enter the information into the WDS:

- Transporter Name
- Tractor Number
- Trailer Number
- RH Package Number(s)
- Handling Material Weights

[E] For controlled shipments, email the WIPP Shipment Scheduler of impending shipment.

4.1.3 Finalizing Shipments Using the WDS

[A] Enter the following information into the WDS:

- Manifest Number
- Outer Containment (OC) Lid Number (from DOE/WIPP 02-3284, Attachment 2, Packaging Loading Data Sheet)
- Inner Vessel (IV) closure date and time (from DOE/WIPP 02-3284, Attachment 2, Packaging Loading Data Sheet)
- Dose Rate Surface (mrem/hr) from Radiological Survey Report
- Dose Rate 1-meter (mrem/hr) from Radiological Survey Report

- Dose Rate 2-meter (mrem/hr) from Radiological Survey Report
- Alpha contamination survey results in dpm from Radiological Survey Report
- Beta/gamma contamination survey results in dpm from Radiological Survey Report
- U.S. Department of Transportation (DOT) Description from Bill of Lading or UHWM.
- RQ or HRCQ flag(s) (as applicable) from Bill of Lading or UHWM.

[B] Select SAVE.

[C] Print final PTCD.

[D] Review PTCD, **AND** sign report if all parameters are in compliance with CCP-PO-505.

[E] Enter the send date and time in WDS.

[F] Select the Finalize Button to complete the WDS process.

4.2 Shipping Preparations

NOTE

Email notifications may be performed by Host site Shipping Coordinator.

4.2.1 Transmit the draft PTCDs (if applicable), WDS Shipment Summary Report, and WDS Shipment Data report to the Host site Shipping Coordinator for preparation of shipping papers.

4.2.2 Host site Transportation Personnel, develop shipping papers.

4.2.3 Host site Shipping Coordinator, provide TCO with draft copy of shipping paper and RadCalc work sheets (or equivalent).

4.2.4 Review the shipping documentation (Bill of Lading or UHWM) in accordance with 49 CFR Part 172, Subpart C, *Shipping Papers*.

NOTE

Completion of an LDR is necessary only for each initial shipment of a mixed waste stream. The LDR is completed in accordance with 40 CFR Part 268.

4.2.5 Complete Attachment 3, Land Disposal Restriction Exemption Notification.

4.2.6 Print name, sign, date, and initial Attachment 3.

4.2.7 Provide copy of Attachment 3 to Host site Shipping Coordinator.

4.2.8 Host site Shipping Coordinator, attach copy of Attachment 3 to the shipping papers.

4.2.9 As soon as available, prior to releasing the shipment, email a copy of the Draft Manifest and LDR (if applicable), to the WIPP Transportation Group.

NOTE

If the Transportation Tracking and Communications (TRANSCOM) system is out of service, secondary shipment protocol is followed as directed by the WIPP Transportation group. Step 4.2.10 can be omitted.

4.2.10 Prior to releasing the shipment to the carrier, prepare the TRANSCOM system by entering a Draft Bill of Lading or UHWM in TRANSCOM per the guidance found in the TRANSCOM 2000 Designated User Handbook.

4.2.11 Email Draft Bill of Lading or UHWM to TRANSCOM. TRANSCOM email transcom@transcom.energy.gov.

4.2.12 Host site Shipping Coordinator, notify the applicable State Motor Vehicle Department (SMVD) at least 24-hours prior to releasing a shipment.

[A] Request the performance of a Commercial Vehicle Safety Alliance (CVSA) inspection at the Host site of the trailer, tractor, and loaded RH Packaging Containers.

4.3 Inspections and Loading Operations

4.3.1 Verify that payload canisters or containers are DOT Type 7A or equivalent by reviewing the procurement record, specific certification report, or actual canister markings.

NOTE

Evidence of specific filter information is listed on the applicable site Canister Loading Record.

NOTE

Canister Integrity inspections, Marking/Labeling and/or Filter verification, may be performed by reviewing remote camera inspections or by reviewing recent recorded video.

4.3.2 Verify filter vents, as specified in Section 2.4 of the CCP RH-TRAMPAC, are installed in payload containers.

4.3.3 Perform Integrity Inspection on the payload canister identified for shipment per Attachment 4, CCP RH Canister Integrity Checklist.

4.3.4 Print name, sign, and date Attachment 4.

NOTE

Each canister shall be labeled with a unique payload canister identification (ID) number that includes a site identifier as a prefix. The characters composing the canister ID number shall be approximately 2 inches high and of a color contrasting with their background. Canister ID numbers shall be placed at approximately equal intervals around the circumference of the canister and within 18-inches of the top of the canister.

NOTE

Variances from the marking and labeling requirements listed in step 4.3.5, require CBFO approval. CCP will develop and transmit a formal letter requesting the variance to CBFO. CBFO will respond in writing of approval on specific deviation from these requirements.

4.3.5 Ensure the following Marking and Labeling is clearly legible on the payload canister:

[A] Minimum of three canister ID number labels spaced equally around canister

[B] Minimum of one “Caution Radioactive Material" label

[C] Minimum of one, when applicable, “Hazardous Waste” label

[D] Minimum of one, when applicable, PCB label

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4.3.6 Ensure that each payload canister is checked to see that there are NO HOLD TAGS attached.

[A] **IF** a HOLD TAG is found,
THEN determine the disposition to ensure that the canister is acceptable for shipment.

4.3.7 Host site RCT or equivalent position, provide Canister Contamination Survey Report to the TCO.

4.3.8 Host site RCT or equivalent position, provide a Dose Rate Survey Report of the payload canister to the TCO (dose rate readings: on contact, including Neutron contribution).

NOTE

Host site personnel will provide payload canister/containers to loading area under the direction of the TCO.

4.3.9 Perform the following:

[A] Verify from the applicable PTCD that the selected payload canister is correct for the designated RH TRU 72-B to be loaded.

[B] Verify that all of the visible container ID labels are an exact match to the ID numbers listed on the PTCD.

[C] **IF** not already performed,
THEN provide PTCD CCP RH Packaging and Transportation Team.

4.3.10 CCP RH Packaging and Transportation Team, perform the following:

[A] Verify from the applicable PTCD that the selected canister is correct for the designated RH TRU 72-B to be loaded.

[B] Verify that all of the visible container ID labels are an exact match to the ID numbers listed on the PTCD.

[C] Load the payload canister/containers into the RH TRU 72-B in accordance with DOE/WIPP-02-3284.

[D] Provide TCO with completed loading documentation.

4.3.11 Host site RCT or equivalent position, provide the dose rate and contamination surveys of the RH TRU 72-B exterior to the TCO (dose rate readings: on contact, 1-meter, and 2-meter, including Neutron contribution).

4.3.12 Review the Radiological Survey Report of the loaded RH TRU 72-B, **AND** verify that the survey data meets applicable radiation/contamination requirements in step 2.4.3.

4.3.13 Controlled Shipment Processing

[A] **IF** Controlled Shipment Payload,
THEN record applicable dates and times of IV lid installation on Attachment 5, **AND** ensure 24-hour Loading Time will not be exceeded.

[B] **IF** total loading time is calculated to be ≥ 24-hours,
THEN vent the package, **AND** repeat the lid installation process.

[C] Provide a copy of completed Attachment 5, to the Host Site Shipping Coordinator.

4.4 Shipping Completion

4.4.1 Host site Transportation personnel, perform marking, labeling, and placarding (if applicable) of the RH Package and Transport Trailer.

4.4.2 Ensure correct marking, labeling, and placarding (if applicable) per the following:

[A] Marking of RH Packaging Container shipments of RH TRU waste is conducted in accordance with 49 CFR Part 172, Subpart D, *Marking*, § 172.300 through 172.338; 40 CFR Part 262, Subpart C, § 262.32, *Marking*; and 40 CFR 761.40, Subpart C, *Marking of PCBs and PCB Items*.

[B] Labeling of RH Packaging Container shipments of RH TRU waste is conducted in accordance with 49 CFR Part 172,Subpart E, *Labeling*, § 172.400 through 172.450; and 40 CFR Part 262, Subpart C, § 262.31, *Labeling*.

[C] Placarding of RH Packaging Container transport vehicles of RH TRU waste is conducted in accordance with 49 CFR Part 172, Subpart F, *Placarding*, § 172.500 through 172.560; and 40 CFR Part 262, Subpart C, § 262.33, *Placarding.*

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4.4.3 Trucking company, attach tractor and trailer.

4.4.4 Host site Transportation personnel, sign the shipping documentation (Bill of Lading or UHWM) in accordance with 49 CFR Subpart C.

4.4.5 Host site Transportation personnel, provide carrier with appropriate shipping documentation package, including LDR (if applicable), and controlled shipment package Attachment 5 (if applicable).

4.4.6 SMVD, perform CVSA inspection of the tractor, trailer, and RH package.

4.4.7 Host site Transportation personnel, provide TCO with a signed copy of the shipping documentation (Bill of Lading or UHWM).

4.4.8 Ensure Shipment Radiological Information is emailed to WIPP RCT group.

4.4.9 **IF** the shipment contains a Controlled Shipment Package, **THEN** ensure Attachment 5, is emailed to WIPP Transportation.

4.4.10 Ensure the PTCD is signed to certify that the payload in the RH Packaging Container meets the requirements of CCP-PO-505.

4.4.11 TCO **OR** Host Site Shipping Coordinator, contact WIPP Central Monitoring Room **AND** request to release shipment.

4.4.12 **ONCE** approval is granted, **THEN** TCO or Host Site Shipping Coordinator, release shipment.

4.4.13 Change WDS status to “In Transit.”

4.5 Shipment Receipt

NOTE

Receipt sites may use CBFO-approved site-specific Controlled Shipment forms in place of CCP-TP-507, Attachment 6, provided that the same information is recorded **AND** a completed copy is returned to the applicable TCO.

4.5.1 **IF** the shipment contains a Controlled Shipment Package, **THEN** request the Receipt Site to fax/email the completed Attachment 6, or a site equivalent form, once the payloads are unloaded.

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4.5.2 **ONCE** the shipment status in WDS is “Shipment Received,”
THEN send a fax/email to the Host site Shipping Coordinator, stating shipment received with the date of receipt.

4.5.3 **ONCE** the shipping data entry is complete,
THEN compile and submit items listed in Section 5.1.1, to CCP Records.

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5.0 RECORDS

5.1 Records generated during the performance of this procedure are maintained as QA records in accordance with CCP-QP-008, *CCP Records Management.* The records are the following:

NOTE

Records generated by DOE/WIPP 02-3284 (see Section 3.1.4) as applicable, are included in the Shipping Documentation Package.

QA/Nonpermanent

5.1.1 Shipping Documentation Package:

- PTCD Spreadsheet(s), as applicable
- WDS Shipment Summary Report
- Copy of Attachment 1 - Uniform Hazardous Waste Manifest (mixed waste only), if applicable
- Copy of Attachment 2 - Straight Bill of Lading - Short Form (non-mixed waste only), if applicable
- Attachment 3 - Land Disposal Restriction Exemption Notification (initial shipment of a waste stream only)
- Attachment 4 - CCP RH Canister Integrity Checklist
- Attachment 5 - CCP Control Checklist for RH Controlled Shipments
- Attachment 6 - CCP Control Checklist for Receipt of RH Controlled Shipments
- Fax or e-mail correspondence, if applicable

5.1.2 Radiological Surveys

[A] Dose Rate Survey Report

[B] Contamination Survey

Attachment 1 – Uniform Hazardous Waste Manifest (EXAMPLE)

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | **4. Manifest Tracking Number**

5. Generator's Name and Mailing Address | Generator's Site Address (if different than mailing address)

Generator's Phone:

6. Transporter 1 Company Name | U.S. EPA ID Number

7. Transporter 2 Company Name | U.S. EPA ID Number

8. Designated Facility Name and Site Address | U.S. EPA ID Number

Facility's Phone:

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
	1.					
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name | Signature | Month | Day | Year

GENERATOR

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name | Signature | Month | Day | Year

Transporter 2 Printed/Typed Name | Signature | Month | Day | Year

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) | U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) | Month | Day | Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1. | 2. | 3. | 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name | Signature | Month | Day | Year

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete. **DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)**

Attachment 2 – Straight Bill of Lading – Short Forms (EXAMPLE)

STRAIGHT BILL OF LADING
ORIGINAL–NOT NEGOTIABLE

Shipper No. _____

Carrier No. _____

Date _____

ge ____ of ____ _____ (Name of carrier) (SCAC)

FROM:
Shipper

Street

City State Zip Code

24 hr. Emergency Contact Tel. No.

signee

State Zip Code

Vehicle Number

No. of Units & Container Type	HM	BASIC DESCRIPTION Proper Shipping Name, Hazard Class, Identification Number (UN or NA), Packing Group, per 172.101, 172.202, 172.203	TOTAL QUANTITY (Weight, Volume, Gallons, etc.)	WEIGHT (Subject to Correction)	RATE	CHARGES (For Carrier Use Only)

PLACARDS TENDERED: YES ☐ NO ☐

Note – (1) Where the rate is dependent on value, shippers are required to state specifically in writing the agreed or declared value of the property as follows: "The agreed or declared value of the property is hereby specifically stated by the shipper to be not exceeding _____ per _____"
2) Where the Applicable tariff publishes specific limitation of the carrier's liability absent a release or a value declaration by the shipper and the shipper does not release the carrier's liability or declare a value, the carrier's liability shall be limited to the extent provided by such applicable. See NMFC Item 172.
3) Commodities requiring special or additional care or attention in handling or stowing must be so marked and packaged as to ensure safe transportation. See Section 2(a) of Item 360, Bills of Lading, Freight Bills and Statements of Charges and Section 1(a) of the Contract Terms and Conditions for a list of such articles.

I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

_____ Signature

HIMIT
C.O.D. TO:
ADDRESS

COD Amt: $

C.O.D. FEE:
PREPAID ☐
COLLECT ☐ $

Subject to Section 7 of the conditions, if this shipment is to be delivered to the consignee without recourse on the consignor, the consignor shall sign the following statement:
The carrier shall not make delivery of this shipment without payment of freight and all other lawful charges.

Signature of Consignor

TOTAL CHARGES: $

FREIGHT CHARGES
PREPAID ☐ COLLECT ☐

RECEIVED, subject to classifications and tariffs in effect on the date of the issue of this Bill of Lading, the property described above in apparent good order, except as noted (contents and condition of contents of packages unknown), marked, consigned, and destined as indicated above which said carrier (the word carrier being understood throughout this contract as meaning any person or corporation in possession of the property under contract) agrees to carry to its usual place of delivery at said destination, if on its route, otherwise to deliver to another carrier on the route to said destination. It is mutually agreed, as to each carrier of all or any of said property over all or any portion of said route to destination and as to each party at any time interested in all or any said property, that every service to be performed hereunder shall be subject to all the terms and conditions in the governing classification on the date of shipment.
Shipper hereby certifies that he is familiar with all the bill of lading terms and conditions in the governing classification and the said terms and conditions are hereby agreed to by the shipper and accepted for himself and his assigns.

SHIPPER

PER

CARRIER

PER

DATE

1

Attachment 3 – Land Disposal Restriction Exemption Notification

Page 1 of 2

The non-waste water identified in this shipment, Manifest Number_____, and bearing the EPA hazardous waste number(s) listed below are exempted from the land disposal prohibitions of 20 NMAC 4.1, 268 because the waste is exempted by the WIPP Land Withdrawal Act. The Land Withdrawal Act also exempts this waste from the treatment standards in 20 NMAC 4.1, 268. This waste is **NOT** prohibited from land disposal.

EPA Hazardous Waste Number (No additional codes to those listed below can be accepted at the WIPP, Check only those that are included in this shipment.):

Waste Stream Profile Number: _____

☐	D004	Arsenic	05/08/92	☐	D038	Pyridine	09/19/96
☐	D005	Barium	08/08/90	☐	D039	Tetrachloroethylene	09/19/96
☐	D006	Cadmium	08/08/90	☐	D040	Trichloroethylene	09/19/96
☐	D007	Chromium	08/08/90	☐	D043	Vinyl Chloride	09/19/96
☐	D008	Lead	08/08/90	☐	F001	Spent Solvents	11/08/86
☐	D009	Mercury	05/08/92	☐	F002	Spent Solvents	11/08/86
☐	D010	Selenium	08/08/90	☐	F003	Spent Solvents	11/08/86
☐	D011	Silver	08/08/90	☐	F004	Spent Solvents	11/08/86
☐	D018	Benzene	09/19/96	☐	F005	Spent Solvents	11/08/86
☐	D019	Carbon Tetrachloride	09/19/96	☐	F006	Sludges	09/08/88
☐	D021	Chlorobenzene	09/19/96	☐	F007	cyanide salts	07/08/89
☐	D022	Chloroform	09/19/96	☐	F009	cyanide salts	07/08/89
☐	D026	Cresol	09/19/96	☐	P015	Beryllium Powder	08/08/90
☐	D027	1,4-Dichlorobenzene	09/19/96	☐	P030	Cyanides (soluble cyanide salts), not otherwise specified (H)	06/08/89
☐	D028	1,2-Dichloroethane	09/19/96	☐	P098	Potassium Cyanide (H)	06/08/89
☐	D029	1,1-Dichloroethylene	09/19/96	☐	P099	Potassium Silver Cyanide (H)	08/08/90
☐	D030	2,4-Dinitrotolune	09/19/96	☐	P106	Sodium Cyanide (H)	06/08/89
☐	D032	Hexachlorobenzene	09/19/96	☐	P120	Vanadium Pentoxide	08/08/90
☐	D033	Hexachlorobutadiene	09/19/96	☐	U002	Acetone	08/08/90
☐	D034	Hexachloroethane	09/19/96	☐	U003	Acetonitrile (I,T)	08/08/90
☐	D035	Methyl ethyl ketone	09/19/96	☐	U019	Benzene	08/08/90
☐	D036	Nitrobenzene	09/19/96	☐	U037	Chlorobenzene	08/08/90
☐	D037	Pentachlorophenol	09/19/96	☐	U043	Vinyl Chloride	08/08/90

Attachment 3 – Land Disposal Restriction Exemption Notification (Continued)

Page 2 of 2

Waste Stream Profile Number: _____

☐	U044	Chloroform	08/08/90	☐	U226	1,1,1-Trichloroethane	08/08/90
☐	U052	Cresol	08/08/90	☐	U228	Trichloroethylene	08/08/90
☐	U070	1,2-Dichlorobenzene	08/08/90	☐	U239	Xylene	08/08/90
☐	U072	1,4-Dichlorobenzene	08/08/90	☐	N/A	N/A	N/A
☐	U078	1,1-Dichloroethylene	08/08/90	☐	N/A	N/A	N/A
☐	U079	1,2-Dichloroethylene (T) 156-60-5	08/08/90	☐	N/A	N/A	N/A
☐	U103	Dimethyl Sulfate (T)	08/08/90	☐	N/A	N/A	N/A
☐	U105	2,4-Dinitrotoluene (T) 121-14-2	08/08/90	☐	N/A	N/A	N/A
☐	U108	1,4-Dioxane (T)		☐	N/A	N/A	N/A
☐	U122	Formaldehyde	08/08/90	☐	N/A	N/A	N/A
☐	U133	Hydrazine	08/08/90	☐	N/A	N/A	N/A
☐	U134	Hydrofluoric Acid	08/08/90	☐	N/A	N/A	N/A
☐	U151	Mercury	08/08/90	☐	N/A	N/A	N/A
☐	U154	Methanol	08/08/90	☐	N/A	N/A	N/A
☐	U159	Methyl Ethyl Ketone	08/08/90	☐	N/A	N/A	N/A
☐	U196	Pyridine	08/08/90	☐	N/A	N/A	N/A
☐	U209	1,1,2,2-Tetrachloroethane	08/08/90	☐	N/A	N/A	N/A
☐	U210	Tetrachloroethylene	08/08/90	☐	N/A	N/A	N/A
☐	U220	Toluene	08/08/90	☐	N/A	N/A	N/A

_____/_____/_____/_____
TCO Printed Name Signature Date Initials

REFERENCE:

20 NMAC 4.1, 268.7(a) (3)
OCT. 30, 1992–PUBLIC LAW 102-579 as amended Sept. 23, 1996–PUBLIC LAW 104-201, Subtitle F
WIPP Hazardous Waste Facility Permit, Attachment C-5b(2)
WIPP Hazardous Waste Facility Permit, Table 2.3.4

Attachment 4 – CCP RH Canister Integrity Checklist

Record Canister ID number_____

RH TRU 72-B Cask Number (if applicable) _____

Any YES answer on the inspection checklist will result in the TCO immediately contacting the facility supervisor. The facility supervisor will have the canister/container segregated **AND** the appropriate site-specific corrective actions invoked. The TCO will select a new waste canister/container for shipment. The new waste canister/container will require the same inspection per the checklist.

Visually examine 100% of each canister/container for selected payload assembly per the checklist below.

CANISTER/CONTAINER EXAMINATION		**DISCUSSION OF CRITERIA**	**CHECK ONE**	
1.	Is the canister/container obviously degraded?	Obviously degraded means clearly visible and potentially significant defects in the canister/container or canister/container surface.	YES ☐	NO ☐
2.	Is there evidence that the canister/container is, or has been, pressurized?	Pressurization can be indicated by a fairly uniform expansion of the sidewalls, bottom or top. Past pressurization can be indicated by a notable outward deflection of the bottom or top. Verify that the canister/container is not warped.	YES ☐	NO ☐
3.	Is there any potentially significant rust or corrosion such that wall thinning, pin holes, or breaches are likely or the load bearing capacity is suspect?	Rust shall be assessed in terms of its type, extent, and location. Pitting, pocking, flaking, or dark coloration characterizes potentially significant rust or corrosion. This includes the extent of the canister/container surface area covered, thickness, and, if it occurs in large flakes or built-up (caked) areas. Rusted canisters/containers may not be accepted if: • Rust is present in caked layers or deposits • Rust is present in the form of deep metal flaking, or built-up areas of corrosion products In addition, the location of rust should be noted; for example on a drum: top lid; filter region; locking chine; top one-third, above the second rolling hoop; middle one-third, between the first and second rolling hoops; bottom one-third, below the second rolling hoop; and on the bottom. Canisters/containers may still be considered acceptable if the signs of rust show up as: • Some discoloration on the canister/container • If rubbed would produce fine grit or dust or minor flaking (such that wall thinning does not occur)	YES ☐	NO ☐

Attachment 4 – CCP RH Canister Integrity Checklist (Continued)

CANISTER/**CONTAINER EXAMINATION**		**DISCUSSION OF CRITERIA**	**CHECK ONE**	
4.	Are any of the following apparent? • wall thinning • pin holes • breaches	Wall thinning, pin holes, and breaches can be a result of rust/corrosion (see discussion for #3).	YES ☐	NO ☐
5.	Are there any split seams, tears, obvious holes, punctures (of any size), creases, broken welds, or cracks?	Canisters/containers with obvious leaks, holes or openings, cracks, deep crevices, creases, tears, broken welds, sharp edges or pits, are either breached or on the verge of being breached. Verify that there is no warpage that could cause the canister/container to be unstable or prevent it from fitting properly in the applicable package.	YES ☐	NO ☐
6.	Is the load-bearing capacity suspect?	The load-bearing capacity could be reduced for excessive rust (see discussion for #3), wall thinning (see discussion for #4), breaches, cracks, creases, broken welds, etc. (see discussion for #5).	YES ☐	NO ☐
7.	Is the canister/container improperly closed?	Inspect the fastener and fastener ring (chine) if applicable for damage or excessive corrosion. Check the alignment of the fastener to ensure that it is in firm contact around the entire lid and the canister/container will not open during transportation.	YES ☐	NO ☐
8.	Are there any dents, scrapes, or scratches that make the canister's/container's structural integrity questionable or prevent the top and bottom surfaces from being parallel?	Deep gouges, scratches, or abrasions over wide areas are not acceptable. If top and bottom surfaces are not parallel, this would indicate that the container is warped. Dents should be less than ¼ inch deep by 3 inches long and between ½ inch to 6 inches wide. All other dents must be examined to determine impact of structural integrity.	YES ☐	NO ☐
9.	Is there discoloration which would indicate leakage or other evidence of leakage of material from the canister/container?	Examine the canister/container regions near vents, top lid fittings, bottom fittings, welds, seams and intersections of one or more metal sheets or plates. Canisters/containers must be rejected if evidence of leakage is present.	YES ☐	NO ☐
10.	Is the canister/container bulged?	For the purposes of this examination, bulging is indicated by: • A fairly uniform expansion of the sidewalls, bottom, or top (e.g., in the case of a drum, either the top or bottom surface protrudes beyond the planar surface of the top or bottom ring, • A protrusion of the side wall (e.g., in the case of a drum, beyond a line connecting the peaks of the surrounding rolling hoops or a line between a surrounding rolling hoop and the bottom or top ring), or Expansion of the sidewall (e.g., in the case of a drum, such that it deforms any portion of a rolling hoop).	YES ☐	NO ☐

Note: Remote Camera Inspections can be performed by reviewing recent recorded video.

Controlled
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Attachment 4 – CCP RH Canister Integrity Checklist (Continued)

Comments: _____
_____
_____
_____

Inspected by: _____/_____/_____
TCO Printed Name Signature Date

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Attachment 5 – CCP Control Checklist for RH Controlled Shipments*

Shipment No. _____ Packaging No. _____

To be completed by CCP Transportation Certification Official, or designee, for package designated as a controlled shipment.

Activity	Recorded Date	Recorded Time	Completion of Activity (√)
Record date and time of IV closure and installation of IV vent port plug, DOE/WIPP 02-3284, *RH Packaging Operations Manual.*			
Record date and time the shipment containing the loaded package is ready to depart from site to destination			
Calculate and record total Loading Time (Limit = 24 hours)			
Total Loading time ≤ 1day, proceed to certification signature block *Total Loading time > 1, STOP. Vent package and repeat closure process*			
I certify the above data is accurate and compliant with the Loading Time limit of 24 hours, as specified in Section 6.2.3 of the RH-TRAMPAC.			
Transportation Certification Official (or designee)		Date	

*Controlled shipments (10 days) shall be made in accordance with the conditions specified in RH-TRAMPAC Section 6.2.3

_____/_____/_____/_____
TCO Printed Name Signature Date Initials

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Attachment 6 – CCP Control Checklist for Receipt of RH Controlled Shipments*

Shipment No. _____ Packaging No. _____

To be completed by Site Operations personnel for package designated as a controlled shipment:

Activity	Recorded Date	Recorded Time	Completion of Activity (√)
Record date and time of package receipt			
Vent package within 24 hours of date and time recorded above and record vent date and time			
I certify the above data is accurate and compliant with the Unloading Time limit of 24 hours, as specified in Section 6.2.3 of the RH-TRAMPAC.			
Designated Site Personnel	Site	Date	

*Controlled shipments (10 days) shall be made in accordance with the conditions specified in RH-TRAMPAC Section 6.2.3. This attachment may be reformatted for Receipt Site use provided that the same information is recorded.

Contact TCO _____, at Ph# _____, upon completion of attachment for notification of completion of 24 hour unloading time, completion of 10 day controlled shipment and to arrange return email/FAX of “Attachment 6” copy, for Shipping Documentation Package.

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CCP-TP-509

Revision 4

CCP Remote-Handled Transuranic Container Tracking

EFFECTIVE DATE: 06/21/2013

Irene Joo

PRINTED NAME

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RECORD OF REVISION

Revision Number	Date Approved	Description of Revision
0	02/16/2006	Initial issue.
1	06/02/2008	Delete requirement for hanging nonconformance (NCR) tag.
2	11/11/2008	Revised to add responsibilities and procedural steps to incorporate sampling operations into the program. Added reference to CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control*. Added note to step 4.4.1 regarding Acceptable Knowledge (AK) Expert review on newly packaged waste containers added to the AK Tracking Spreadsheet.
3	02/24/2011	Revised to include the nondestructive assay (NDA) process.
4	06/21/2013	Revised to incorporate Nuclear Waste Partnership (NWP) transition changes, eliminate reference to CCP Data Center, and to implement the Permit Modification Request Class 2 approved by New Mexico Environment Department (NMED) dated March 13, 2013.

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1.0 PURPOSE

This procedure describes and implements the Central Characterization Program (CCP) tracking of remote-handled (RH) transuranic (TRU) waste containers during the characterization process.

1.1 Scope

This procedure applies to personnel who support CCP RH TRU waste characterization activities. The Host site may use their procedures for container movement and handling. Container tracking through CCP activities will be conducted using this procedure.

2.0 REQUIREMENTS

2.1 References

Baseline Documents

- DOE/WIPP-02-3214, *Remote-Handled TRU Waste Characterization Program Implementation Plan*
- CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*
- CCP-PO-002, *CCP Transuranic Waste Certification Plan*

Referenced Documents

- CCP-QP-002, *CCP Training and Qualification Plan*
- CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control*
- CCP-QP-008, *CCP Records Management*
- CCP-QP-040, *Support Training*
- CCP-TP-500, *CCP Remote-Handled Waste Visual Examination*

2.2 Training Requirements

2.2.1 None.

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2.3 Equipment List

2.3.1 None.

2.4 Precautions and Limitations

2.4.1 None.

2.5 Prerequisite Actions

2.5.1 None.

2.6 Definitions

2.6.1 None.

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3.0 RESPONSIBILITIES

NOTE
Container Management personnel may be CCP and/or Host site personnel as determined by CCP and the Host facility.

3.1 Container Management Personnel

3.1.1 Verifies container is on the Acceptable Knowledge Tracking Spreadsheet (AKTSS).

3.1.2 Verifies container has a legible radiological label/tag with a radiation dose equivalent rate.

3.1.3 Performs scale calibration check and container weighing.

3.1.4 Records scale calibration information on Attachment 1, Scale Calibration Check Information.

3.1.5 Records the Gross Container Weight and the Container Identification (ID) Number on Attachment 2, Standardized Container Management Report.

3.2 Nondestructive Examination (NDE) Operator

3.2.1 Provides the container processing information (Container ID Number, Batch Data Report [BDR] Number, Nonconformance Report [NCR] Number if applicable, and reason for NCR) to the Site Project Manager (SPM)/Vendor Project Manager (VPM).

3.3 Dose Operator

3.3.1 Provides the container processing information (Container ID Number, BDR Number, NCR Number if applicable, and reason for NCR) to the SPM/VPM.

3.4 Nondestructive Assay (NDA) Operator

3.4.1 Provides the container processing information (Container ID Number, BDR Number, NCR Number if applicable, and reason for NCR) to the SPM/VPM.

3.5 Visual Examination (VE) Operator

3.5.1 Provides the container processing information (Container ID Number, BDR Number, NCR Number if applicable, and reason for NCR) to the SPM/VPM.

3.6 Sampling Operator

3.6.1 Provides the container processing information (Container ID Number, BDR Number, NCR Number if applicable, and reason for NCR) to the SPM/VPM.

3.7 Vendor Project Manager (VPM)

3.7.1 Tracks the containers through the characterization process using site-specific tracking spreadsheet or equivalent.

3.8 Site Project Manager (SPM)

3.8.1 Tracks the containers through the characterization process using site-specific tracking spreadsheet or equivalent.

3.8.2 Updates and maintains new NCR information in the RH folder on the secure file transfer protocol (sftp) site (https://sftp.wipp.energy.gov) [if automated download is not functioning], as reviewed, placing or removing NCR holds on containers.

3.9 Facility Records Custodian

3.9.1 Receive, process, and transmit Attachment 1 and Attachment 2 in accordance with CCP-QP-008, *CCP Records Management*.

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4.0 PROCEDURE

Container Manager

NOTE
Only perform steps 4.1 and 4.2 as applicable (i.e., NDA process).

4.1 Scale Calibration Check

4.1.1 On each day the scale is used, perform the following:

[A] **IF** the scale is an electronic scale,
THEN either verify the scale is turned ON, **OR** turn the power ON to the scale.

[B] Verify the following, **AND** record on Attachment 1:

- Scale ID #
- Scale Calibration Due Date

[C] Verify that the scale reads zero when NOT loaded.

[C.1] **IF** the scale DOES **NOT** read zero,
THEN ensure the scale is ON, **OR** zero the scale per manufacturer instruction.

[D] Perform a calibration check to verify the scale response is satisfactory as follows:

[D.1] Place a known Check Weight on the scale, AND verify the scale reads within the accuracy of the calibration (as listed on the calibration sticker or data sheet, as applicable).

[D.2] **IF** the scale calibration is satisfactory,
THEN record SAT on Attachment 1 in the Scale Cal Check column.

[D.3] **IF** the scale reads outside of the calibration range,
THEN SUSPEND WORK, record UNSAT on Attachment 1, in the Scale Cal Check column, **AND** notify the CCP VPM/Designee.

[D.4] Return the Check Weight to its storage location.

[E] Print name, sign, and date Attachment 1.

4.2 Container Weighing

4.2.1 Verify Container ID is on the AKTSS.

[A] **IF** the Container ID is NOT on the AKTSS, **THEN** DO NOT accept the container, contact the VPM/Designee, **AND** return the container to the Host site.

4.2.2 Record the Container ID on Attachment 2.

4.2.3 Inspect each container for a completed radiological label/tag, **AND** ensure the completed radiological label/tag is legible and records a radiation dose.

[A] **IF** a radiological label/tag is NOT attached to the container, **THEN** SUSPEND WORK on the container, **AND** perform the following:

[A.1] Notify the VPM/Designee

[A.2] Request a radiation survey be performed

[A.3] Verify that a new radiological label/tag is attached

4.2.4 Load the container onto to the scale, **AND** allow the scale reading to stabilize.

4.2.5 Record the Gross Container Weight (kilogram [kg]) on the Attachment 2.

4.2.6 Remove the container from the scale.

4.2.7 Repeat steps 4.2.1 through 4.2.6 as required for all additional containers.

4.2.8 Print name, sign, and date Attachment 2.

4.2.9 Forward Attachments 1 and 2 to the Facility Records Custodian.

<u>Facility Records Custodian</u>

4.2.10 Receive, process, and transmit Attachments 1 and 2 in accordance with CCP-QP-008.

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4.3 NDE Process

NDE Operator

4.3.1 Verify that the containers delivered to the NDE process are on the AKTSS.

4.3.2 **IF** the containers are **NOT** the correct containers to be processed (i.e., **NOT** listed on the AKTSS),
THEN return the containers to the Host site in lieu of processing.

4.3.3 Perform NDE in accordance with approved procedure.

4.3.4 Provide the container processing information (Container ID Number, BDR Number, NCR Number if applicable, and reason for NCR) to the SPM/VPM.

4.4 Dose Process

Dose Operator

4.4.1 Verify that the containers delivered to the process are on the AKTSS.

4.4.2 **IF** the containers are **NOT** the correct containers to be processed (i.e., **NOT** listed on the AKTSS),
THEN return the container to the Host site in lieu of processing.

4.4.3 Perform Dose acquisition in accordance with approved procedure.

4.4.4 Provide the container processing information (Container ID Number, BDR Number, NCR Number if applicable, and reason for NCR) to the SPM/VPM.

4.5 NDA Process

NDA Operator

NOTE
Only performed when directed by an RH SPM.

4.5.1 Verify that the containers delivered to the NDA process are on the AKTSS.

4.5.2 **IF** the containers are **NOT** the correct containers to be processed (i.e., NOT listed on the AKTSS),
THEN return the containers to the Host site in lieu of processing.

4.5.3 Perform NDA in accordance with the approved procedure.

4.5.4 Provide the container processing information (Container ID Number, BDR Number, NCR Number if applicable, and reason for NCR) to the SPM/VPM.

4.6 VE Operations

NOTE

For newly packaged waste, the containers will be added to the AKTSS after the appropriate AK Expert review is complete. Forward signed CCP-TP-500, *CCP Remote-Handled Waste Visual Examination*, Attachment 1 to SPM with copy to the AK Expert for review and AK update.

VE Operator

4.6.1 Verify the containers identified for VE are on the AKTSS.

4.6.2 **IF** the containers are **NOT** the correct containers to be processed (i.e., **NOT** listed on the AKTSS),
THEN return the container to the Host site in lieu of processing.

4.6.3 Perform VE in accordance with approved procedure.

4.6.4 Provide the container processing information (Container ID Number, BDR Number, NCR Number if applicable, and reason for NCR) to the SPM/VPM.

4.7 Sampling Operations

NOTE

Containers to be radiochemistry sampled may be presented in the original packaging configuration from the host site and would not appear on the AKTSS. The operator is to use the Sampling Analysis Plan to verify the container to be sampled.

Sampling Operator

4.7.1 Verify the containers identified for Sampling are on the AKTSS.

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4.7.2 **IF** the containers are **NOT** the correct containers to be processed (i.e., **NOT** listed on the AKTSS),
THEN return the container to the Host site in lieu of processing.

4.7.3 Perform Sampling in accordance with approved procedure.

4.7.4 Provide the container processing information (Container ID Number, BDR Number, NCR Number if applicable, and reason for NCR) to the SPM/VPM.

4.8 Radiochemistry Analysis

SPM

4.8.1 Track the container processing information (Container ID Number, BDR Number, NCR Number if applicable, and reason for NCR) provided by the analytical laboratory.

4.9 Container Tracking

SPM/VPM

4.9.1 Track each container through the required processes.

4.10 Updating and Maintaining sftp Site

SPM

4.10.1 Update Excel spreadsheet with NCR information received, if applicable.

4.10.2 Click on the RH folder on the sftp site (https://sftp.wipp.energy.gov).

4.10.3 Open appropriate Excel spreadsheet and logon.

4.10.4 Copy the updated spreadsheet.

4.10.5 Verify NCR status of containers prior to container reconciliation/evaluation.

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5.0 RECORDS

5.1 Records generated during the performance of this procedure are maintained as Quality Assurance records in accordance with CCP-QP-008. The records are the following:

5.1.1 <u>QA/Nonpermanent</u>

[A] Data Generation Level Container Management database
[B] Attachment 1 – Scale Calibration Check Information
[C] Attachment 2 – Standardized Container Management Report

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Attachment 1 – Scale Calibration Check Information

Scale ID #	Scale Calibration Due Date	Scale Cal Check (SAT/UNSAT)

Comments:

Completed by: _____ _____ _____

Print Name Signature Date

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Attachment 2 – Standardized Container Management Report

Container ID Number	Gross Container Weight (Record to 0.1 kg)

Comments:

Completed by: _____ _____ _____

Print Name Signature Date

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CCP-TP-512

Revision 6

CCP
Remote-Handled Waste Sampling

EFFECTIVE DATE: 06/21/2013

Irene Joo

PRINTED NAME

APPROVED FOR USE

RECORD OF REVISION

Revision Number	Date Approved	Description of Revision
0	07/23/2008	Initial issue.
1	08/06/2008	Clarified when data may be pre-recorded for ALARA reasons.
2	04/16/2009	Revised to accommodate remote-handled (RH) transuranic (TRU) sampling event for various events.
3	05/04/2010	Add step to perform pre-job briefing of sampling plan.
4	12/29/2010	Revised to incorporate Permit Modification Independent Technical Review (ITR) language.
5	04/25/2011	Revised to implement revision 2 of DOE/WIPP-02-3214, *Remote-Handled TRU Waste Characterization Program Implementation Plan*.
6	06/21/2013	Revised to implement the Permit Modification Request Class 2 approved by New Mexico Environment Department (NMED) dated March 13, 2013.

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1.0 PURPOSE

This procedure provides instructions for sampling (not analysis) remote-handled (RH) transuranic (TRU) waste forms. The physical and chemical diversity of RH TRU waste, as well as the dissimilarity of storage facilities and sampling equipment associated with them, require a specific Sampling Analysis Plan (SAP) for each waste stream. Therefore, the sampling is performed in conjunction with a U.S. Department of Energy (DOE) Carlsbad Field Office (CBFO) approved SAP. The SAP will provide specific sampling details/instructions required for the selected analysis for each waste stream. Depending on the specific SAP, the sampling is performed as defined by DOE/WIPP-02-3214, *Remote-Handled TRU Waste Characterization Program Implementation Plan* (WCPIP).

1.1 Scope

This procedure applies to personnel responsible for collecting samples and sampling information, including preparation of the sampling batch data report (BDR). It also addresses the Independent Technical Review (ITR) and Site Project Manager (SPM) review of the BDR.

2.0 REQUIREMENTS

2.1 References

Baseline Documents

- CCP-PO-002, *CCP Transuranic Waste Certification Plan*
- 49 *Code of Federal Regulations* (CFR), *Transportation Regulations*

Referenced Documents

- CCP-QP-002, *CCP Training and Qualification Plan*
- CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control*
- CCP-QP-008, *CCP Records Management*
- DOE/WIPP-02-3214, *Remote-Handled TRU Waste Characterization Program Implementation Plan* (WCPIP)

2.2 Training Requirements

2.2.1 Personnel identified in this procedure will be trained and qualified in accordance with CCP-QP-002, *CCP Training and Qualification Plan*, prior to performing this procedure.

2.3 Definitions

2.3.1 **Sampling Batch**: A sampling batch is a suite of samples collected consecutively using the same sample equipment within a specific time period. A sampling batch can be up to 20 samples (excluding field quality control [QC] samples), all of which shall be collected within 14 days of the first sample in the batch. The 14 day time limit is not applicable to Radiochemistry or ICP-MS Analyses radiological characterization only.

2.3.2 **Chain of Custody (COC)**: Chain of custody (COC) will be initiated immediately after sampling. Sample custody will be maintained by ensuring the samples are sealed or locked in the possession of or within the view of a Sampler, in a sealed or locked container controlled by a Sampler, or in a secure controlled-access location.

2.3.3 **Tamper Indicating Device (TID)**: Tamper indicating devices (TIDs) have physical characteristics that would immediately indicate tampering should container integrity be violated. TIDs must be affixed to sample containers and to loaded shipping containers.

2.3.4 **Shipment**: A shipment is when sample containers are shipped off site using an off-site shipping company.

2.3.5 **Transfer**: A transfer is when sample containers are transferred to another location, but a person is always in the physical custody of the sample containers.

2.4 Quality Assurance Objectives (QAOs)

2.4.1 **Precision**: Not applicable.

2.4.2 **Accuracy**: Sampling accuracy is achieved by the development of an appropriate sample design in the sampling approved and by collecting an adequate number of samples such that the one-sigma uncertainty in the mean value of the sample-generated scaling factor is within a factor of two. Sample equipment will be verified free of radiological contamination by use of standard radiological control survey methods.

2.4.3 **Representativeness**: A sampling plan must be developed that describes the sampling strategy for obtaining representative samples. The sampling plan must be approved.

2.4.4 **Completeness**: Sampling completeness will be ensured by meeting the QAO for a minimum set of radionuclides as specified in the sampling plan.

2.4.5 **Comparability**: Not applicable.

2.5 Prerequisite Actions

2.5.1 Personnel shall have signed applicable Radiation Work Permit (RWP) or equivalent As Low As Reasonably Achievable (ALARA) Task and shall wear required dosimetry.

2.5.2 Document briefing of the applicable sampling plan prior to work.

2.6 Equipment

2.6.1 Free of radiological contamination sample collection equipment

2.6.2 Large re-sealable plastic bags

2.6.3 TIDs

2.6.4 Kimwipes, Terri wipes, or suitable wipe-down cloths, as needed

2.6.5 Tape

2.6.6 Bag-out bags

2.6.7 Balance

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3.0 RESPONSIBILITIES

3.1 Independent Technical Reviewer (ITR)

NOTE

The independent technical review will be performed by someone, other than the individual who performed sampling or data generation, who is qualified to have performed the work. Independent Technical Reviewers shall not be involved in the generation or recording of the data.

3.1.1 Reviews the BDR using Attachment 3, Independent Technical Review Checklist.

3.2 Site Project Manager (SPM)

3.2.1 Reviews the Sampling BDR using Attachment 6, Site Project Manager Sampling Batch Data Report Checklist.

3.2.2 Reviews the Radiochemistry or Inductively Coupled Plasma-Mass Spectrometry (ICP-MS) Analytical BDR using Attachment 7, Site Project Manager Radiochemistry or ICP-MS Analytical Batch Data Report Checklist.

3.3 Sampler

3.3.1 Inspects sample area to ensure that gross visible contamination that has the potential to contaminate waste samples is thoroughly removed prior to sampling.

3.3.2 Inspects sample containers and sampling equipment for damage and proper documentation.

3.3.3 Collects samples, **AND** applies TIDs.

3.3.4 Completes sample tracking forms and/or log(s) and COC Form(s).

3.3.5 Assembles and paginates BDR.

3.3.6 Prepares samples for transfer or shipment.

3.4 Analytical Laboratories

3.4.1 Procures and provides sample collection containers free of radiological contamination.

3.4.2 Analyzes samples.

3.5 Radiological Control Technician (RCT)

3.5.1 Performs surveys and records results, when needed, on applicable forms and affixes labels, as needed, on items, as required.

3.6 Lead Operator (LO)/SME

3.6.1 Is present for and provides guidance and direction of **all** sampling activities described in this procedure.

3.6.2 Conducts and documents training briefs of applicable SAP's.

3.6.3 Performs sampler duties as needed.

3.7 Facility Records Custodian/Records Custodian

3.7.1 Receives, processes, and transmits, when applicable, all records generated by this procedure in accordance with CCP-QP-008, *CCP Records Management*.

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4.0 PROCEDURE

NOTE

Sampling will be performed in conjunction with the applicable SAP for the waste stream being sampled. The SAP will provide specific sampling details/instructions required for the selected waste containers or sampling area.

NOTE

Opening and closure of waste containers are performed by site-specific procedures.

Sampler

4.1 Preliminary Sample Collection Activities

4.1.1 Ensure all prerequisites have been met.

4.1.2 If applicable, record the balanced used in the operational logbook.

4.1.3 Obtain a set of sample containers, and/or sampling equipment for each waste container, area, event, etc., to be sampled.

4.1.4 Obtain a copy or copies of the documentation that documents the sampling equipment and sample containers are radiologically free of contamination.

4.1.5 Visually inspect sampling equipment and container bags for integrity and damaged containers.

4.1.6 **IF** damage to sampling equipment packaging or to the sample containers is observed,
THEN discard the damaged package, **AND** RETURN TO step 4.1.3.

4.1.7 Obtain a copy of Attachment 1, Sample Tracking Form, for each container or number of items to be sampled.

4.1.8 Record sampling equipment set number and/or sampling container set number on Attachment 1.

4.1.9 Record sampling equipment certification number and/or sampling container certification number on Attachment 1.

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NOTE

During the sample collecting activity, any damaged sample collection containers will be discarded.

4.1.10 Initiate an Attachment 1 for each sample by recording:

[A] SAP and Revision of SAP

[B] Sampling Date

[C] BDR Number in the format XXRHYYZZ, where XX is the site identification (ID), RH is remote-handled, YY is the last two digits of year, and ZZ is sequential numbers starting with 01 each year

[D] Unique Sample ID Number or as specified in the SAP

[E] Waste Container Number

[E.1] **IF** this is an area sample or not containerized waste, **THEN** mark as N/A.

[F] Sampling Facility (i.e., name of the site, facility, building, and room)

[G] Sampling Location (e.g., drum, can, top, middle, as appropriate)

[H] Sample Matrix (e.g., swipe, solid)

[I] Sample Type (e.g., blank)

[J] Sample Container Size

[K] Procedure Number and Revision

[L] Requested Laboratory

[M] Analysis Requested

4.2 Sampling

4.2.1 Inspect the sample area and sampling work area for cleanliness.

4.2.2 Visually inspect sampling equipment and container bags for integrity and damaged containers.

4.2.3 **IF** damage to sampling equipment or to the sample containers is observed,
THEN discard the equipment or sample container set, **AND** RETURN TO step 4.1.3.

4.2.4 Open a sampling equipment package, as needed.

4.2.5 Open a package containing the sample collection container(s), if applicable and as needed, and stage the sampling container(s) for receipt of sample material, if needed.

4.2.6 From an opened sampling equipment package and/or sample container package, visually inspect sampling equipment and sample containers for damage.

4.2.7 **IF** damage to sampling equipment or to the sample containers is observed,
THEN discard the equipment or sample container set, **AND** RETURN TO step 4.1.3.

4.2.8 Weigh the sample container and record weight on Attachment 1, if applicable.

4.2.9 Collect the appropriate sample matrix and sample amount for sample container size and analysis required by the appropriate SAP, **AND** place it into sample container.

4.2.10 Close the sample collection container, **AND** record the sampling time on Attachment 1.

NOTE

For ALARA reasons and/or equipment limitations, sample container/package label information may be pre-filled out as necessary/applicable.

NOTE

Due to sampling dynamics/conditions, the sample container/package label may be affixed after the sample is removed from the sampling environment.

4.2.11 Record the following on the sample container/package label and affix to sample container/package, as necessary/applicable:

[A] Sample ID Number

[B] Sampler organization

[C] Sample description

4.2.12 Initiate COC using Attachment 2, Chain-of-Custody, by recording the following:

NOTE

More than one COC may be needed for the same BDR; therefore, information is entered on the first COC and as needed on each additional COC.

[A] COC number in the format COCXXRHYYZZ# where the XXRHYYZZ is the BDR number and # is consecutive numbers starting with 1, per BDR

[B] BDR Number

[C] Waste Container Number

[D] Sampling location (as appropriate

[E] Sample Matrix (e.g., smear, solid)

[F] Sample Type

[G] Off-site shipping information (Method of Transfer, Shipping Organization, Bill of Lading Number)

[G.1] **IF NOT** applicable,
THEN mark N/A.

[H] Sample ID number

[I] Sampling date

[J] Sampling time

[K] Requested sample analysis

[L] Preservation method

[L.1] **IF NOT** applicable,
THEN mark N/A.

4.2.13 Weigh the sample/container and record the weight on Attachment 1, if applicable.

4.2.14 Sampler initiating custody: print name, sign, date, and enter time to initiate COC.

4.2.15 Record the COC number(s) on Attachment 1.

4.2.16 For any additional samples needed for this container, GO TO step 4.2.1.

NOTE

Due to sampling dynamics/conditions, TID's may be attached to the sample container/package after the sample is removed from the sampling environment.

4.2.17 Attach a TID to each sample container/package, if applicable.

[A] Date and sign/initial, as applicable.

4.2.18 Record TID number(s) on Attachment 1 in the comments section, if applicable.

NOTE

TIDs shall be installed such that the sample collection container(s)/package CAN **NOT** be opened without breaking one or more seals. TIDs or seals will be traceable to the individual who affixed these items.

4.2.19 Remove sample containers from sampling area according to facility procedures.

4.2.20 **IF** additional waste containers are to be sampled,
THEN return to step 4.2.1.

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4.3 Sample Transfer or Shipment

4.3.1 Sample Shipment

NOTE

Shipping will be processed through the Host site shipping/transportation department.

[A] **IF** samples are to be shipped,
THEN ensure that the required site Shipment Request Form(s), or equivalent, has been completed, if applicable.

[B] Ensure that the samples are secured.

[C] Ensure the TID number used on the shipping container is recorded on Attachment 1(s) **AND** on Attachment 2(s) in the Comments section located at the bottom of the page.

[D] Sign, date, and enter time on Attachment 2(s) to relinquish custody of samples for shipment.

[E] Complete Attachment 1(s) by entering the Sampler(s) printed name, signature, and date on Attachment 1(s).

[F] Photocopy the Attachment 2(s) and Attachment 1(s).

[G] Confirm the following accompanies the samples:

[G.1] Attachment 2(s) (original)

[G.2] Attachment 1(s) (copy)

NOTE

The Attachment 2(s) MUST be placed inside the sealed shipping container. Transfer of custody is complete when the Analytical Laboratory Sample Custodian receives the shipping container, opens the shipping container, **AND** signs, dates, and enters the time on the Attachment 2(s). The shipping documentation will serve to track physical transfer of the samples between the two Sample Custodians.

[H] Ensure that the original Attachment 2(s) and copies of Attachment 1(s) are in a re-sealable bag **AND** attached to the underneath (interior) of the shipping container lid.

NOTE

TIDs shall be installed such that the shipping container CAN **NOT** be opened without breaking one or more seals. Old or broken seals shall be completely removed from the shipping container **AND** replaced with a new seal(s) prior to shipment.

[I] Ensure the shipping container lid is installed **AND** TID is applied.

[J] Place the photocopied Attachment 2(s) and original Attachment 1(s) in the BDR Holding File.

4.3.2 Sample Transfer

[A] Ensure that the samples are secured.

[B] Complete Attachment 1(s) by entering the sampler(s) printed name, signature, and date.

[C] Photocopy the Attachment 1(s).

[D] Place original Attachment 1(s) in the BDR holding file.

[E] Confirm that the original Attachment 2(s) and copies of Attachment 1(s) accompany the sample containers.

[F] Transfer sample containers to new location.

[G] Sign, date, and enter time on the Attachment 2(s) to relinquish custody of sample containers.

[H] After the receiving person at new location signs, dates, and enters the time on Attachment 2(s), photocopy Attachment 2(s).

[I] Place copies of Attachment 2(s) in the BDR holding file.

4.4 BDR Preparation and Submission

4.4.1 Assemble the following data for the BDR by performing the following:

[A] Attach and complete (minus the name, signature, and date) Attachment 5, Batch Data Report Cover Sheet.

[B] Attach Attachment 4, Batch Data Report Table of Contents.

[C] Attach Attachment 1(s), Sample Tracking Form.

[D] Attach Attachment 2(s), Chain-of-Custody.

[E] Attach Attachment 3, Independent Technical Review Checklist.

[F] Attach copy of NCRs, if applicable.

[G] Attach copy of radiological contamination survey(s) for the sampling equipment, if applicable.

[H] Any applicable documentation required by the SAP.

4.4.2 Paginate the BDR, numbering each page with a sequential number.

4.4.3 Complete Attachment 4.

4.4.4 Ensure that the assembly order of BDR matches Attachment 4.

4.4.5 Print name, sign, and date Attachment 5.

4.4.6 Forward the BDR package to the ITR.

ITR

4.4.7 Review the BDR to the criteria in Attachment 3, **AND** document on Attachment 3.

4.4.8 Notify the Sampler of all errors or omissions found during the review.

4.4.9 Recheck the data after the errors or omissions have been rectified.

4.4.10 Ensure Attachment 3 is complete, print name, sign, and date Attachment 3 and Attachment 5.

4.4.11 Submit BDR to the Facility Records Custodian.

Facility Records Custodian

4.4.12 Receive, process, and transmit BDR(s) generated by this procedure in accordance with CCP-QP-008.

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SPM

4.4.13 Retrieve copy of BDR from CCP Records.

4.4.14 Review the BDR to the criteria in Attachment 6, and document on Attachment 6.

4.4.15 Notify the Sampler or ITR of all errors or omissions found during the review.

4.4.16 Recheck the data after the errors or omissions have been rectified.

4.4.17 Ensure Attachment 6 is complete, print name, sign, and date Attachment 6.

4.4.18 Submit the completed Attachment 6 to Facility Records Custodian/Records Custodian.

Facility Records Custodian/Records Custodian

4.4.19 Receive, process, and transmit, when applicable, the Attachment 6 in accordance with CCP-QP-008.

4.5 SPM Radiochemistry or ICP-MS Analytical BDR Review

SPM

4.5.1 Obtain a copy of the Radiochemistry or ICP-MS Analytical BDR from CCP Records.

4.5.2 Review the BDR to the criteria in Attachment 7, and document on Attachment 7.

4.5.3 **IF** quality affecting problem is identified,
THEN initiate an NCR in accordance with CCP-QP-005, **AND** resolve accordingly.

4.5.4 Ensure Attachment 7 is complete, print, sign, and date Attachment 7.

4.5.5 Submit Attachment 7 to the Facility Records Custodian/Records Custodian.

Facility Records Custodian/Records Custodian

4.5.6 Receive, process, and transmit, when applicable, all records generated by this procedure in accordance with CCP-QP-008.

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5.0 RECORDS

5.1 Records generated during the performance of this procedure are maintained as quality assurance (QA) records in accordance with CCP-QP-008. The records are the following:

5.1.1 **QA/Lifetime**

[A] BDR:

[A.1] Attachment 5, Batch Data Report Cover Sheet

[A.2] Attachment 4, Batch Data Report Table of Contents

[A.3] Attachment 1(s), Sample Tracking Form

[A.4] Attachment 2(s), Chain-of-Custody

[A.5] Attachment 3, Independent Technical Review Checklist

[A.6] Copy of NCRs, if applicable

[A.7] Copy of radiological contamination survey(s) for the sampling equipment, if applicable

[B] Attachment 7, Site Project Manager Radiochemistry or ICP-MS Analytical Batch Data Report Checklist

[C] Attachment 6, Site Project Manager Batch Data Report Checklist

Attachment 1 – Sample Tracking Form

SAP and Revision of SAP	
Sampling Date	*Sampling Time*
BDR Number	
Sampling Equipment/Container Kit Number	
Sample ID Number	
Waste Container Number	
Sampling Facility	
Sampling Location	
Sample Matrix	
Sample Type	
Sample Container Size	
Sample Container Weight (Grams)	
Sample/Container Weight (Grams)	
Procedure Number and Revision	
Requested Laboratory	
Analysis Requested:	
Comments:	
COC No.	
Samplers: *Print Name:*_____*Signature:*_____*Date:*_____ *Print Name:*_____*Signature:*_____*Date*_____	

Attachment 2 – Chain-of-Custody

COC No.: _____BDR No.:_____ Waste Container No.:_____

Sampling Facility:_____ Sample Matrix:_____ Sample Type:_____

Method of Transfer:_____ Shipping Organization: _____Bill of Lading Number:_____

Sample ID Number	Sampling Date	Sampling Time	Requested Sample Analysis	Preservation Method	Comments	Disposition

Sampler Initiating Custody:_____
Print Name Signature Date Time

Samples relinquished by:	Date:	Time:	Samples received by:	Date:	Time:

Comments:_____

Sample Disposition: Signature:_____ Printed Name: _____Date: _____Time:_____

Attachment 3 – Independent Technical Review Checklist

BDR No.:			
DESCRIPTION	**YES**	**NO**	**N/A**
1. Were data generation and reduction conducted in a technically correct manner with the methods used?			
2. Was the correct revision of operating procedure used? Record the revision number:_____			
3. Was the correct SAP and revision used? Record the revision number:_____			
4. Were the data reviewed for transcription errors?			
5. Are BDR contents and field sampling records complete and do they match the Sampling Batch Data Report Table of Contents (Attachment 4)?			
6. Does the Sample Batch Report include no more than 20 samples (excluding field Quality Control samples).			
7. Were the sampling equipment and sample containers (e.g., spoons, sub-samplers, sampling containers) used for all samples in this batch clean (or purchased clean)?			
8. Are there acceptable radiological contamination surveys for sampling equipment used?			
9. Are the field sampling records complete and include acceptable sample area and sampling equipment inspections?			
10. Are data properly reported (e.g., data are reported in the correct units and with the correct number of significant figures)?			
11. Was the COC initiated after sample collection?			
12. Is all the data provided using reproducible ink and by the individual(s) generating it?			
13. Is all data entered clearly, legibly, and accurately and include sample identification numbers?			
14. Are all changes to original data lined out, initialed and dated by the individual making the changes?			
15. Was justification made for changing the original data?			
16. Were data changes made by a qualified individual?			
17. Have calculations been verified by a valid calculation program, a spot check of verified calculation programs, or 100 percent check of all hand calculations?			
18. Are values that are not verifiable to within rounding or significant difference discrepancies rectified?			
19. Was the QAO for representativeness met (an approved sampling plan is established for this activity), if applicable?			
20. Was the QAO for completeness met by satisfying the SAP specific QAO's?			
Comments:			

I have reviewed 100 percent of the container specific and batch data in this report.

Independent Technical Reviewer:

_____ _____ _____

Printed Name Signature Date

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Attachment 4 – Batch Data Report Table of Contents

BDR No.:_____ **Date:** _____

Table of Contents		
Item	Description	Page No.
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		

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Attachment 5 – Batch Data Report Cover Sheet

BDR No.: _____

	Sample Number
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	

Sampler:

_____	_____	_____
Printed Name	Signature	Date

ITR:

_____	_____	_____
Printed Name	Signature	Date

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Attachment 6 – Site Project Manager Sampling Batch Data Report Checklist

BDR No.:			
	YES	**NO**	**N/A**
1. Was the Independent Technical Review checklist completed and signed?			
2. Are Batch Data Report contents and field sampling records complete and do they match the Batch Data Report Table of Contents (Attachment 5)?			
3. Was the data reported in the correct units and with the correct number of significant figures?			
4. Was the sampling equipment certified free contamination? (Accuracy)			
5. Were project specific QAO's satisfied? (Representativeness)			
6. Were the sample plan specific QAOs satisfied? (Completeness)?			
Comments:			

[1] The accuracy criteria will be evaluated after analysis.

I have reviewed 100 percent of the container specific and batch data in this report.

Site Project Manager:

_____ _____ _____
Printed Name Signature Date

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Attachment 7 – Site Project Manager Radiochemistry or ICP-MS Analytical Batch Data Report Checklist

BDR No.: _____

DESCRIPTION	YES	NO	N/A
1. Date generation level independent technical review, validation, and verification are complete as evidenced by a completed, signed Independent Technical Review checklist?			
2. Are BDR contents complete (do they match the table of contents and include the Independent Technical Review checklist deliverable)?			
3. Are data properly reported (e.g., data are reported in the correct units and with the correct number of significant figures)?			
4. Have the analytical QAOs been met? (QAOs acceptance criteria may be altered if the analytical laboratory has other acceptable QC controls, see the waste-stream specific sampling and analysis plan.)			
a. Precision – relative percent difference (RPD) derived from laboratory duplicates $\leq$ 40?			
b. Accuracy – percent R derived from laboratory control samples 75 percent to 125 percent R and matrix spikes/matrix spike duplicates 50 to 150 percent R (when applicable)?			
c. Representativeness – collection of unbiased samples, mark as "N/A"			
d. Completeness – Expressed as the ration of the number of samples that are analyzed with valid results to the total number of samples are submitted for analysis. This ratio will not be less than 0.9.			
5. Have the analytical QCs been met as evidenced by an acceptable laboratory ITR that used the QC acceptance criteria as specified in the waste-stream specific sampling and analysis plan?			
Comments:			

I have reviewed 100 percent of the container specific and batch data in this report.

Site Project Manager:

_____ _____ _____
Printed Name Signature Date

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CCP-TP-530

Revision 11

CCP
RH TRU Waste Certification and WWIS/WDS Data Entry

EFFECTIVE DATE: 06/19/2013

Irene Joo

APPROVED FOR USE

RECORD OF REVISION

Revision Number	Date Approved	Description of Revision
0	04/25/2006	Initial issue.
1	05/05/2006	Revised to address CBFO comments.
2	06/15/2006	Revised to address concerns raised during the Idaho National Laboratory (INL) Remote-Handled (RH) Audit A-06-21.
3	11/16/2006	Revised to implement the Waste Isolation Pilot Plant Hazardous Waste Facility Permit requirements resulting from the Section 311/Remote-Handled (RH) Permit Modification Request (PMR) and to remove Transportation Certification Official (TCO) activities.
4	04/20/2007	Revised to incorporate guidance for assignment of packaging material weight for RH canister assembly and to perform miscellaneous editing.
5	07/23/2007	Revised to include the CNS 10-160B information.
6	06/25/2008	Revised to include the process for submitting transportation data only for the Battelle Columbus Laboratory (BCL) waste at Savannah River Site (SRS) using the CNS 10-160B.
7	07/11/2008	Revised to address comments from the Remote-Handled (RH)-Oak Ridge National Laboratory (ORNL) Audit as well as remove any reference to the Characterization Data System (CDS) Waste Certification Official (WCO) Review Form.
8	09/09/2009	Revised to remove Section 4.4.24 in response to CAR-RHLANL-0001-09 as well as minor editorial changes.
9	12/11/2009	Revised to allow use of the Waste Data System (WDS) as well as include steps for canisters measuring <200 millirem (mRem) per Central Characterization Project (CCP)-Standing Order (SO)-042.
10	04/25/2011	Revised Table 1, Data Sources for the RH WDS Master Template, to include a new source for Gross Weight and a new field label and source for remote-handled (RH) nondestructive assay (NDA).
11	06/19/2013	Revised to implement new Permit Modification Request Class 2 approved by New Mexico Environment Department (NMED) dated March 13, 2013 and *Contact-Handled Transuranic Waste Authorized Methods for Payload Control* (CH-TRAMPAC) changes.

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1.0 PURPOSE

The purpose of this procedure is to describe the steps the Central Characterization Program (CCP) uses for certifying remote-handled (RH) transuranic (TRU) waste for disposal at the Waste Isolation Pilot Plant (WIPP). This procedure also describes the process for entering data into the WIPP Waste Information System (WWIS)/ Waste Data System (WDS) and reporting data on containers and payload assemblies in the RH TRU 72-B and the 10-160B transportation casks that are intended for disposal at the WIPP.

In addition, this procedure may be used to enter data into the WWIS/WDS for site-to-site waste shipments using the RH TRU 72-B and/or the 10-160B transportation casks. Site-to-site waste shipments are defined as shipments with destinations to sites other than the WIPP for storage, characterization, or treatment and are distinct from site-to-WIPP waste shipments for disposal.

1.1 Scope

This procedure defines the parameters necessary for certification of RH TRU waste for disposal at the WIPP. This procedure includes the records that are generated to document that the CCP Waste Certification Official (WCO) has performed the necessary verifications and has certified the waste for disposal.

This procedure also describes how to obtain access and enter data into the WWIS/WDS for containers to be certified.

This procedure also describes the steps for entering data into the WWIS/WDS for site-to-site waste shipments.

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2.0 REQUIREMENTS

2.1 References

Baseline Documents

- CCP-QP-022, *CCP Software Quality Assurance Plan*

Referenced Documents

- DOE/WIPP-09-3427, *Waste Data System User's Manual*
- DOE/WIPP 90-045, *RH-TRU Waste Content Codes* (*RH-TRUCON*)
- CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*
- CCP-PO-002, *CCP Transuranic Waste Certification Plan*
- CCP-PO-505, *CCP Remote-Handled Transuranic Waste Authorized Methods for Payload Control* (CCP RH-TRAMPAC)
- CCP-QP-002, *CCP Training and Qualification Plan*
- CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control*
- CCP-QP-008, *CCP Records Management*
- CCP-TP-002, *CCP Reconciliation of DQOs and Reporting Characterization Data*
- CCP-TP-500, *CCP Remote-Handled Waste Visual Examination*
- CCP-TP-506, *CCP Preparation of the Remote-Handled Transuranic Waste Acceptable Knowledge Characterization Reconciliation Report*
- Safety Analysis Report for Model 10-160B Type B Radwaste Shipping Cask, Appendix 4.10.2.1, *Compliance Methodology for TRU Waste from Battelle Columbus Laboratories.* Duratek, Inc.

2.2 Training Requirements

2.2.1 Personnel who use this procedure to certify waste will be trained and qualified to the requirements for the WCO in accordance with CCP-QP-002, *CCP Training and Qualification Plan*.

2.2.2 Personnel who use this procedure to enter data will be trained and qualified to the requirements for the Waste Certification Assistant (WCA) in accordance with CCP-QP-002.

2.2.3 Personnel who use this procedure to enter data into the WWIS/WDS will refer to DOE/WIPP-09-3427, *Waste Data System User's Manual*.

2.3 Equipment List

2.3.1 None.

2.4 Software

NOTE

An "*" is a wild card used to indicate the version number included in a software name.

2.4.1 RH WDS Master Template*.xls

2.4.2 concat_WDS_files.bat

2.4.3 clean_container_files.bat

2.5 Precautions and Limitations

2.5.1 None.

2.6 Prerequisite Actions

2.6.1 None.

2.7 Definitions

2.7.1 None.

NOTE

The Data Administrator (DA) in this document refers to the WWIS/WDS Data Administrator.

3.0 RESPONSIBILITIES

3.1 Site Project Manager (SPM) or Designee

3.1.1 Confirms that personnel performing this procedure are trained and qualified in accordance with applicable requirements in CCP-QP-002.

3.1.2 Prepares a list of candidate containers for certification and transportation, as applicable, and submits to the WCO and WCA.

3.1.3 Provides the DA with a list of Waste Stream Profile Form (WSPF) Numbers.

3.1.4 Submits the WSPF to the DA for review and approval in accordance with CCP-TP-002, *CCP Reconciliation of DQOs and Reporting Characterization Data,* and CCP-TP-506, *CCP Preparation of the Remote-Handled Transuranic Waste Acceptable Knowledge Characterization Reconciliation Report*.

3.1.5 Notifies the WCO and/or WCA of approved WSPF.

3.1.6 Notifies the WCO and/or WCA of completed Characterization Information Summary (CIS).

3.1.7 Serves as focal point for resolution of data issues.

3.2 Quality Assurance (QA)

3.2.1 Provides assistance in verifying data, completing documentation, and reviewing requirements and provides status of applicable Nonconformance Reports (NCRs) and Corrective Action Requests (CARs).

3.2.2 Confirms that there are no unresolved NCRs or CARs for containers to be certified when requested by the WCA or WCO.

3.3 Waste Certification Official (WCO) or Designee

3.3.1 Confirms that the WCOs and WCAs are granted access to the WWIS/WDS.

3.3.2 Obtains a copy of the approved WSPF for applicable containers to be certified.

3.3.3 Certifies the data for the container to be certified as identified on the CCP RH WDS Master Template.

3.3.4 Reviews the data for the container as identified on the RH WDS Master Template to be submitted for transportation purposes only.

3.3.5 Notifies Transportation Certification Official (TCO) of the WWIS/WDS Certification Module approval, if necessary.

3.3.6 Notifies the TCO of containers that are approved for Controlled Shipment, if necessary.

3.4 Acceptable Knowledge (AK) Expert

3.4.1 Extracts the necessary information for site-to-site waste shipments.

3.4.2 Works with the WCA, WCO, and DA for WWIS/WDS data input for site-to-site waste shipments.

3.5 Waste Certification Assistant (WCA)

3.5.1 Works with the WCO to obtain access to the WWIS/WDS.

3.5.2 Obtains copies of data for the RH WDS Master Template for each container from CCP Records or the Site Project Manager (SPM).

3.5.3 Generates the RH WDS Master Template and has a second WCA confirm the data is transferred correctly to the RH WDS Master Template. The second data entry person verifies the information prior to certification by the WCO.

3.5.4 Forwards the RH WDS Master Template to the WCO for certification.

3.5.5 Requests that quality assurance (QA) confirm that NCRs and CARs associated with containers to be certified have been resolved as appropriate, via electronic mail (e-mail).

3.5.6 Submits the container data from the RH WDS Master Template to the WWIS/WDS Characterization and/or Certification Modules, as applicable.

3.5.7 Submits data package to CCP Records Custodian in accordance with CCP-QP-008, *CCP Records Management*.

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3.6 CCP Records Custodian

3.6.1 When applicable, receives and processes all records generated by this procedure in accordance with CCP-QP-008.

4.0 PROCEDURE

4.1 Obtaining and Changing Access to the WWIS/WDS

WCO

4.1.1 Determine which personnel need access to the WWIS/WDS (see Section 4.0 of DOE/WIPP-09-3427).

4.1.2 Request WWIS/WDS access for each person by requesting the WDS access form from the Data Administrator with a copy provided to the SPM.

4.1.3 Notify the DA when personnel who have received WWIS/WDS access:

[A] Leave the project;

[B] No longer need WWIS/WDS access; **OR**

[C] Need to change the type of WWIS/WDS access.

CCP Personnel

4.1.4 Once the DA has been notified by the WCO that personnel are to be granted access, those personnel will contact the DA to receive WWIS/WDS training and a WWIS/WDS username in accordance with the DOE/WIPP-09-3427.

NOTE

Section 4.2 is **NOT** required for site-to-site waste shipments.

4.2 Submitting the WSPF Number to the DA

SPM

4.2.1 Obtain the WSPF Number in accordance with CCP-TP-002.

4.2.2 Request the DA to establish the WSPF Number in the WWIS/WDS.

4.2.3 Confirm that the WSPF Number is correct in the WWIS/WDS Reference Table upon notification that the DA has added the WSPF Number to the WWIS/WDS.

4.2.4 Notify the WCO and WCA of the WSPF.

4.2.5 Develop a list of containers for Characterization, **AND** submit the list to the WCO and WCA for WSPF approval.

4.2.6 Develop a list of containers from an approved WSPF for certification, **AND** submit the list to the WCO and WCA when the CIS is complete.

NOTE

For site-to-site waste shipments, the required information may be obtained from the acceptable knowledge (AK) Expert. This Data will come from the process knowledge documentation. For site-to-site shipments not qualified under CCP-PO-505, *CCP Remote-Handled Transuranic Waste Authorized Methods for Payload Control* (CCP RH-TRAMPAC), the data will be recorded from the approved shipping plan. The source data column in Table 1, Data Sources for the RH WDS Master Template, DOES **NOT** apply to site-to-site waste shipments. CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*, and CCP-PO-002, *CCP Transuranic Waste Certification Plan*, information is **NOT** required to be entered.

4.3 Entering and Verifying Characterization Data Using the RH WDS Master Template

---

NOTE

For site-to-site waste shipments, verification may be from data received from the AK Expert.

WCA

4.3.1 Obtain from CCP Records or the SPM, a copy of the appropriate WSPF, Batch Data Reports (BDRs), Packaging Records, AK Summary Report, AK Tracking Spreadsheet, and radiological survey data for the list of candidate containers for certification, as applicable.

4.3.2 Request via email that QA confirm that each container being certified and entered into the RH WDS Master Template has NO unresolved NCRs and CARs.

4.3.3 Use the copies of the appropriate BDR or other data source, from CCP Records or the SPM, as listed in Table 1, to enter characterization data into the appropriate site-specific RH WDS Master Template, for each container record used to support the WSPF.

NOTE

The designator "H" must be added to the end of the Container Identification (ID) Number for all waste containers overpacked into a 55-gallon drum as identified on the applicable AK Tracking Spread Sheet if applicable. This will be the new Container ID Number.

4.3.4 Enter RH TRU Waste Content Codes (Content Codes) as described in Attachment 1, Entering of Content Codes into WWIS/WDS, as required.

4.3.5 **IF** a 30-gallon container is packaged into a 55-gallon container, **AND** the Dose-to-Curie (DTC) was performed on the 30-gallon container,
THEN add the tare weight of the 55-gallon container to the gross weight of the 30-gallon container to obtain the new gross weight.

4.3.6 Forward the completed RH WDS Master Template to a second WCA for verification.

WCA (Verifier)

NOTE

Step 4.3.7 is for a direct load canister only when a rollup of the DTC is required.

4.3.7 **IF** rollup of DTC data is required,
THEN the weight of the plastic will be the total of the gross weights of the inner containers.

4.3.8 Confirm the data entered into the RH WDS Master Template for each container record by checking the data to confirm the accuracy and completeness of the data.

4.3.9 **IF** data is accurate **AND** complete,
THEN enter initials and the date verified on the RH WDS Master Template.

4.3.10 **IF** there are any discrepancies,
THEN resolve the discrepancies with original WCA, if applicable, **AND** return to step 4.3.9.

NOTE

For site-to-site shipments, contact the WCO/AK Expert if discrepancies CAN **NOT** be resolved.

4.3.11 **IF** the discrepancies CAN **NOT** be resolved,
THEN provide the RH WDS Master Template to the WCO or SPM for resolution.

NOTE

For site-to-site waste shipments, the WCO or the AK Expert will review the data prior to submittal to the WWIS/WDS.

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4.3.12 **WHEN** the RH WDS Master Template is complete **AND** verified,
THEN forward to the WCO.

Table 1. Data Sources for the RH WDS Master Template

Field Label	Source
Characterization, Certification and Shipping Data	
Shipper Site ID or Site ID	AK Summary Report
Location ID Destination Program ID Shipping Purpose	AK Summary Report
Waste Stream Profile	AK Summary Report; WSPF
Container ID Number or Container Number	Completed CIS (Ensure payload container has a unique site-identifier prefix). For all waste containers overpacked into a 55-gallon drum as identified on the applicable AK Tracking Spread Sheet, include an "H" at the end of the drum number.
Container Type	Packaging records; visual inspection; AK Summary Report; Associated BDRs
WAC Rev #	DOE/WIPP-02-3122, *Transuranic Waste Acceptance Criteria for the Waste Isolation Pilot Plant*
WAC Ex #	Executive Order Letter from the U.S. Department of Energy (DOE) Carlsbad Field Office (CBFO) in CCP Records
Cert Site or Certified Site	WSPF or AK Summary Report
Cert Date or Certification Date	Date WCO certifies payload container
Waste Handling Code or Handling Code	RH from Dose to Curie BDR; Radiological Characterization Report; WSPF; AK Summary Report
Waste Type Number or Waste Type	WSPF or AK Summary Report (If no hazardous waste numbers, enter TRU) If hazardous number(s) apply, enter "MTRU."
Waste Stream Baseline Inventory Report (BIR) ID Waste Stream Mixed Waste Inventory Report (MWIR) ID	WSPF or AK Summary Report (If not applicable, enter NONE)
Generator Site ID or Generator Site Item Description Code (IDC) Code or IDC Waste Matrix (parameter) Code or Matrix Code	WSPF or AK Summary Report (NONE if no IDC available)

Table 1. Data Sources for the RH WDS Master Template (Continued)

Field Label	Source
Content Code or TRUCON Code	Remote-Handled Transuranic Content Codes, AK Summary Report, WSPF, Characterization Info. Summary. See Attachment 1.
TRU Alpha Act TRU Alpha Act Uncertainty TRU Alpha Act Concentration (conc.) TRU Alpha Act Conc. Uncertainty Pu239 fissile Gram Equivalent Pu-239 Fissile Gram Equivalent Uncertainty Pu-239 eq. act. Decay Heat Decay Heat Uncertainty	Waste Container Dose-to-Curie Conversion Record (DTC BDR), Radiological Characterization Report, Waste Container Radiological Characterization Record AK record for BCL waste
Layers of Packaging	Visual Examination (VE) BDR; Radiography BDR; AK Summary Report; WSPF
Fill Factor	Dose-to-Curie BDR, Radiological Characterization Report, VE BDR
Liner Type or Liner Exists	VE BDR. Radiography BDR; AK Summary Report; RH Content Code Document
Field Label	Source
Liner Punctured or Liner Hole Size Liner Lid Present	VE BDR. Radiography BDR or AK Summary Report. No liner lid indicates liner is vented with default hole size of 457.2 mm for 30-gallon drum and 478 mm for 55-gallon drum.
Polychlorinated Biphenyl (PCB) Waste, PCB Concentration, PCB Mass PCB Out-Of-Service Date	WSPF or AK Summary Report. If yes, then PCB mass = net weight and PCB out-of-service = Closure date unless otherwise stated in other documentation.
Aqueous Material Beryllium Present Beryllium less than or equal to 100 kg Beryllium less than or equal to 1% Machine Compacted Beryllium chemically/mechanically bound	AK Tracking Spreadsheet or AK Summary Report
Closure Date	AK Tracking Spreadsheet, Remediated Drum Spreadsheet, or AK Summary Report, Canister Loading Data Sheet
Vent Date	AK Tracking Spreadsheet, Remediated Drum Spreadsheet, or AK Summary Report, Canister Loading Data Sheet
Filter Install Date Filter Model Number of filters installed	Flammable Gas Analysis BDR, VE BDR, RTR BDR, AK Tracking Spreadsheet or Remediated Drum Sheet, Canister Loading Data Sheet, AK Summary Report
Aspiration Method ID	AK Tracking Spreadsheet, Remediated Drum Spreadsheet, AK Summary Report, Flammable Gas Analysis BDR, Project AK Summary Report
Gross Weight	Waste Container Dose-to-Curie Conversion Record (DTC BDR) or Scale Certification Data, Canister Loading Data Sheet, Radiological Characterization Report, Waste Container Radiological Characterization Record
Gross Weight Uncertainty	VE BDR, Radiography BDR, or Scale Certification Data, Canister Loading Data Sheet, Bounding Case for drums loaded in canisters (2.3 kg)
Alpha Surf Cont Beta/Gamma Surf Cont Neutron Dose Rate Beta/Gamma Dose Rate	RCT Report RCT Report RCT Report RCT Report

Table 1. Data Sources for the RH WDS Master Template (Continued)

Field Label	Source
Radionuclide Data	
Radionuclide	Waste Container Dose-to-Curie Conversion Record(DTC BDR), Canister loading data sheet, Radioassay BDR, Radiological Characterization BDR/Radiological Characterization Report, Waste Container Radiological Characterization Record
Activity (Ci)	
Activity Uncertainty (Ci)	
Assay Method Data	
Radioassay Method	WWIS/WDS Reference Tables/Library; Certification Letters
Data Package Number	Dose-to-Curie BDR, Radiological Characterization Report, Waste Container Radiological Characterization Record, Radioassay BDR
Assay Date (actual assay date)	Dose-to-Curie BDR, Radiological Characterization Report, Waste Container Radiological Characterization Record, Radioassay BDR
Material Parameter Data	
Waste Material Parameter	VE BDR or Real-Time Radiography (RTR) BDR
Waste Weight	Waste Container Dose-to-Curie Conversion Record (DTC BDR), Radiological Characterization Report, Waste Container Radiological Characterization Record
Characterization Method Data	
Charz Method ID	WWIS/WDS Reference Table/Library; Certification Letters
Data Package Number	VE or RTR BDR
Charz Method Date	VE or RTR BDR
Hazardous Waste Numbers Data	
Hazardous Waste Numbers	WSPF or AK Summary Report
Date Sampled	Flammable Gas Analysis BDR, N/A for canister, AK Sufficiency
Method ID	WWIS/WDS Reference Table/Library; Certification Letters
Data Package #	Flammable Gas Analysis BDR, AK Sufficiency
Analyte	
Sample ID	
Sample Type	
Layer Sampled	
Units (% vol., mg/kg, ppm) Concentration Date Analyzed	Flammable Gas Analysis BDR, AK Sufficiency
Cas #	Flammable Gas Analysis BDR
Reporting Flag D	
Reporting Flag U	
Reporting Flag N/A	
Flammable VOCs < 500 ppm	AK Summary Report, Content Code, Process Knowledge Summary Report

NOTE

Section 4.4 is **NOT** required for site-to-site waste shipments.

4.4 Waste Certification (By Container of Waste)

WCO

4.4.1 Verify the appropriate WWIS/WDS Data Entry RH WDS Master Template is being used.

4.4.2 Confirm that the TRU alpha activity concentration is greater than 100 nanocuries per gram (nCi/g) for each container.

4.4.3 Confirm that the RH WDS Master Template contains accurate, and complete information for the container by checking that the WCA has completed their input and review.

4.4.4 **IF** there are any open NCRs/CARs,
THEN confirm that, for the container you are certifying, all issues associated with the open NCRs/CARs have been resolved.

4.4.5 Review the waste stream information against the applicable Content Code and data sources to confirm the waste is **NOT** an incompatible waste.

4.4.6 Verify that the RH WDS Master Template contains the correct WSPF Number for that container as listed in the AK Tracking Spreadsheet.

4.4.7 Verify at least one TRU isotope is greater than lower limit of detection (LLD).

4.4.8 Ensure that each payload container has a site-specific identifier as a prefix to the Container ID Number.

NOTE

For debris waste (S5000), the WCO will assess the data for the container to assign the material parameter weights. In steps 4.4.9 and 4.4.10, the WCO will compare the material parameter data (waste weights in kg) to the number obtained by multiplying the volume of the waste container by the maximum loading density of plastic (620 kg/m^3).

4.4.9 **IF** the calculated weight of the plastic is greater than or equal to the waste weight (kg) of the container,
THEN enter the waste weight of the container as “Plastic” in the RH WDS Master Template.

4.4.10 **IF** the calculated weight of the plastic is less than the waste weight (kg) of the container,
THEN enter the calculated weight as "Plastic" in the RH WDS Master Template, **AND** assign in the RH WDS Master Template the remaining waste weight to the waste material per the percentages as identified in the applicable waste stream AK Summary Report.

NOTE

For soil/gravel waste (S4000), the WCO will assess the data for the container to determine the estimated weight of cellulose, plastics, and rubber (CPR) for any reported debris material. In steps 4.4.11 and 4.4.12, the WCO will review the data and confirm that the derived weight entered into RH WDS Master Template for any debris material reported will have a waste material parameter type of "Plastic."

4.4.11 **IF** the container (S4000) DOES **NOT** contain any debris material,
THEN assign the net weight of the container as waste material parameters of "Soil" in the RH WDS Master Template.

4.4.12 **IF** the container (S4000) does contain any debris material,
THEN enter the estimated weight of the debris as "Plastic" and the remaining net weight of the container as "Soil" in the RH WDS Master Template.

NOTE

For homogeneous solid waste (S3000), the WCO will assess the data for the container to determine the estimated weight of CPR for any reported debris material. In steps 4.4.13 and 4.4.14, the WCO will review the data and confirm that the derived weight entered into RH WDS Master Template for any debris material reported will have a waste material parameter type of "Plastic."

4.4.13 **IF** the container (S3000) DOES **NOT** contain any debris material,
THEN assign the net weight of the container as waste material parameter type appropriate to the waste (e.g., solidified inorganic material, solidified organic material, cement) in the RH WDS Master Template.

4.4.14 **IF** the container (S3000) does contain debris material,
THEN enter the estimated weight of the debris as "Plastic" and the remaining net weight of the container as the waste material parameter type appropriate to the waste (e.g., solidified inorganic material, solidified organic material, and cement) in the RH WDS Master Template.

4.4.15 **IF** the container is certifiable,
THEN sign and date the RH WDS Master Template **AND** forward to WCA for submittal to WWIS/WDS.

4.4.16 **IF** container is **NOT** certifiable,
THEN proceed to step 4.4.20.

WCA

4.4.17 Request, via e-mail, that QA confirm that each container being certified and entered into the WWIS/WDS has NO unresolved NCRs and CARs, if applicable.

QA

4.4.18 Prepare report verifying that each container being certified has NO unresolved NCRs and CARs.

4.4.19 Forward report to WCA.

WCO

NOTE
To remove the HOLD on a Container Data Folder, a WCO must confirm deficiencies NO longer exist.

NOTE
Prior to submittal to the WWIS/WDS, WCO/WCA and QA must perform step 4.4.17 through 4.4.19, as applicable.

4.4.20 **IF** there is an issue with data,
THEN attempt to resolve issue with SPM.

[A] **IF** resolved,
THEN proceed to Step 4.5.

4.4.21 **IF** a deficiency in data is identified after a Container Data Folder is created and before submittal to the WWIS/WDS and CAN **NOT** be resolved with SPM,
THEN perform the following:

[A] Initiate an NCR in accordance with CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control*, as directed by the SPM.

[B] Place the Container Data Folder in the WCO Hold Drawer until disposition is met.

NOTE

Data entry for site-to-site waste shipments shall be submitted into the Intersite Shipping Module within the WWIS/WDS.

NOTE

The WCO or WCA uses a macro (CreateTmpTables) and ancillary worksheets that are part of the RH WDS Master Template.

NOTE

If required, for filtered waste containers or containers requiring inner can data, the data required by WWIS/WDS for the inner cans will be entered as applicable based on an individual container basis (inner can ID, decay heat, decay heat uncertainty, closure date, vent date, filter diffusivity, flammable gas generation rate or hydrogen concentration, and sample date) after the waste containers are entered into the WWIS/WDS.

4.5 Waste Certification WWIS/WDS Submittal

WCO or WCA

4.5.1 Generate tab-delimited files from the electronic WWIS/WDS DATA RH WDS Master Template corresponding to the WWIS/WDS Temporary Database Tables by selecting the CREATE TMP TABLES.

4.5.2 OPEN TempTables Folder to run batch programs, **AND** OPEN concat_WDS_files.bat to copy all containers into upload files readable by WWIS/WDS.

4.5.3 Log on to WWIS/WDS.

[A] Select DATA UPLOAD FUNCTION.

[B] Select BROWSE to open the Temptables folder.

[C] Select the text file to be uploaded.

[D] Select CERTIFICATION or CHARACTERIZATION based on whether or not the waste stream is approved.

[E] Select PERFORM EVALUATIONS if applicable.

[F] Select UPLOAD CONTAINERS.

[G] **IF** container upload is successful,
THEN GO TO step 4.5.4 if inner can data is required or GO TO step 4.5.5 if complete.

[H] **IF** container upload fails,
THEN select VIEW EXIT CODES **OR** print error messages on screen as applicable.

[I] **IF** container upload error(s) can be fixed,
THEN fix errors, **AND** repeat steps 4.5.1 through 4.5.3[H] until successful **OR** container CAN **NOT** be fixed.

[J] **IF** container transfer CAN **NOT** be fixed,
RETURN Container Data Folder to WCO.

NOTE

For containers with inner can data and/or data for a 30-gallon container overpacked into a 55-gallon container, follow steps 4.5.4 through 4.5.5. Once complete proceed to step 4.5.7.

NOTE

A unique Inner Container ID must be entered using the 55-gallon number with an H suffix when a 30-gallon container is overpacked into a 55-gallon container in the Inner Can Data in WWIS/WDS.

4.5.4 Select CONTAINER CERTIFICATION DATA SUBMITTAL/CONTAINER CHARACTERIZATION DATA SUBMITTAL based on whether or not the waste stream is approved.

[A] Select SEARCH and enter the container number and select SEARCH.

[B] Select applicable container.

[C] Select INNER LAYER and enter the applicable data.

[D] Select SUBMIT for approval.

4.5.5 **WHEN** complete,
THEN exit the system AND open the temptables folder and RUN clean_container_files.bat to clear the temptables folder of all upload file data.

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4.5.6 **IF** a deficiency is identified after the container data is submitted to the WWIS/WDS,
THEN:

[A] Request in writing (e.g., e-mail), with CCP Management approval, that the Data Administrator reject the container from the WWIS/WDS, if applicable, **AND**

[B] Obtain confirmation (e.g., email) from the Data Administrator that the container is rejected, if applicable.

[C] Initiate an NCR in accordance with CCP-QP-005, as necessary.

4.5.7 Compile the following items used in the submission of data to the WWIS/WDS, **AND** submit to the CCP Records Custodian:

[A] The completed RH WDS Master Template for each container submitted to and approved by the WWIS/WDS

[B] The completed WWIS/WDS Transportation Only RH WDS Master Template for each Packaging Container submitted to and approved by the WWIS/WDS

[C] NCR/CAR check from QA e-mail (not applicable for BCL transportation data)

[D] Any correspondence (e.g., memorandum/e-mail notifications) associated.

<u>CCP Records Custodian</u>

4.5.8 When applicable, receives and processes all records generated by this procedure in accordance with CCP-QP-008.

NOTE

The WWIS/WDS Canister Planning and Completion Module utilizes edit and limit checks when data is entered and selected. The WWIS/WDS steps in the following section may be repeated until overpack compliance is satisfied. Default data may be used to generate the build list for the TCOs.

NOTE

The recommended container selection for the canister can either be provided by the Host site, based on As Low As Reasonably Achievable (ALARA) needs for movement of the drums and container retrievability, or determined by the WCO.

WCO

4.6 Container Selection and certification for RH TRU 72-B waste canister using the WWIS/WDS.

4.6.1 LOGON to the WWIS/WDS.

4.6.2 Select CANISTER PLANNING and COMPLETION.

4.6.3 Select NEW.

4.6.4 Enter applicable data in the Canister Information Section as follows, then select SEARCH.

[A] Canister Configuration Type
[B] Certification Program ID
[C] Current Location
[D] Destination Site ID
[E] Shipping Program ID
[F] Waste Stream Profile Code

4.6.5 Select the appropriate containers from the Candidate Containers Section.

4.6.6 Select ACCEPT.

4.6.7 Enter the Canister number in the Enter Container Number field and select ACCEPT.

4.6.8 **ONCE** the Canister Plan is accepted,
THEN enter the remaining applicable canister information for Certification.

4.6.9 Generate the Build List and provide to TCO as applicable.

4.6.10 **IF** the canister requires a controlled shipping period,
THEN the WCO will indicate on the Build List.

NOTE

Some 55-gallon containers loaded into the Removable Lid Canister use an RH TRU Drum Handling Bag (lift bag). The lift bag weighs 1.42 kg and is made of polyester fabric. The lift bag can not be retrieved from the canister after loading.

4.6.11 Receive the Loading Form from the TCO and enter the required certification data including the lift bag data if applicable.

4.6.12 **IF** the canister dose rate from the TCOs is < 200 mRem **AND** all inner containers are > 200 mRem,
THEN use the highest dose rate from the inner containers.

4.6.13 SUBMIT the canister for approval.

4.6.14 After successful submittal for approval, print the Canister Data Report, date and sign with title.

4.6.15 Compile the following items used in the submission of data to the WWIS/WDS, **AND** submit to the CCP Records Custodian:

[A] Copies of the data containing the RH TRU waste canister, radiological survey, and filter information used to enter data above

[B] The completed Canister Data Report for the data submitted

[C] Correspondence (e.g., memorandum/e-mail notifications).

CCP Records Custodian

4.6.16 When applicable, receives and processes all records generated by this procedure in accordance with CCP-QP-008.

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5.0 RECORDS

5.1 Records generated during the performance of this procedure are maintained as QA records in accordance with CCP-QP-008. The records are the following:

5.1.1 <u>QA/Lifetime Records</u>

[A] Container Certification:

[A.1] RH WDS Master Template

[A.2] Correspondence (memorandum/e-mail notifications)

[A.3] Radiological Survey Information, if applicable

[B] Canister Certification:

[B.1] RH WDS Master Template

[B.2] Waste Canister Data Report

[B.3] Waste Canister Loading Sheet, if applicable

[B.4] Radiological Survey Information, if applicable

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Attachment 1 – Entering of Content Codes into WWIS/WDS

NOTE

The Content Code may be assigned by the WWIS/WDS based on the information submitted on the RH WDS Master Template.

1. INTRODUCTION

This appendix describes the steps used to enter assigned RH Content Codes into the RH WDS Master Template using various sources of characterization data. Entering the Content Code is performed by the waste certification staff based on the waste material contents and the layers of packaging used for each container. Content Code assignment is reviewed and approved by the WCO during container certification unless the Content Code is assigned by the WWIS/WDS.

2. ASSIGNING THE NUMERIC VALUE

Assign the Content Code based on the container waste stream assignment. The Content Code identified in AK may be confirmed by RTR or VE. Enter the Content Code in RH WDS Master Template.

3. ASSIGNING A LETTER DESIGNATOR

The letter designator of the Content Code is assigned using packaging information from the following sources, which are listed in order of priority of usage:

- VE BDRs, if available
- If RTR information is undetermined, use the default assignment given in (or determined from) the AK Summary Report for the applicable waste stream.

4. OTHER

For waste packaged under a U.S. Department of Energy (DOE) Carlsbad Field Office (CBFO) audited and approved certification program (newly generated waste exempted from RTR), use the Content Code assigned in the packaging documents.

Effective Date: 05/22/13

WP 13-QA.03
Revision 22

Quality Assurance Independent Assessment Program

Cognizant Department: Quality Assurance

Approved by: Val Cannon

Nuclear Waste Partnership LLC

A URS-led partnership with B&W and AREVA

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CHANGE HISTORY SUMMARY

REVISION NUMBER	DATE ISSUED	DESCRIPTION OF CHANGES
18	06/20/11	Added allowance for the Assurance Programs manager to extend the time limit for issuance of an audit report. (6.0)
19	02/28/12	Added discussion of effectiveness reviews (Introduction). Added clarification for developing criteria for (4.3) and performing (5.0) effectiveness reviews. Deleted reference to EFCOG Contractor Guide For Performance of Effectiveness Reviews (4.3, 5.0).
20	01/25/13	• Deleted requirements to enter external assessment findings in CTS throughout the document. • Updated organization names in accordance with MD 1.1.
21	03/04/13	• Removed from section 2.0 last bullet of lead assessor responsibilities and last bullet of surveillor responsibilities. • Added to sections 5.0 and 6.0 provisions to document findings corrected during assessment on the WIPP Form in accordance with WP 04-IM1000 (Corrective action for CBFO CAR 12-020). • Deleted attachment 9, and added reference to WP 09-CN3025 in section 4.3. • Deleted Attachment 10, Concerns Form and its mention from section 5.0.

22	05/22/13	• Added statement to Introduction that commercial grade surveys are performed in accordance with this procedure and WP 09-CN3040, *Commercial Grade Item Dedication*. • Added bullets in section 2.0 to delegate the responsibility for identifying the need for technical assistance when performing assessments to the lead assessor and surveillor. • Reworded lead auditor/surveillor actions to be consistent with QAPD language in section 4.3. • Added additional methods for performing effectiveness reviews in section 5.0. • Deleted requirement in section 5.0 to notify CBFO of deficiencies in DOE requirements (Original requirement was deleted in DOE O 226.1B). • Deleted note in section 6.0 about issuing WIPP Forms for assessment findings (this information is discussed elsewhere). • Changed P-A Coordinator to Compliance Coordinator throughout. • Added discussion item “Potential hazards” to attachment 10.

ABBREVIATIONS and ACRONYMS

ALARA	as low as reasonably achievable
CAM	continuous air monitor
CAQ	condition adverse to quality
CBFO	Carlsbad Field Office
CDA	corrected during assessment
CFR	Code of Federal Regulations
CH	contact-handled
CMS	Central Monitoring System
CTS	commitment tracking system
DNFSB	Defense Nuclear Facilities Safety Board
DOE	U.S. Department of Energy
HEPA	high-efficiency particulate air (filter)
HVAC	Heating, Ventilation, and Air Conditioning
ISM	Integrated Safety Management
NRC	U.S. Nuclear Regulatory Commission
NWP	Nuclear Waste Partnership LLC
P-A	Price-Anderson
PPE	personal protective equipment
QA	Quality Assurance
QAPD	Quality Assurance Program Description
QSL	Qualified Suppliers List
RH	remote-handled
SDD	System Design Description
VSS	Vital Safety System
WHB	Waste Handling Building
WIPP	Waste Isolation Pilot Plant

1.0 INTRODUCTION[1]

The purpose of this document is to define and prescribe quality assurance (QA) methods and techniques used to identify, schedule, plan, perform, report, and close independent assessments, and to identify the resulting records.

This document applies to Nuclear Waste Partnership LLC (NWP) QA personnel qualified to lead and/or perform independent assessments. It also applies to cognizant managers of organizations being assessed.

Independent assessments may be performed as audits or surveillances. Audits are generally larger, more formal assessments of quality program elements or supplier programs. Surveillances are generally smaller assessments of specific activities, but may also be expanded and performed on quality program elements. Where the term "assessment" is used in this document, it applies to both audits and surveillances. Where actions apply only to an audit or surveillance, it will be so stated.

Commercial grade surveys are performed in accordance with this procedure and WP 09-CN3040, *Commercial Grade Item Dedication*.

Effectiveness reviews are conducted as surveillances to verify the effectiveness of corrective actions implemented to prevent the recurrence of significant issues, problems, or events.

Assessments may contain elements of inspections, testing, monitoring work in progress, and checking to support the reviews that comprise assessment activities.

Assessments evaluate the adequacy of program documents and implementation, including effectiveness of established programs, and processes for compliance with WP 13-1, *Nuclear Waste Partnership LLC Quality Assurance Program Description* (NWP QAPD), other QA program documents, and purchase order requirements, as applicable. Assessments focus on improving items, services, and processes by emphasizing the achievement of quality by line organizations. Regularly scheduled program assessments may be supplemented by or integrated with additional technical assessments (e.g., surveillances and limited scope audits).

Assessments are performed using reviews, interviews, observation and monitoring, and checks. Actual and/or potential deficiencies are noted. Timeliness of corrective actions is evaluated. Supplier assessments verify conformance to applicable purchase orders and the QA requirements imposed by contract, or evaluate potential for providing products or services in compliance with NWP QA requirements. Scheduling is based on frequency required by regulation, ongoing project activities (e.g., previous audit results, adverse trends, or requests from other line organizations), and capabilities. Internal assessment findings and associated corrective actions are entered and tracked in the Issues Management (WIPP Form) System in accordance with WP 04-IM1000, *Issues Management Processing of WIPP Forms*.

Implementation of the program generates the following record(s), as applicable. Any records generated are handled in accordance with departmental Records Inventory and Disposition Schedules.

- NWP QA Independent Assessment Subject Master Table
- Approved Audit Schedule
- Audit Plan
- Assessment Checklist
- Audit Report
- Audit follow-up documentation
- Surveillance Report
- Surveillance follow-up documentation
- Independent Assessment Record File Completion Checklist
- Technical Specialist/Auditor Participation Indoctrination for Quality Assurance Audits

2.0 RESPONSIBILITIES

The Assurance Programs manager is responsible for:

- Implementation of this document.
- Ensuring that assessment personnel have sufficient authority and organizational freedom to carry out their assigned responsibilities.
- Approval of the assessment schedules.
- Qualification of lead auditors and QA Surveillors (surveillors) in accordance with WP 13-QA.04, *Quality Assurance Department Administrative Program*.
- Assignment of assessment team leaders.
- Concurrence with assessment team selection.
- Assignment of surveillors.

The lead assessor is responsible for:

- Selecting the assessment team.
- Identifying the need for technical assistance when performing assessments.
- Approving assessment checklists.
- Organizing and directing the assessment.
- Reporting the assessment results.

The surveillor is responsible for:

- Performing surveillances.
- Identifying the need for technical assistance when performing assessments.
- Organizing and directing the surveillance.
- Reporting the surveillance results.

3.0 DEFINITIONS

Corrected During the Assessment (CDA) – An isolated condition adverse to quality (CAQ) requiring only remedial action to correct and for which resolution can be verified through review of objective evidence prior to the exit meeting.

Finding – A condition, applicable to the program or process being audited, that deviates from specified requirements defined by codes, standards, or other established specifications (a clear violation of a clear requirement).

Observation – A condition that, if left unattended, could become a deviation from established acceptance criteria; or a suggestion that, if enacted, could strengthen the existing program.

4.0 PREPARATION FOR ASSESSMENTS

4.1 QA Independent Assessment Identification

Waste Isolation Pilot Plant (WIPP) program elements or activities requiring independent assessment are found in:

- WP 13-1, *Nuclear Waste Partnership LLC Quality Assurance Program Description*
- DOE/CBFO 94-1012, *U.S. Department of Energy Carlsbad Field Office Quality Assurance Program Document*
- Hazardous Waste Facility Permit NM4890139088-TSDF

Additional programs, processes, or activities important to compliance application, nuclear safety, waste characterization, or the isolation of waste within the disposal system require independent assessments to verify adequate and effective performance. These programs are found in:

- Defense Nuclear Facilities Safety Board (DNFSB) Recommendation 2000-2, Configuration Management Vital Safety Systems
- DOE/WIPP-04-3310, *WIPP Environmental Policy Statement*

- DOE/WIPP-07-3372, *Waste Isolation Pilot Plant Documented Safety Analysis*
- DOE/WIPP-07-3373, *Waste Isolation Pilot Plant Technical Safety Requirements*
- EFCOG Contractor Guide For Performance of Effectiveness Reviews
- NWP procedures that prescribe assessments

Activities which affect the following require independent assessments, in accordance with the contractor assurance system established by U.S. Department of Energy (DOE) Order 226.1B, Implementation of Department of Energy Oversight Policy:

- Environment, safety, and health (e.g., protection of the environment, workers, and the public from damage or injury)
- Safeguards and security
- Emergency management
- Cyber security

Independent assessments performed in accordance with the contractor assurance system include evaluations of compliance with the following, as applicable:

- Laws
- Regulations
- National standards
- DOE directives
- DOE-approved plans and program documents (e.g., authorization basis documents and QA program)
- Site-specific procedures/manuals
- Criteria review and approach documents
- Contractual performance objectives, and other contractually mandated requirements

The scope and frequency of audits scheduled and performed in accordance with the contractor assurance system must ensure that:

- Assessments required by applicable DOE directives, including environment, safety, and health, safeguards and security, emergency management, and cyber security, are being performed;

- The effectiveness of safety management programs, including programs that are credited in the safety basis, is being assessed adequately;

- Deficiencies are being self-identified; and

- Corrective actions are being taken in a timely and effective manner.

Supplier audits are based on requests for new suppliers to be added to the NWP QSL; those suppliers currently on the QSL which are due for reevaluation, or have their authorized scope changed; and suppliers providing products or services under Title 10 *Code of Federal Regulations* (CFR) Part 71, that require a facility audit every three years. These requests and reevaluations are processed in accordance with WP 13-QA3012, *Supplier Evaluation/Qualification*.

The Assurance Programs manager or assigned cognizant individual will:

- Review WIPP requirements documents and identify needs for independent assessments based on both written requirements for independent assessments and other programs or processes that affect safety, storage of waste, or the environment, the importance of which necessitates assurance of compliance.

- Upon notification from a QA procurement reviewer or a NWP Contracting Officer that a project is scheduled to begin or is ongoing, evaluate the need for initial and follow-on independent assessments based on this section 4.0.

- Review the potential assessment to be added using the criteria in the Assessment Priority Determination Tables (provided in attachment 1). Document a decision for either an audit or a surveillance on the NWP QA Independent Assessment Subject Master Table (example provided in attachment 2). This table is controlled by Assurance Programs and each revision, with date, is a record. A copy is located on the network in WQNRA on the Torreon server, under the folder "Assessment Planning," subfolder "Assessment Subject Master Table."

- Determine a frequency at which the assessment should be performed. If established by the requirement, that frequency is to be used. If not established by requirement, determine an adequate frequency based on relative risk, hazards, and complexity of the processes and activities to be evaluated. Also consider the scope and coverage of previous oversight activities, and historical performance. Document the frequency on the NWP QA Independent Assessment Subject Master Table.

4.2 QA Independent Assessment Scheduling

Assessments will be scheduled to begin as early in the life of a project or activity as practicable, and will continue at intervals consistent with the schedule for accomplishing the work.

The Assurance Programs manager or assigned cognizant individual will:

- Evaluate the timing of the first, or next, occurrence for the assessment to be scheduled against all current or planned assessments. Consider resources, date required, time available, known regulatory oversight preparedness needs, associated historical issues, and client expectations, then schedule the assessment to best accommodate the need.

- Document external (supplier) audits on the NWP QA Fiscal Year External Audit Schedule (example supplied in attachment 3), completing all necessary fields as applicable. Suppliers of parts and materials, and services regulated by 10 CFR 71, Subpart H, will require the performance of a site audit on a triennial basis. (Reg. Guide 7.10, section 18.2)

- Document internal audits on the NWP QA Fiscal Year Internal Audit Schedule (example supplied in attachment 3), completing all necessary fields as applicable.

- Develop additional informal schedule tools to track assessments, as necessary.

The Assurance Programs manager will:

- Review and approve internal and external audit schedules and revisions.

- Revise or update QA assessment schedules, as applicable, to reflect current needs.

- Approve any extensions or cancellations to the audit schedules prior to deviating from the approved schedule and notate the rationale on the next revision of the schedule.

- Distribute assessment schedules to the Carlsbad Field Office (CBFO), affected NWP management, applicable assessment personnel, and the assessment file.

4.3 QA Independent Assessment Planning

Assessments include audits and surveillances. Direction regarding assessments applies to both audits and surveillances. The term "assessor" denotes the person performing either the audit or surveillance, as appropriate. Any direction specific to either audits or surveillances is indicated where applicable.

The Assurance Programs manager will:

- Direct an assessment coordinator to maintain the Independent Assessment schedule and tracking documents. The log (see example in attachment 9) will be used to issue assessment numbers, and collect certain information regarding the assessments. The schedules (example, see attachment 3) contain certain deliverable information.

- Assign a qualified lead auditor to lead/perform audits. Determine if an audit team is necessary due to size or complexity of the scope.

- Assign a qualified surveillor or qualified lead auditor to perform surveillances.

The assessment coordinator will:

- Develop and maintain an independent assessment log for systematically issuing unique numbers to assessments performed by NWP QA. The log is to contain, at a minimum, the assessment number, assessment subject or manufacturer, date performed, assessor identification, and status.

- Develop and maintain schedules that contain the anticipated assessments for a specific time frame. The anticipated assessments are identified in the NWP QA Independent Assessment Subject Master Table with their respective performance frequencies. As the assessments are performed, collect applicable information and enter into the appropriate document.

- Prepare copies of the schedules for record or contract deliverable purposes, as necessary.

The lead auditor/surveillor will:

- Obtain from the assessment coordinator an audit or surveillance number that denotes the type of assessment ("I" or "E" for internal or external audit, or "S" for surveillance, the fiscal year, and a sequential number beginning with 01 (e.g., I06-01, E06-01, S06-01).

- Contact the cognizant individual for internal audits/surveillances or the supplier for external audits/surveillances to determine any safety/security issues and precautions of which the team should be aware. This includes Personal Protective Equipment (PPE), badging, logistics information, etc. Document the safety/security issues and precautions in the audit plan.

- Select an assessment team, if a team is needed, based on the scope, complexity, or special nature of the work being assessed, technical qualifications, knowledge of the items and activities being assessed, availability, experience, and the prospective assessor's ability to provide an objective contribution.

- Ensure the following, as applicable:

  — Personnel having direct responsibility for performing the activities being assessed shall not be involved in the selection of the team. Team members shall have the authority to carry out their assigned responsibilities and be independent from the items and/or processes being assessed. Assessors shall be authorized in accordance with WP 13-QA.04, and/or perform under the supervision of a lead auditor.

  — During assessments, technical specialists shall be used when evaluating the adequacy of technical processes. Technical specialists will be indoctrinated by the lead assessor commensurate with the scope, complexity, or special nature of the work being assessed, and of the assessments process associated with their duties. This indoctrination will be documented using a format similar to that defined in attachment 10. Attachment 10 may also be used to indoctrinate other assessors from the assessment group, at the discretion of the lead assessor.

  — External peers or subject matter experts may be used as necessary to support assessment activities.

- Ensure that the team members collectively have appropriate training and experience commensurate with the scope of the assessment.

- Indoctrinate the audit team to the audit process, as needed, and their associated tasks before the audit. Include a review of potential hazards and plan accordingly for proper PPE, ALARA (as low as reasonably achievable), and additional controls deemed necessary. Document the indoctrination using a format similar to that defined in attachment 10.

- Prepare the audit plan, for both internal audits and external supplier audits, using guidance in attachment 4, and obtain QA management approval. The audit plan will include purpose, scope (including the work to be assessed and related corrective actions since previous assessments), requirements, audit personnel, organizations to be notified, applicable documents, written procedures to be used, schedule, safety/security issues and precautions, and background. Background should include previous findings, Corrective Action Requests, and weaknesses noted within the intended scope. For external supplier assessments, obtain supplier history from the QSL file or Coordinator.

- Review, with team members, any plan generated, pertinent background information that includes previous audit or oversight results, applicable procedures, and applicable technical documents so that team members are familiar with the work being assessed.

- If the assessment is external, notify the affected organization or company management by correspondence of the scheduled assessment, identifying the scope of the assessment. The notification need not include the audit checklist.

- Determine, with QA management, when internal surveillances are to be formally announced prior to performance. In such cases, notify the organization to be surveilled by correspondence of the surveillance, its scope, and schedule.

Assessor(s) will:

- Refer to the NWP QA Independent Assessment Subject Master Table for identification of requirements documents from which assessment criteria should be developed.

- Develop the criteria to be used during the assessment based on approved requirements; will also consider the following when developing criteria:

  — For internal assessments, include criteria, as applicable, to assess application of Integrated Safety Management (ISM) in accordance with Management Policy MP 1.28, *Integrated Safety Management*, and WP 15-GM.03, *Integrated Safety Management System Description*. The Safety Management Responsibilities section of the latter document provides a source from which criteria can be generated. For internal assessments, the intention is to review the ISM controls in evidence or exhibited in the activity being assessed. For external assessments, ISM controls may be considered regarding the hazards that the assessor could encounter (e.g., anticipated hazards mitigated by adequate PPE).

  — Although Graded Approach is assessed separately, consider possible criteria in accordance with WP 09-CN3005, *Graded Approach to Application of QA Controls*.

  — Consider Conduct of Operations criteria applicable to the activity being assessed.

  — Consider environmental controls or environmental response to unusual occurrences applicable to the activity being assessed.

  — Consider software controls applicable to the activity being assessed.

- When assessing a WIPP Vital Safety System (VSS), develop criteria from the following:

  — Applicable portion of WP 09-CN3025, Annual System Health/Walkdown/Requalification, Attachment 1, Assessment Boundary for Vital Safety System Definitions

- General for VSS assessments - Timely closure of modifications, Cognizant Engineer walkdowns, periodic maintenance performed as required in SDDs, maintenance performed in accordance with manufacturer recommendations, combustible materials in the disposal circuit in the underground, software QA

- For an audit, develop the audit checklist(s) under the direction of the lead auditor using the guidance in attachment 5. Checklist line items are generally written as directions to verify conformance of the activity being evaluated with established requirements, or as questions whether or not the activity being evaluated conforms with the requirement.

- For a surveillance, the criteria may be identified briefly on the Surveillance Report or on a detailed checklist to be filed with the assessment. Examples of brief criteria include, "observe actions based on steps XX through and including YY," or "observe waste hoist lifting activity for adherence to Procedure XXX, Revision Y, Section ZZ," or "review 15 WIPP Forms for adequacy, completeness, and implementation of corrective actions," etc. Criteria typically are found in QA manuals and program plans, procedures, previous assessments and corrective action documents, and contract requirements.

- For Effectiveness Reviews of completed corrective actions for 'significant' WIPP Forms, P-A externally-reportable issues, etc., develop criteria considering the following:

  - Effectiveness reviews are performed to verify the effectiveness of corrective actions that have been implemented to prevent the recurrence of significant issues.

  - Effectiveness is measured by a significant change in one or more of these four measures:

    1. The probability of the original event recurring

    2. The frequency of the problem recurring

    3. Reduction in the magnitude or severity of the problem

    4. Elimination of the original problem

5.0 ASSESSMENT PERFORMANCE

The lead auditor/surveillor will:

- For audits and external surveillances (optional for internal surveillances), conduct an entrance meeting with the assessment team and appropriate personnel representing the assessed organization(s). The entrance meeting is intended to introduce the assessors, explain the purpose, scope, and schedule for the assessment, and establish interfaces and contacts with the organization being assessed.

- For Effectiveness Reviews of completed corrective actions for 'significant' WIPP Forms, P-A externally reportable issues, etc., perform the assessment using one or more of the following methods. The method selected should be appropriate for the specific corrective/preventive actions. The direct observation method is the method of preference, but other methods should also be applied, as necessary.

  — Observe the work or performance of an evolution.

  — Conduct facility inspections or activity monitoring.

  — Utilize past performance indicators to track any ongoing recurrences.

  — Review databases or similar problems.

  — Run a test to challenge the system or process (if applicable).

  — Run a mock item through the process, or complete a performance test (if applicable).

  — Perform a walkthrough of the work, process, or evolution.

  — Interview impacted managers and workers on their understanding of, and involvement with, the implemented corrective actions.

  — Review a documented, previously completed equivalent evaluation of the original problem prior to initiating the effectiveness review.

The assessment team will:

- Evaluate the applicable quality program element(s) by examining objective evidence, observing activities in progress, examining items (including components, specimens, and machinery, etc.), and/or interviewing personnel responsible for the activity. Include technical evaluations of the applicable procedures, instructions, activities, and items, as appropriate. Objective evidence related to the planning and technical aspects of the work performance is to be examined to the depth necessary to determine if these elements are being implemented effectively.

- Review previous corrective actions, as applicable, to evaluate implementation and effectiveness when recurring problems are found.

- Observe, to the extent possible, actual operations to verify conformance to requirements.

- Record the results of the evaluations performed on the assessment checklist or surveillance report, as applicable.

- Record, on the assessment checklist or surveillance report, as applicable, objective evidence examined, including all documents reviewed, with sufficient detail so that any conditions or practices may be noted in the report with adequate detail. Include, as applicable, document number, title, and revision.

- Record, on the assessment checklist or surveillance report, as applicable, the results of observations of processes or items, including the quantity of items examined to indicate the size or breadth of the examination. Identify the items, where possible.

- Record, on the assessment checklist or surveillance report, as applicable, the names of personnel interviewed.

- Inform the lead auditor/surveillor of progress and/or problems with assigned tasks periodically during the assessment.

- Notify immediately the lead auditor/surveillor if conditions are identified during an internal audit or surveillance that qualify as an event or potentially reportable occurrence under the requirements of 10 CFR Part 21, 10 CFR Part 71, WP 12-ES3918, *Reporting Occurrences in Accordance with DOE Order 232.2*, etc.

- Notify immediately the lead auditor/surveillor if conditions are identified that are believed to be unsafe. If an internal assessment condition requires immediate work stoppage, proceed as directed in MP 1.2, *Stop-Work Policy*. During external assessments, notify the supplier management, or their designated point-of-contact.

- Acknowledge and track any CDAs. Verify that the actions completed correct the condition. Document CDAs on a WIPP Form, in accordance with WP 04-IM1000, for trending.

The lead auditor/surveillor will:

- Notify QA management and the management of the assessed organization as soon as practicable if conditions are discovered that could have a significant adverse impact on prior work or affect work in progress, or if conditions require prompt attention. If conditions require immediate attention as defined in WP 12-ES3918 or MP 1.2, perform action as directed by the appropriate document.

- Notify the management of the assessed organization as soon as practicable of any issues identified, to assure accuracy, and allow opportunity for resolution during the assessment.

- Notify Packaging Manager of issues that affect nuclear packaging (TRUPACTs, HalfPACTs, etc.) or are otherwise potentially reportable to the U.S. Nuclear Regulatory Commission (NRC), to allow them to screen for reportability under 10 CFR Part 21 or 10 CFR Part 71, etc.

- For audits and external surveillances, conduct an exit meeting with appropriate personnel representing the assessed organization(s). The exit meeting is intended to provide a general overview of the evaluation of the program element and any issues requiring attention.

6.0 ASSESSMENT REPORTING

The reporting of the assessment, if performed as an audit or external surveillance, will follow the guidance provided in attachment 6; and, if performed as an internal surveillance, will use the example provided in attachment 8.

Assessments that involve sensitive (e.g., permit- or personnel-related) information are to be coordinated through the NWP Legal Counsel. The lead auditor/surveillor and QA management will determine the necessary reviewers (i.e., NWP Legal Counsel, etc.) for proper processing of such assessment information.

The lead auditor/surveillor/manager will:

- Prepare the assessment report with the assistance, as necessary, of the assessment team, and sign the report.

- Ensure that the assessment report includes the following, as appropriate:

  — Assessment purpose and scope (surveillances to include criteria used)

  — Identification of assessors

- Identification of personnel contacted

- Identification of documents reviewed, including revision indicator

- Summary statement(s) indicating program (or program element) adequacy, implementation, effectiveness (applicable to scope), and a brief statement of ISM evaluations performed

- Commendable practices or situations (if any are identified)

- Findings (conditions adverse to quality, if any are identified) – Enter internal (NWP) conditions adverse to quality into the Issues Management System using the WIPP form in accordance with WP 04-IM1000. Identify findings in the report as directed in attachments 6 and 8. Concisely describe in the report (and on the WIPP Form for internal findings) the specific condition that deviates from the requirements, with sufficient detail to enable remedial actions to be taken by the audited organization, and subsequent closure by QA. Clearly quote or state the requirement from which the deviation was noted. Group findings of a common nature together whenever possible so that systematic breakdowns can be identified. Evaluate findings based on the relative importance to indicate the degree of impact on compliance application, waste characterization, repository performance assessment, waste isolation, waste transportation, nuclear safety, environmental protection, or management and operation of the WIPP facility.

- Observations (if any are identified) - Concisely state either the condition observed that, if left unaddressed, could deteriorate into a finding, or the suggestion that could strengthen the existing program or process.

- Corrected During Assessment (CDA) - Concisely describe the CAQ found, the requirement from which the condition deviated, and the action(s) taken to resolve the condition. Document CDAs on a WIPP Form, in accordance with WP 04-IM1000, for trending.

- Include the following statement in external supplier audit reports:

  (Name of Company) will be (select "retained on," "added to," "added to pending successful resolution of finding," or "removed from") the NWP QSL for (state the scope or limitations of products or services authorized).

- Include the following statement in audit reports for suppliers currently on the NWP QSL:

  If the agreements and commitments contained herein are deemed by the supplier to involve a change in the order concerning work scope, price, or schedule, it is agreed that such work will not commence or continue until authorized by a written change notice. It is understood that if the supplier commences such work without a written change notice, it is at the supplier's risk.

- Using cover correspondence, issue the assessment report to all affected entities within 45 calendar days of conclusion of the audit. The 45 calendar day time limit may be extended at the discretion of the Assurance Programs manager.

  - Cognizant department manager (all reports)
  - Compliance Coordinator (all reports)
  - CTS Coordinator (external reports containing findings)
  - Facility point-of-contact (external reports)
  - QSL Coordinator (external qualification or requalification audits)
  - Packaging Manager (reports affecting packaging)
  - Assessment Coordinator (all reports)
  - Lessons Learned Coordinator (reports containing findings determined by the lead auditor/surveillor/management to be potential Lessons Learned issues)
  - QA assessment file for this assessment
  - Others as designated by QA management

Because internal findings are transferred to WIPP Forms, internal reports are considered closed at the time of issue. For external audit reports, include direction to the supplier for responding to any findings.

- Document CDAs on a WIPP Form, in accordance with WP 04-IM1000, for trending.

- For external supplier qualification audits, complete the Supplier Evaluation/QSL Update Request Form in accordance with WP 13-QA3012, and forward to the QSL Coordinator.

  It is recommended to electronically file a copy of the completed checklist and the report in the applicable assessment folder within "Assessment Reports" in the shared folder WQNRA on the Torreon server.

7.0 ASSESSMENT RESPONSE

The cognizant manager of the assessed WIPP organization will review the assessment (audit or surveillance) results assigned to their organization on the WIPP Form, and respond using the Issues Management (WIPP Form) process in accordance with WP 04-IM1000.

The facility contact (for external assessments) is expected to respond as directed in the issuing cover letter and report. Any request for extension of corrective action due date shall be reviewed by the Assurance Programs Manager or designee.

8.0 ASSESSMENT FOLLOW-UP

In accordance with WP 04-IM1000, the WIPP Form screening committee will assign the lead auditor/surveillor as a technical reviewer of actions/corrective action plans developed in response to a WIPP Form issued as the result of an internal audit/surveillance finding. As a technical reviewer, the lead auditor/surveillor/manager will be responsible for determining the long-term effectiveness of the corrective actions, and will be expected to sign the Corrective Action Plan, so indicating, in accordance with WP 04-IM1000. Issues that cannot be resolved will be referred to management.

For external supplier audit or surveillance findings and the resulting supplier's committed actions, the lead auditor/surveillor/manager will review the supplier's actions, and report completion based on the supplier's approved commitment(s).

9.0 ASSESSMENT CLOSURE AND FILING

The lead auditor/surveillor/manager will:

- For external supplier audits or surveillances with findings, verify that the corrective actions were completed as committed, issue a closure letter to the supplier and any other affected organizations, and ensure that copies are distributed to the QSL Coordinator (if applicable) and the Compliance Coordinator.

- Review, using the file checklist (attachment 7), the assessment file for completeness: purge working documents, sign the checklist, notify the assessment coordinator, and forward the complete file to the QA file. The assessment file is to include:

  — Audit Plan (for audits)

  — Completed Assessment Checklist (required for audits, or when used for surveillances)

  — Completed Assessment Report (including identification of documents reviewed and personnel contacted)

  — Assessment response (for external assessments)

  — Corrective Action completion, follow-up, and verification (for external assessments)

  — Other documentation determined to be necessary to support the assessment (closure correspondence, etc.)

REFERENCES	
DOCUMENT NUMBER AND TITLE	KEY STEP
10 CFR Part 21, "Reporting of Defects and Noncompliance"	
10 CFR Part 71, "Packaging and Transportation of Radioactive Material"	
Reg. Guide 7.10, *Establishing Quality Assurance Programs for Packaging Used in Transport of Radioactive Material (NRC)*	
DNFSB Recommendation 2000-2, *Configuration Management Vital Safety Systems*	
DOE O 226.1B, *Implementation of Department of Energy Oversight Policy*	
Hazardous Waste Facility Permit, Waste Isolation Pilot Plant, Permit #NM4890139088 TSDF, Issued by New Mexico Environment Department	
DOE/CBFO 94-1012, *Carlsbad Field Office Quality Assurance Program Document*	
DOE/WIPP 04-3310, *WIPP Environmental Policy Statement*	
DOE/WIPP-07-3372, *Waste Isolation Pilot Plant Documented Safety Analysis*	
DOE/WIPP-07-3373, *Waste Isolation Pilot Plant Technical Safety Requirements*	
EFCOG Contractor Guide for Performance of Effectiveness Reviews	
MP 1.2, *Stop-Work Policy*	
MP 1.28, *Integrated Safety Management*	
WP 04-IM1000, *Issues Management Processing of WIPP Forms*	
WP 09-CN3005, *Graded Approach to Application of QA Controls*	
WP 09-CN3025, *Annual System Health/Walkdown/Requalification*	
WP 09-CN3040, *Commercial Grade Item Dedication*	
WP 12-ES3918, *Reporting Occurrences in Accordance with DOE Order 232.2*	
WP 13-1, *Nuclear Waste Partnership LLC Quality Assurance Program Description*	**1**
WP 13-QA.04, *Quality Assurance Department Administrative Program*	
WP 13-QA3012, *Supplier Evaluation/Qualification*	
WP 15-GM.03, *Integrated Safety Management System Description*	

Attachment 1 – NWP QA Internal Assessment Priority Determination Tables

Determine whether the assessment will be performed as an audit or surveillance using the tables below:

- Review the assessment to be performed against the criteria in the Risk and Hazard Table to determine a numeric value.
- Review the assessment also against the criteria in the Importance and Complexity Table to determine a numeric value.
- Multiply the two numeric values.
- Use the Assessment Priority Table and the number derived from the previous bullet to determine the priority of the assessment to be performed and schedule the type of assessment indicated.

Risk and Hazard Table	
Description	Probability and Consequence Level
If not performed, improbable undetected impact on environment safety, health, safeguards and security, emergency management, cyber security, or QA	1
If not performed, possible minor undetected impact on environment, safety, health, safeguards, and security, emergency management, cyber security, or QA	2
If not performed, possible major undetected impact on environment, safety, health, safeguards, and security, emergency management, cyber security, or unknown status of QA program, or possible continuation of negative trend or repetitive nonconformance	3

Importance and Complexity Table	
Description	Importance and Complexity Level
Necessary to verify actions in document other than a requirement-source or implementing procedure	1
Necessary to verify an action required by an implementing procedure	2
Necessary to complete an assessment required by an implementing procedure	3
Necessary to complete an assessment required by an implementing procedure, and complex in nature	4
Necessary to complete a specific program assessment requirement, or commitment (both non-complex and complex in nature)	4

Attachment 1 – NWP QA Internal Assessment Priority Determination Tables

Assessment Priority Table		
Derived Numeric Value	Priority	Action
1-4	Low	Schedule Surveillance
5-8	Medium	Schedule Surveillance or Audit
9-12	High	Schedule Audit

Attachment 2 – Example of NWP QA Internal Assessment Subject Master Table

NWP QA INDEPENDENT ASSESSMENT SUBJECT MASTER TABLE **Revision XX mm/dd/yy**							
Area of Interest	**Source/Reference**	**Risk/Hazard**	**Complexity**	**Priority**	**Audit**	**Surv**	**Frequency**
Management System NWP Organization Facility Ops Chain of Command QA Organization	Source WP 13-1, R.27, §1.1 Reference DSA/TSR 10 CFR 71 Subpart H	3	4	12	**X**		Biennial (frequency not specified in 830.122, NQA-1, WP 13-1, R.27, or WP 13-QA.03)
Personnel Qualification and Training **Facility Staff Qualifications Training** **Qualified Operators**	Source WP 13-1, R.27, §1.2 Reference DSA/TSR 10 CFR 71 Subpart H DSA/TSR	3	4	12	**X**		Biennial

Attachment 3 – Example of QA Fiscal Year External and Internal Audit Schedules

NWP QUALITY ASSURANCE
FISCAL YEAR 2007 EXTERNAL AUDIT SCHEDULE

Supplier/Location Audit	Product/Service	Lead Auditor	Audit Number	Remarks
ACME Manufacturing 123 Any Street Anywhere, NM	Pipe, flanges, fittings	Lead Auditor Name	E07-01	Completed October 2006
Jones Cal Services 456 Busy Highway Big City, NM	Calibration Services	Lead Auditor Name		Scheduled January 2008

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Signatures on last printed page: Manager, Assurance Programs, and Manager, Quality Assurance

NWP QUALITY ASSURANCE
FISCAL YEAR 2007 INTERNAL AUDIT SCHEDULE

Audit Title and Audit Criteria	Scheduled	Lead Auditor (when determined)	Audit Number (when determined)	Status
Personnel Qualification	March 2007			

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Signatures on last printed page: Manager, Assurance Programs, and Manager, Quality Assurance

Attachment 4 – Audit Plan Guidance

NUCLEAR WASTE PARTNERSHIP LLC
QUALITY ASSURANCE AUDIT PLAN
Title of audit (subject)

Audit number

Audited organization(s) (and location if supplier audit)

1. Purpose and Scope of the audit

2. Applicable Requirements Documents
   WP 13-1, *NWP Quality Assurance Program Description*
   (Any others, including regulatory documents containing requirements)

3. Procedure(s) to be used to perform the audit
   WP 13-QA.03, *Quality Assurance Independent Assessment Program*

4. Hazards, Safety/security issues
   Precautions
   Badging, logistics information
   PPE (if any)

5. Audit Team
   Lead Auditor
   Team Auditors (if any)
   Technical Expertise (if any)
   Anticipated Observers (if any)

6. Schedule
   Pre-Audit Meeting
   Audit Activities
   Post-Audit Meeting

7. Background
   Previously reported findings (if any)
   Previous corrective action issues (if any)
   Previously reported weaknesses (if any)

8. Signatures:

Prepared by: _____ Approved by: _____
(Printed Name) (Printed Name)
Lead Auditor Manager, Assurance Programs

Attachment 5 – Example of NWP Quality Assurance Assessment Checklist

(The following table is shown on first page only, followed by the second table as space allows.)

NWP Quality Assurance Assessment Checklist	
Organization Assessed: _____	Assessment Number: _____
Requirements Documents: _____	Dates of Assessment: _____
Assessor(s): _____	**Key: S=Satis., U=Unsat., N=N/A**

(The top row of the following table is a header to be shown on each page to which this table expands with usage.)

Item	[Type in Assessment # here] Assessment Item	Reference Document(s)	**Key**	Assessor Comments
	(Add rows as needed)			

(The following signature line is shown on the last page only, following the end of the above table.)

Approved by: _____ _____
Lead Auditor/Surveillor (print name and sign) Date:

Notes: Refer to the NWP QA Independent Assessment Subject Master Table for identification of requirements documents from which assessment criteria should be developed.
Review any corrective actions committed as a result of the previous assessment; develop criteria to evaluate their effectiveness.
Develop criteria that evaluate a broad range of the requirements with enough detail to be meaningful in verifying compliance and effectiveness.
Develop criteria to evaluate effectiveness of Graded Approach and the ISM system.

Attachment 6 – Audit Report Guidance

Nuclear Waste Partnership LLC
Quality Assurance (select either **Internal** or **External**) **Audit Report**
[Descriptive, yet concise **title** - if external, provide company and address]
[**Audit Number**]

I. Executive Summary: Concise summary (generally one page or less), written in paragraph format including brief mention of organization audited (include location for external supplier) and audit date, abbreviated purpose and scope, results in general terms, conclusion of program adequacy (including ISM), any commendable situations noted, and any major issues requiring further action.

II. Audit Details

Purpose and Scope (more detailed than the Executive Summary)
Criteria used (identify or make reference to checklist, and specifically address ISM)
Audit Team
Inclusive dates of audit
Location(s) of audit
Conclusion(s) regarding compliance, effectiveness, and ISM evaluations performed. Include a statement addressing the number of findings, observations, and/or "CDAs." An acceptable method would be, "The assessment resulted in 2 Findings, 0 Observations, and 3 issues closed during the assessment."
Commendable practices or activities (if applicable)

[Include the following statement, as applicable, in assessment reports containing findings.]

Response to Findings (external supplier audits only) - When responding to audit findings, the following elements are required to be addressed:

- Cause of nonconformance
- Interim actions planned to correct the nonconformance
- Evaluation of the extent of the condition beyond that cited in the report
- Actions planned to prevent recurrence
- Schedule of implementation/completion

Findings (are to be numbered as [audit no.]-F-[sequential number beginning with 01], and internal findings are to also cross-reference to the WIPP Form Number. Example – "S04-027-F-01 issued as WF04-120")

- Condition noted
- Requirement not met

Observations (numbered as [assessment no.]-O-[sequential number beginning with 01])

- Condition (noted, or considered to be an improvement)

Attachment 6 – Audit Report Guidance

Conditions corrected during the assessment (numbered as [assessment no.]-CDA-[sequential number beginning with 01])

- Condition noted
- Requirement from which condition deviated
- Action taken, and verification of completion

[Include the following statements in external supplier audit reports]

[Name of company] will be [select "retained on," "added to," "added to, pending successful resolution of findings," or "removed from"] the NWP Qualified Suppliers List for [state the scope or limitations of products or services authorized].

If the agreements and commitments contained herein are deemed by the supplier to involve a change in the order concerning work scope, price, or schedule, it is agreed that such work will not commence until authorized by a written change notice. It is understood that if the supplier commences such work without a written change notice, it is at the supplier's expense.

III. Attachments:

1. Table of Personnel Contacted
2. Table of Documents Reviewed
3. (Any other information deemed appropriate for attachment)

IV. Signatures:

Prepared by: _____ _____
(Printed Name) Date

Approved by: _____ _____
(Printed Name) Date
Manager, Assurance Programs

Attachment 6 – Audit Report Guidance

Attachment 1 Table of Personnel Contacted

[A] Attended Audit Entrance Meeting
[B] Contacted During the Audit
[C] Attended Audit Exit Meeting

Personnel Contacted	A	B	C
(Added rows as needed)			

Attachment 2 Table of Documents Reviewed

Document Identification	Document Title or Description
(Add rows as needed)	

Attachment 7 – Example of Independent Assessment Record File Completion Checklist

INDEPENDENT ASSESSMENT RECORD FILE COMPLETION CHECKLIST

Assessment No. _____

	Complete
Audit Team/Technical Specialist Indoctrination	☐
Assessment Plan (required for audit, optional for surveillance)	☐
Assessment report	☐
Assessment response (if external assessment contained findings)	☐
Assessment Checklist (required for audit)	☐
Closure letter (if external assessment contained findings)	☐
Other	
_____	☐
_____	☐
_____	☐
_____	☐

I have reviewed the above listed records and verified their completeness and legibility.

_____

Lead Auditor/Surveillor Signature Date

Attachment 8 – Example of Surveillance Report

Nuclear Waste Partnership LLC Quality Assurance **(make this a header row)** **Surveillance Report Number:** **Date:**	
Subject	Organization(s) Surveilled
Scope Surveillor(s)	
Requirement References (include revision no.)	
Surveillance Criteria	[ ] Checklist on file in QA
Personnel Contacted (* indicates persons to whom a copy of this report is to be distributed)	
Documents reviewed [ ] See attachment	
Details/Results/Conclusions [ ] WIPP Form(s) identified in Findings _____ _____ _____ _____ [Print and Sign] Date [Print and Sign] Date Lead Auditor/Surveillor Manager, Assurance Programs	
cc: Manager of assessed organization, WIPP Form Coordinator (if containing findings), Compliance Coordinator, Assessment Coordinator, CTS Coordinator (if containing findings), Packaging Manager (if containing packaging issues) Page 1 of (total)	

Make the top row a header to appear on every page.
Insert pagination (page X of Y) at the bottom center

Attachment 9 – Example of NWP QA Independent Assessment Log

NWP QUALITY ASSURANCE
INDEPENDENT ASSESSMENT LOG

Assessment Number	Subject/Manufacturer	Location	Date Performed	Lead Auditor/ Surveillor	Assessment Team	Results Findings/CDAs/ Observations	Status of External Findings
E05-06	Supplier X	Wichita, KS	5/10/2005	(Name)	(Names)	8 Findings 1 CDA 2 Obs.	All findings closed 5/10/05, QA:05-00287

Attachment 10 – Technical Specialist/Auditor Participation Indoctrination for Quality Assurance Audits Example

Technical Specialist/Auditor Participation Indoctrination
for Quality Assurance Audits
Audit XXX0XX
(Audit Title)

In preparation for participation as a Technical specialist/Auditor, this documentation serves as a record that the below listed individual has been indoctrinated per the requirements of the NWP QAPD, and procedure WP 13-QA.03.

Items discussed:

- Applicable portion of the NWP QAPD
- Applicable section of WP 13-QA.03, which includes audit checklist preparation and completion, documentation required during the audit process, and the audit report format.
- Applicable requirements documentation associated with this audit.
- Expectations of an Auditor.
- Potential hazards. Plan accordingly for proper PPE, ALARA, and additional controls deemed necessary, i.e., badging, logistics, etc.

Experience Background:

(Enter short biography for each specialist [auditor as desired] detailing previous experience and qualifications.)

Technical Specialist/Auditor:

Print Name	Signature

Lead Auditor:

Print Name	Signature

CORRECTED DURING THE AUDIT

1.0 CDA #	2.0 Audit Number:	3.0 Responsible Organization	4.0 Identified By/Date
CDA-1	A-13-24	ANLL/CCP	Katie Martin 8/28/13

5.0 Description of Condition Adverse to Quality:

(Concern #3)

During the review of NCR-RHANL-0509-13, Rev. 1, it was identified that the CCP QA Engineer did not sign the validation block (14) on the NCR. The CCP QA Engineer printed their name and dated the form, but did not sign as required by the form.

6.0 Requirements not met (include document number, revision number, and paragraph):

CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control*, Rev. 22, Section 4.2.14 states, "IF the NCR is determined to be valid, THEN validate the NCR by signing concurrence in Block 14."

7.0 Actions Taken By Auditee:

During the audit, the signature field on the NCR was completed by the QA Engineer's supervisor. The NCR was received and processed by NTPC Records and the BDR was updated to reflect the corrected version of the NCR.

Verified By:		Trend Cause Code:
Auditor	Date	CA-05
Katie Martin	8/28/13	

* Note: 1) All blocks are to be filled out by the audit team member who identified the deficiency.
2) Trend Cause Codes are provided in Attachment II of MP 3.2.

Audit Number: A-13-24 Date: Aug. 27 – 29, 2013

AUDIT CONCERN FORM

AUDITOR: Katie Martin **Checklist Activity (Item No):** 45

CONCERN NO. 3

I WHAT IS THE CONCERN?:

During the review of NCR-RHANL-0509-13, Rev. 1, it was identified that the CCP QA Engineer did not sign the validation block (14) on the NCR. The CCP QA Engineer printed their name and dated the form, but did not sign as required by the form.

CONCERN DISCUSSED WITH WHOM?: Terry Mueller/Wayne Ledford
Sample size 1 **Population Size** (If known) 4

II DOCUMENT REQUIREMENTS (Name, Revision, Paragraph):

CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control*, Rev. 22, Section 4.2.14 states, "IF the NCR is determined to be valid, THEN validate the NCR by signing concurrence in Block 14."

III CONCERN DISPOSITION:

CDA	X	**CAR**		**OBS**	
REC		**Exem Prac.**		**NONE**	

IV VERIFICATION OF ACTIONS TAKEN DURING THE AUDIT:

During the audit, the signature field on the NCR was completed by the QA Engineer's supervisor. The NCR was received and processed by NTPC Records and the BDR was updated to reflect the corrected version of the NCR.

V If the concern is a deficiency (CAR or CDA), the ATL must answer the following questions:

1. **Does this deficiency affect waste already shipped to WIPP? Yes** _____ **NO**

   Why? The identified NCR was properly processed and issue did not affect the physical waste.

2. **Does this deficiency affect waste that the site is currently certified to ship? Yes** _____ **NO**

   Why? The identified NCR was properly processed and issue did not affect the physical waste.

If the answer to question 1 or 2 is yes, Office of the National TRU Program (NTP) must be notified immediately.

Name of NTP person notified: N/A

Time and Date of notification: _____ _____

The information contained on this form is preliminary. All concerns are subject to final review and validation by the Carlsbad Field Office.

Attachment 1 – CCP Nonconformance Report (NCR)

CCP NONCONFORMANCE REPORT (NCR)

(Use NCR Continuation, Attachment 2, if necessary)

NCR No. NCR- RHANL-0509-13 **Revision:** 1

1. Lot No., Heat No., or Serial No. (if applicable):	2. Process (e.g., NDA, HSG, NDE, VE, Other):	3. Batch Data Report #(s):
NA	RH-DTC 04/9/13 LRJ	ANLRHDTC12008
4. Order/Work Order/Job Control Number (if applicable): NA	5. PO # (if applicable): NA	Container #(s): NA
	6. Supplier (if applicable): NA	

DESCRIPTION OF NONCONFORMANCE

7a. NCR Description: ☐ < 100 nCi/g ☐ Prohibited Item ☐ E-Flag ☐ Receipt Inspection ☐ Transportation ☐ WWIS/WDS ☒ Other

7b. Requirement(s) (Enter Implementing Procedure No., Revision, Section No., & Quoted Text):

CCP-TP-504 rev. 13 Section 4.4.1 states in part, "Assemble the BDR as follows...Attachment 4, Batch Data Report Cover Sheet, Attachment 5, Batch Data Report Table of Contents, Attachment 6 Batch Data Report Narrative Summary, Attachment 7 ITR Checklist...Submit to the ITR"

7c. Actual Condition:

The Attachment 5 Batch Data Report Table of Contents, Attachment 6 Batch Data Report Narrative Summary, and the Attachment 7 ITR checklist were all completed using the incorrect revision of CCP-TP-504.

Reason for Revision 1: Correct the Process in Block 2 from RH 512 Sampling to RH DTC. 04/9/13 LRJ

7d. Have the CCP HOLD TAGS associated with this NCR been applied? ☐ YES ☒ NO **(If no is checked, explain:)**

See Block 24B

8. NCR Originator:

Laura Nelson — Laura Nelson — 4-9-13

printed name — signature — date

9. Does the Identified condition have the potential to impact AK? ☐ YES ☒ NO ☐ INDETERMINATE

If YES or INDETERMINATE, enter Trend Code L in Block 10.

10. Trend Code: A

11. Responsible Manager: Laura Nelson

12. Significant Condition? ☐ YES ☒ NO **(If Yes, enter CAR No.:)**

13. Recurring Condition? ☐ YES ☒ NO **(If Yes, list NCRs and CARs:)**

14. CCP QA Engineer or CCP QA Designee validation:

Laura R. Jones — V. K. Conner 8/28/13 For Laura Jones — 04/9/2013

printed name — signature — date

NTPC RECORDS ORIGINAL
DATE REC'D 5-21-13

COPY

Attachment 1 – CCP Nonconformance Report (NCR) (Continued)

NCR No. NCR-RHANL-0509-13 **Revision:** 1

INTERIM DISPOSITION

15a. Interim Disposition (Check Only One):

☒ N/A (See Final Disposition) ☐ Hold ☐ Conditionally Accept ☐ Conditionally Use

☐ Sort ☐ Reinspect or Retest ☐ Remediate

15b. Instructions for Completion of the Interim Disposition:

INTERIM DISPOSITION APPROVALS

16a. Responsible Manager or Individual:			16b. CCP QA Engineer or CCP QA Designee:		
printed name	signature	date	printed name	signature	date
Additional Approvals:			**Additional Approvals:**		
printed name	signature	date	printed name	signature	date

COMPLETION OF INTERIM DISPOSITION

17. Interim Disposition Complete – Responsible Manager or Individual:

printed name signature date

18. Interim Disposition Verified – CCP QA Engineer:

printed name signature date

Attachment 1 – CCP Nonconformance Report (NCR) (Continued)

NCR No. NCR-RHANL-0509-13 **Revision:** 1

FINAL DISPOSITION

19. Final Disposition (Check Only One):
☐ Use-As-Is ☐ Repair

19a. Technical Justification – Required for Use-As-Is or Repair dispositions. (Enter "N/A" for Reject, Rework, and Scrap:)

NA

DN 4-9-13

☐ Reject ☒ Rework ☐ Scrap

19b. Instructions for Completion – Required for Reject, Repair, Rework, or Scrap. (Enter "N/A" for Use-As-Is:)
1. Have a qualified operator re-assemble the BDR using the correct revision for the Attachment 5, 6, and 7 and supersede the attachments with the incorrect revision. Filling the attachments out as appropriate.
2. Have a qualified operator review the corrections and fill out the ITR checklist with the correct revision and sign the correct ITR checklist.
3. Have a qualified operator review the corrections and fill out and sign the Attachment 6 with the correct revision.
4. Turn in the corrected BDR to records for SPM review.

19c. Corrective Actions (Actions to Prevent Recurrence – For Repair or Rework, if applicable. Enter "N/A," if not applicable, and for Use-As-Is, Reject, and Scrap):

NA

FINAL DISPOSITION APPROVALS

20. Responsible Manager or Individual:			21. CCP QA Engineer or CCP QA Designee:		
Laura Nelson	Laura Nelson	4-9-13	Laura R. Jones	Laura Rawson Jones	04/9/13
printed name	signature	date	printed name	signature	date
Additional Approvals:			Additional Approvals:		
printed name	signature	date	printed name	signature	date

CLOSURE

22. Final Disposition Complete – Responsible Manager or Individual:

Laura Nelson — Laura Nelson — 5/9/2013
printed name — signature — date

23. Attachments: Attachment 1: Email Attachment 2: BDR data

24a. HOLD TAG removal has been verified and reconciled for all nonconforming items on the NCR. ☐

24b. Check if not applicable (N/A) and explain. ☒

Due to ALARA considerations NCR tagging will not be applied for this NCR. Administrative control will be applied through container entry in this CCP Data Center. In addition a listing of containers has been posted on the CCP sftp site identifying those containers where NCR tagging is not being applied due to ALARA. Container information for this NCR has been included in the listing which is to alert Mobile Loading Unit Personnel as a second control mechanism for non-tagged containers. The current listing has been uploaded to the sftp site.

25. Final Disposition Verified – NCR Closed CCP QA Engineer:

Laura R. Jones — Laura Rawson Jones — 05/14/2013
printed name — signature — date

Jones, Laura - NWP

From: Pearcy, Mark - NWP
Sent: Thursday, April 11, 2013 9:30 AM
To: Jones, Laura - NWP
Subject: RE: Revised NCR-RHANL-0509-13-1

not reportable

Mark Pearcy
Central Characterization Program
Nuclear Waste Partnership LLC
Contractor for the U.S. Department of Energy
575-234-7394 (W)
575-499-7339 (C)

Nuclear Waste Partnership LLC

A URS-led partnership with B&W and AREVA

From: Jones, Laura - NWP
Sent: Tuesday, April 09, 2013 12:57 PM
To: Nelson, Laura - NWP; Joo, Irene - NWP; Kantrowitz, Rich - NWP; Pearcy, Sheila - Stoller; Pearcy, Mark - NWP; Reeves, Ron - NWP; Henry, Paulette
Cc: Jones, Laura - NWP
Subject: Revised NCR-RHANL-0509-13-1

Laura/Irene/Ron – For your information
Mark – Please review for notification determination. Section 2-work process was corrected from 512 sampling to RH-DTC.
Sheila / Paulette – Please post this open revised NCR.

Thanks,

Laura R. Jones
Quality Assurance NCR Coordinator
Nuclear Waste Partnership LLC
Contractor for the U.S. Department of Energy
Office: (575) 234-7244
Email: laura.jones@wipp.ws
Fax: (575) 234-7071

NCR -RHANL- 0509-13 Rev. 1

Attachment 1 Page 1 of 2

Jones, Laura - NWP

From:	IDC [SQLMaster@wipp.ws]
Sent:	Thursday, April 11, 2013 9:30 AM
To:	Jones, Laura - NWP; Mueller, Terry - NWP; Walker, Mak (Maryann) - NWP; Morrison, Jim - NWP
Subject:	Project Office NCR [NCR-RHANL0509131] was just reviewed.

Certification Manager/Designee has just reviewed the project office NCR NCR-RHANL0509131 and has indicated that it [should NOT] be reported to CBFO. IDC has already updated the NCR for you.

NCR- RHANL-0509-13 Rev. 1

Attachment 1 Page 2 of 2

Attachment 5 – Batch Data Report Table of Contents

BDR Number: ANL RHDTC 12008

Testing Facility: ANL 331 Shell

SECTION	PAGE NUMBER
Batch Data Report Cover Sheet, Attachment 4	1
Batch Data Report Table of Contents, Attachment 5	2
Batch Data Report Narrative Summary, Attachment 6	3
ITR Checklist, Attachment 7	4
Measurement Control Report(s), Attachment 1	6
Container Data Sheet(s), Attachment 2	8
Waste Container Dose-to-Curie Conversion Record(s)	14
Gamma Spectroscopy Daily Check List and Measurement Controls, Attachment 9 (if applicable)	N/A
Evaluation of Gamma Spectroscopy results (if applicable)	N/A
Duplicate Container Data Sheet(s), Attachment 10	20
Relative Percent Difference Spreadsheet(s) (if applicable)	21
Relative Percent Difference, Attachment 12 (if applicable)	N/A
Copies of NCR(s) (if applicable)	22

NCR-RHANL-0509-13 rev. 1
Attachment 2 pg 1 of 8

02

Attachment 5 – Batch Data Report Table of Contents

BDR Number: ANLRHDTC12008

Testing Facility: ANL 331 Shell

SECTION	PAGE NUMBER
Batch Data Report Cover Sheet, Attachment 4	1
Batch Data Report Table of Contents, Attachment 5	2
Batch Data Report Narrative Summary, Attachment 6	3
ITR Checklist, Attachment 7	4
Measurement Control Report(s), Attachment 1	6
Container Data Sheet(s), Attachment 2	8
Waste Container Dose-to-Curie Conversion Record(s)	14
Gamma Spectroscopy Daily Check List and Measurement Controls, Attachment 9 (if applicable)	N/A
Evaluation of Gamma Spectroscopy results (if applicable)	N/A
Duplicate Container Data Sheet(s), Attachment 10	20
Relative Percent Difference Spreadsheet(s) (if applicable)	21
Relative Percent Difference, Attachment 12 (if applicable)	N/A
Copies of NCR(s) (if applicable)	N/A

PB 3-27-13

NCR-RHANL-0509-13 rev.1
Attachment 2 pg. 2 of 8

02A
PB 3-27-13 ~~02~~

Attachment 6 – Batch Data Report Narrative Summary

BDR Number: ANL RH DTC 12008

BDR Date: 03-28-13

Quality Control Summary:

ALL quality control measurements are within Acceptable Limits.

Nonconformance:

NCR-RHANL-0509-13 Attached

Comments:

ANL RH DTC 12008 Reworked per NCR-RHANL-0509-13

Printed Name: F. Wesley Root

Signature and Date: F. Wesley Root, 03-28-13

NCR-RHANL-0509-13 rev. 1
Attachment 2 pg. 3 of 8

Attachment 6 – Batch Data Report Narrative Summary

BDR Number: ANL RHDTC 12.008

BDR Date: 2-25-13

Quality Control Summary:

ALL quality control measurements are within Acceptable Limits.

Nonconformance:

N/A

PB 3-27-13

Comments:

None

Printed Name: F. Wesley Root

Signature and Date: F. Wesley Root, 2-25-13

NCR-RHANL-0509-13 rev. 1
Attachment 2 pg 4 of 8

03A
PB 3-27-13 ~~03~~

Attachment 7 – ITR Checklist

BDR Number: 4NLRHDTC12008

Description of Criteria Reviewed	Criteria Met (Check One)
ITR Checklist	
The BDR contains no more than 20 containers.	☑ YES ☐ NO
There is a container data sheet present for each of the containers listed on the BDR cover sheet and measurement control sheet(s) that covers the range of dates for each of the container data sheets.	☑ YES ☐ NO
The container data sheets and associated measurement control sheets are complete and contain:	
• Instrument calibration is satisfactory. (Accuracy)	☑ YES ☐ NO
• Instrument battery check is satisfactory.	☑ YES ☐ NO
• Instrument source check is satisfactory.	☑ YES ☐ NO
• The highest measured dose rate is at least three times greater than the measured background for each container not rejected by an NCR.	☑ YES ☐ NO
• The correct revision of the procedure was used.	☑ YES ☐ NO
• The Operator signed and dated each sheet, as applicable.	☑ YES ☐ NO
• Duplicate dose rate RPD ≤40%. (Precision)	☑ YES ☐ NO
The Quality Assurance Objectives have all been met.	☑ YES ☐ NO
Data generation and reduction were conducted in a technically correct manner in accordance with the methods used (procedure with revision).	☑ YES ☐ NO
Calculations have been verified by a valid calculation program, a spot check of verified calculation programs, and/or 100 percent check of all hand calculations.	☑ YES ☐ NO
The dose rates on the container data sheets are technically reasonable and reported in the proper units and correct number of significant figures.	☑ YES ☐ NO
The data has been checked for transcription errors between the container data sheets and the conversion records.	☑ YES ☐ NO
The conversion records are complete and show:	
• Total TRU activity concentration is greater than 100 nanoCuries per gram (nCi/g).	☑ YES ☐ NO
• Operator printed name, signature, and date.	☑ YES ☐ NO

NCR-RHANL-0509-13 rev. 1
Attachment 2 pg. 5 of 8

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Attachment 7 – ITR Checklist

BDR Number: ANLRHDTC12008

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Description of Criteria Reviewed	Criteria Met (Check One)
ITR Checklist	
The BDR contains no more than 20 containers.	☑ YES ☐ NO
There is a container data sheet present for each of the containers listed on the BDR cover sheet and measurement control sheet(s) that covers the range of dates for each of the container data sheets.	☑ YES ☐ NO
The container data sheets and associated measurement control sheets are complete and contain:	
• Instrument calibration is satisfactory. (Accuracy)	☑ YES ☐ NO
• Instrument battery check is satisfactory.	☑ YES ☐ NO
• Instrument source check is satisfactory.	☑ YES ☐ NO
• The highest measured dose rate is at least three times greater than the measured background for each container not rejected by an NCR.	☑ YES ☐ NO
• The correct revision of the procedure was used.	☑ YES ☐ NO
• The Operator signed and dated each sheet, as applicable.	☑ YES ☐ NO
• Duplicate dose rate RPD ≤40%. (Precision)	☑ YES ☐ NO
The Quality Assurance Objectives have all been met.	☑ YES ☐ NO
Data generation and reduction were conducted in a technically correct manner in accordance with the methods used (procedure with revision).	☑ YES ☐ NO
Calculations have been verified by a valid calculation program, a spot check of verified calculation programs, and/or 100 percent check of all hand calculations.	☑ YES ☐ NO
The dose rates on the container data sheets are technically reasonable and reported in the proper units and correct number of significant figures.	☑ YES ☐ NO
The data has been checked for transcription errors between the container data sheets and the conversion records.	☑ YES ☐ NO
The conversion records are complete and show:	
• Total TRU activity concentration is greater than 100 nanoCuries per gram (nCi/g).	☑ YES ☐ NO
• Operator printed name, signature, and date.	☑ YES ☐ NO

NCR-RHANL-0509-13 rev. 1
Attachment 2 pg. 6 of 8

PB 3-27-13 ~~04~~ 04A

Attachment 7 – ITR Checklist (Continued)

BDR Number: ANLRHDTC12008

Description of Criteria Reviewed	Criteria Met (Check One)
The results shown on the conversion records are technically reasonable and reported in the proper units and correct number of significant figures.	☑YES ☐NO
The BDR is complete (i.e., contains the forms listed in the table of contents) for this point of generation.	☑YES ☐NO
Any NCRs generated are contained in the testing BDR.	☑YES ☐N/A
Comments: NCR-RHANL-0509-13 is ATTAched	
ITR Approval Kevin R. Klosowski — K R Kl — 3-28-13 Printed Name — Signature — Date	

NCR-RHANL-0509-13 rev.1
Attachment 2 pg. 7of8

Attachment 7 – ITR Checklist (Continued)

BDR Number: ANLRHTDC 12008

Description of Criteria Reviewed	Criteria Met (Check One)
The results shown on the conversion records are technically reasonable and reported in the proper units and correct number of significant figures.	☑YES ☐NO
The BDR is complete (i.e., contains the forms listed in the table of contents) for this point of generation.	☑YES ☐NO
Any NCRs generated are contained in the testing BDR.	☐YES ☑N/A
Comments: N/A	
ITR Approval Kevin R. Klosowski — K. R. Kl[illegible] — 2-25-13 Printed Name — Signature — Date	

PB 3-27-13

NCR-RHANL-0509-13 rev. 1
Attachment 2 pg. 8 of 8

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Attachment 1 – CCP Nonconformance Report (NCR)

CCP NONCONFORMANCE REPORT (NCR)

(Use NCR Continuation, Attachment 2, if necessary)

NCR No. NCR- RHANL-0509-13 **Revision:** 0

1. Lot No., Heat No., or Serial No. (if applicable): NA	**2. Process (e.g., NDA, HSG, NDE, VE, Other):** RH 512 SAMPLING	**3. Batch Data Report #(s):** ANLRHDTC12008
4. Order/Work Order/Job Control Number (if applicable): NA	**5. PO # (if applicable):** NA	**Container #(s):** NA
	6. Supplier (if applicable): NA	

DESCRIPTION OF NONCONFORMANCE

7a. NCR Description: ☐ < 100 nCi/g ☐ Prohibited Item ☐ E-Flag ☐ Receipt Inspection ☐ Transportation ☐ WWIS/WDS ☑ Other

7b. Requirement(s) (Enter Implementing Procedure No., Revision, Section No., & Quoted Text): 02/27/13 LNS

CCP-TP-504, rev. 13 Section 4.4.1 states in part, "Assemble the BDR as follows... Attachment 4, Batch Data Report Cover Sheet, Attachment 5, Batch Data Report Table of Contents, Attachment 6 Batch Data Report Narrative Summary, Attachment 7 ITR Checklist .....Submit to the ITR. "

7c. Actual Condition:

The Attachment 5 Batch Data Report Table of Contents, Attachment 6 Batch Data Report Narrative Summary, and Attachment 7 ITR Checklist were all completed using the incorrect revision of CCP-TP-504.

7d. Have the CCP HOLD TAGS associated with this NCR been applied? ☐ YES ☑ NO **(If no is checked, explain:)**

See Block 24B

8. NCR Originator:

Laura Nelson — Laura Nelson — 2-27-13

printed name — signature — date

9. Does the identified condition have the potential to impact AK? ☐ YES ☑ NO ☐ INDETERMINATE

If YES or INDETERMINATE, enter Trend Code L in Block 10.

10. Trend Code: A

11. Responsible Manager: Laura Nelson

12. Significant Condition? ☐ YES ☒ NO **(If Yes, enter CAR No.:)**

13. Recurring Condition? ☐ YES ☒ NO **(If Yes, list NCRs and CARs:)**

14. CCP QA Engineer or CCP QA Designee validation:

Laura R Jones — Laura Renee Jones — 02/27/2013

printed name — signature — date

SUPERSEDED BY REV 1 04/09/2013 LNS

Attachment 1 – CCP Nonconformance Report (NCR) (Continued)

NCR No. NCR- RHANL-0509-13 **Revision:** 0

INTERIM DISPOSITION

15a. Interim Disposition (Check Only One):

☑ N/A (See Final Disposition) ☐ Hold ☐ Conditionally Accept ☐ Conditionally Use

☐ Sort ☐ Reinspect or Retest ☐ Remediate

15b. Instructions for Completion of the Interim Disposition:

INTERIM DISPOSITION APPROVALS

16a. Responsible Manager or Individual:			16b. CCP QA Engineer or CCP QA Designee:		
printed name	signature	date	printed name	signature	date
Additional Approvals:			**Additional Approvals:**		
printed name	signature	date	printed name	signature	date

COMPLETION OF INTERIM DISPOSITION

17. Interim Disposition Complete – Responsible Manager or Individual:

printed name signature date

18. Interim Disposition Verified – CCP QA Engineer:

printed name signature date

Attachment 1 – CCP Nonconformance Report (NCR) (Continued)

NCR No. NCR- RHANL-0509-13 **Revision:** 0

FINAL DISPOSITION

19. Final Disposition (Check Only One):

☐ Use-As-Is ☐ Repair

19a. Technical Justification – Required for Use-As-Is or Repair dispositions. (Enter "N/A" for Reject, Rework, and Scrap:)

NA

☐ Reject ☑ Rework ☐ Scrap

19b. Instructions for Completion – Required for Reject, Repair, Rework, or Scrap. (Enter "N/A" for Use-As-Is:)

1. Have a qualified operator re-assemble the BDR using the correct revision for the Attachment 5, 6 and 7 and superseding the attachments with the incorrect revision . Filling the attachments out as appropriate.
2. Have a qualified operator review the corrections and fill out an ITR checklist with the correct revision and sign the correct ITR checklist.
3. Have a qualified operator review the corrections and fill out and sign the Attachment 6 with the correct revision.
4. Turn the corrected BDR into records for SPM review.

19c. Corrective Actions (Actions to Prevent Recurrence – For Repair or Rework, if applicable. Enter "N/A," if not applicable, and for Use-As-Is, Reject, and Scrap):

NA

FINAL DISPOSITION APPROVALS

20. Responsible Manager or Individual:			21. CCP QA Engineer or CCP QA Designee:		
Laura Nelson	Laura Nelson	2-27-13	Laura R Jones	Laura Renee Jones	02/27/13
printed name	signature	date	printed name	signature	date
Additional Approvals:			**Additional Approvals:**		
printed name	signature	date	printed name	signature	date

CLOSURE

22. Final Disposition Complete – Responsible Manager or Individual:

printed name signature date

23. Attachments: 1-Email Documenting Reportability

24a. HOLD TAG removal has been verified and reconciled for all nonconforming items on the NCR. ☐

24b. Check if not applicable (N/A) and explain. ☑

Due to ALARA considerations NCR tagging will not be applied for this NCR. Administrative control will be applied through container entry in the CCP Data Center. In addition, a listing of containers has been posted on the CCP sftp sire identifying those containers where NCR tagging is not being applied due to ALARA. Container information for this NCR has been included in the listing which is to alert Mobile Loading Unit personnel as a second control mechanism for non-tagged containers. The current listing has been uploaded to the sftp site.

25. Final Disposition Verified – NCR Closed **CCP QA Engineer:**

printed name signature date

Jones, Laura - NWP

From: Pearcy, Mark - NWP
Sent: Wednesday, February 27, 2013 1:52 PM
To: Jones, Laura - NWP
Subject: RE: New NCR-RHANL-0509-13

Not reportable

Mark Pearcy
Central Characterization Program
Nuclear Waste Partnership LLC
Contractor for the U.S. Department of Energy
575-234-7394 (W)
575-499-7339 (C)

Nuclear Waste Partnership LLC

A URS-led partnership with B&W and AREVA

From: Jones, Laura - NWP
Sent: Wednesday, February 27, 2013 1:46 PM
To: Nelson, Laura - NWP; Joo, Irene - NWP; Reeves, Ron - NWP; Pearcy, Sheila - Stoller; Pearcy, Mark - NWP; Martin, Linda - Stoller; Punchios, Sheri - Stoller; Kantrowitz, Rich - NWP
Cc: Jones, Laura - NWP
Subject: New NCR-RHANL-0509-13

Laura/Irene/Ron – For your information.
Mark – Please review for notification purposes.
Linda – please post this open NCR.

Thanks,

Laura R. Jones
Quality Assurance NCR Coordinator
Nuclear Waste Partnership LLC
Contractor for the U.S. Department of Energy
Office: (575) 234-7244
Email: laura.jones@wipp.ws
Fax: (575) 234-7071

NCR - RHANL-0509-13 Rev. 0

Attachment 1 Page 1 of 2

Jones, Laura - NWP

From: IDC [SQLMaster@wipp.ws]
Sent: Wednesday, February 27, 2013 1:52 PM
To: Jones, Laura - NWP; Mueller, Terry - NWP; Walker, Mak (Maryann) - NWP; Morrison, Jim - NWP
Subject: Project Office NCR [NCR-RHANL0509130] was just reviewed.

Certification Manager/Designee has just reviewed the project office NCR NCR-RHANL0509130 and has indicated that it [should NOT] be reported to CBFO. IDC has already updated the NCR for you.

NCR -RHANL-0509-13 Rev. 0
Attachment 1 Page 2 of 2

For Information Only
COPY

Attachment 1 – CCP Nonconformance Report (NCR)

CCP NONCONFORMANCE REPORT (NCR)

(Use NCR Continuation, Attachment 2, if necessary)

NCR No. NCR- RHANL-0509-13 **Revision:** 1

1. Lot No., Heat No., or Serial No. (if applicable):	2. Process (e.g., NDA, HSG, NDE, VE, Other):	3. Batch Data Report #(s):
NA	RH-DTC 04/9/13 LRJ	ANLRHDTC12008
4. Order/Work Order/Job Control Number (if applicable): NA	5. PO # (if applicable): NA	Container #(s): NA
	6. Supplier (if applicable): NA	

DESCRIPTION OF NONCONFORMANCE

7a. NCR Description: ☐ < 100 nCi/g ☐ Prohibited Item ☐ E-Flag ☐ Receipt Inspection ☐ Transportation ☐ WWIS/WDS ☒ Other

7b. Requirement(s) (Enter Implementing Procedure No., Revision, Section No., & Quoted Text):

CCP-TP-504 rev. 13 Section 4.4.1 states in part, "Assemble the BDR as follows...Attachment 4, Batch Data Report Cover Sheet, Attachment 5, Batch Data Report Table of Contents, Attachment 6 Batch Data Report Narrative Summary, Attachment 7 ITR Checklist...Submit to the ITR"

7c. Actual Condition:

The Attachment 5 Batch Data Report Table of Contents, Attachment 6 Batch Data Report Narrative Summary, and the Attachment 7 ITR checklist were all completed using the incorrect revision of CCP-TP-504.

Reason for Revision 1: Correct the Process in Block 2 from RH 512 Sampling to RH DTC. 04/9/13 LRJ

7d. Have the CCP HOLD TAGS associated with this NCR been applied? ☐ YES ☒ NO (If no is checked, explain:)

See Block 24B

8. NCR Originator:

Laura Nelson (printed name) Laura Nelson (signature) 4-9-13 (date)

9. Does the identified condition have the potential to impact AK? ☐ YES ☒ NO ☐ INDETERMINATE

If YES or INDETERMINATE, enter Trend Code L in Block 10.

10. Trend Code: A

11. Responsible Manager: Laura Nelson

12. Significant Condition? ☐ YES ☒ NO (If Yes, enter CAR No.:)

13. Recurring Condition? ☐ YES ☒ NO (If Yes, list NCRs and CARs:)

14. CCP QA Engineer or CCP QA Designee validation:

Laura R. Jones (printed name) (signature) 04/9/2013 (date)

NTPC RECORDS ORIGINAL
DATE REC'D 5-21-13

Attachment 1 – CCP Nonconformance Report (NCR) (Continued)

NCR No. NCR-RHANL-0509-13 **Revision:** 1

INTERIM DISPOSITION

15a. Interim Disposition (Check Only One):

☒ N/A (See Final Disposition) ☐ Hold ☐ Conditionally Accept ☐ Conditionally Use

☐ Sort ☐ Reinspect or Retest ☐ Remediate

15b. Instructions for Completion of the Interim Disposition:

INTERIM DISPOSITION APPROVALS

16a. Responsible Manager or Individual:			16b. CCP QA Engineer or CCP QA Designee:		
printed name	signature	date	printed name	signature	date
Additional Approvals:			**Additional Approvals:**		
printed name	signature	date	printed name	signature	date

COMPLETION OF INTERIM DISPOSITION

17. Interim Disposition Complete – Responsible Manager or Individual:

printed name signature date

18. Interim Disposition Verified – CCP QA Engineer:

printed name signature date

Attachment 1 – CCP Nonconformance Report (NCR) (Continued)

NCR No. NCR-RHANL-0509-13 **Revision:** 1

FINAL DISPOSITION

19. Final Disposition (Check Only One):
☐ Use-As-Is ☐ Repair

19a. Technical Justification – Required for Use-As-Is or Repair dispositions. (Enter "N/A" for Reject, Rework, and Scrap:)

NA

4-9-13

☐ Reject ☒ Rework ☐ Scrap

19b. Instructions for Completion – Required for Reject, Repair, Rework, or Scrap. (Enter "N/A" for Use-As-Is:)

1. Have a qualified operator re-assemble the BDR using the correct revision for the Attachment 5, 6, and 7 and supersede the attachments with the incorrect revision. Filling the attachments out as appropriate.
2. Have a qualified operator review the corrections and fill out the ITR checklist with the correct revision and sign the correct ITR checklist.
3. Have a qualified operator review the corrections and fill out and sign the Attachment 6 with the correct revision.
4. Turn in the corrected BDR to records for SPM review.

19c. Corrective Actions (Actions to Prevent Recurrence – For Repair or Rework, if applicable. Enter "N/A," if not applicable, and for Use-As-Is, Reject, and Scrap):

NA

FINAL DISPOSITION APPROVALS

20. Responsible Manager or Individual:	21. CCP QA Engineer or CCP QA Designee:
Laura Nelson — printed name; Laura Nelson — signature; 4-9-13 — date	Laura R. Jones — printed name; Laura Rawson Jones — signature; 04/9/13 — date
Additional Approvals:	Additional Approvals:
printed name / signature / date	printed name / signature / date

CLOSURE

22. Final Disposition Complete – Responsible Manager or Individual:

Laura Nelson (printed name) Laura Nelson (signature) 5/9/2013 (date)

23. Attachments: Attachment 1: Email Attachment 2: BDR data

24a. HOLD TAG removal has been verified and reconciled for all nonconforming items on the NCR. ☐

24b. Check if not applicable (N/A) and explain. ☒

Due to ALARA considerations NCR tagging will not be applied for this NCR. Administrative control will be applied through container entry in this CCP Data Center. In addition a listing of containers has been posted on the CCP sftp site identifying those containers where NCR tagging is not being applied due to ALARA. Container information for this NCR has been included in the listing which is to alert Mobile Loading Unit Personnel as a second control mechanism for non-tagged containers. The current listing has been uploaded to the sftp site.

25. Final Disposition Verified – NCR Closed CCP QA Engineer:

Laura R. Jones (printed name) Laura Rawson Jones (signature) 05/14/2013 (date)

Jones, Laura - NWP

From: Pearcy, Mark - NWP
Sent: Thursday, April 11, 2013 9:30 AM
To: Jones, Laura - NWP
Subject: RE: Revised NCR-RHANL-0509-13-1

not reportable

Mark Pearcy
Central Characterization Program
Nuclear Waste Partnership LLC
Contractor for the U.S. Department of Energy
575-234-7394 (W)
575-499-7339 (C)

Nuclear Waste Partnership LLC

A URS-led partnership with B&W and AREVA

From: Jones, Laura - NWP
Sent: Tuesday, April 09, 2013 12:57 PM
To: Nelson, Laura - NWP; Joo, Irene - NWP; Kantrowitz, Rich - NWP; Pearcy, Sheila - Stoller; Pearcy, Mark - NWP; Reeves, Ron - NWP; Henry, Paulette
Cc: Jones, Laura - NWP
Subject: Revised NCR-RHANL-0509-13-1

Laura/Irene/Ron – For your information
Mark – Please review for notification determination. Section 2-work process was corrected from 512 sampling to RH-DTC.
Sheila / Paulette – Please post this open revised NCR.

Thanks,

Laura R. Jones
Quality Assurance NCR Coordinator
Nuclear Waste Partnership LLC
Contractor for the U.S. Department of Energy
Office: (575) 234-7244
Email: laura.jones@wipp.ws
Fax: (575) 234-7071

NCR -RHANL- 0509-13 Rev. 1

Attachment 1 Page 1 of 2

Jones, Laura - NWP

From:	IDC [SQLMaster@wipp.ws]
Sent:	Thursday, April 11, 2013 9:30 AM
To:	Jones, Laura - NWP; Mueller, Terry - NWP; Walker, Mak (Maryann) - NWP; Morrison, Jim - NWP
Subject:	Project Office NCR [NCR-RHANL0509131] was just reviewed.

Certification Manager/Designee has just reviewed the project office NCR NCR-RHANL0509131 and has indicated that it [should NOT] be reported to CBFO. IDC has already updated the NCR for you.

NCR - RHANL-0509-13 Rev. 1

Attachment 1 Page 2 of 2

Attachment 5 – Batch Data Report Table of Contents

BDR Number: ANLRHDTC12008

Testing Facility: ANL 331 Shell

SECTION	PAGE NUMBER
Batch Data Report Cover Sheet, Attachment 4	1
Batch Data Report Table of Contents, Attachment 5	2
Batch Data Report Narrative Summary, Attachment 6	3
ITR Checklist, Attachment 7	4
Measurement Control Report(s), Attachment 1	6
Container Data Sheet(s), Attachment 2	8
Waste Container Dose-to-Curie Conversion Record(s)	14
Gamma Spectroscopy Daily Check List and Measurement Controls, Attachment 9 (if applicable)	N/A
Evaluation of Gamma Spectroscopy results (if applicable)	N/A
Duplicate Container Data Sheet(s), Attachment 10	20
Relative Percent Difference Spreadsheet(s) (if applicable)	21
Relative Percent Difference, Attachment 12 (if applicable)	N/A
Copies of NCR(s) (if applicable)	22

NCR-RHANL-0509-13 rev. 1
Attachment 2 pg 1 of 8

02

Attachment 5 – Batch Data Report Table of Contents

BDR Number: ANLRHDTC12008

Testing Facility: ANL 331 Shell

SECTION	PAGE NUMBER
Batch Data Report Cover Sheet, Attachment 4	1
Batch Data Report Table of Contents, Attachment 5	2
Batch Data Report Narrative Summary, Attachment 6	3
ITR Checklist, Attachment 7	4
Measurement Control Report(s), Attachment 1	6
Container Data Sheet(s), Attachment 2	8
Waste Container Dose-to-Curie Conversion Record(s)	14
Gamma Spectroscopy Daily Check List and Measurement Controls, Attachment 9 (if applicable)	N/A
Evaluation of Gamma Spectroscopy results (if applicable)	N/A
Duplicate Container Data Sheet(s), Attachment 10	20
Relative Percent Difference Spreadsheet(s) (if applicable)	21
Relative Percent Difference, Attachment 12 (if applicable)	N/A
Copies of NCR(s) (if applicable)	N/A

PB 3-27-13

NCR-RHANL-0509-13 rev.1
Attachment 2 pg. 2 of 8

02A
PB 3-27-13 ~~02~~

Attachment 6 – Batch Data Report Narrative Summary

BDR Number: ANL RH DTC 12008

BDR Date: 03-28-13

Quality Control Summary:

ALL quality control measurements are within acceptable limits.

Nonconformance:

NCR-RHANL-0509-13 Attached

Comments:

ANL RH DTC 12008 reworked per NCR-RHANL-0509-13

Printed Name: F. Wesley Root

Signature and Date: F. Wesley Root, 03-28-13

NCR-RHANL-0509-13 rev. 1
Attachment 2 pg. 3 of 8

03

Attachment 6 – Batch Data Report Narrative Summary

BDR Number: ANL RH DTC 12 008

BDR Date: 2-25-13

Quality Control Summary:

ALL quality control measurements are within Acceptable Limits.

Nonconformance:

N/A

PB 3-27-13

Comments:

None

Printed Name: F. Wesley Root

Signature and Date: F. Wesley Root, 2-25-13

NCR-RHANL-0509-13 rev. 1
Attachment 2 pg 4 of 8

03A
PB 3-27-13 ~~03~~

Attachment 7 – ITR Checklist

BDR Number: ANLRHDTC12008

Description of Criteria Reviewed	Criteria Met (Check One)
ITR Checklist	
The BDR contains no more than 20 containers.	☑ YES ☐ NO
There is a container data sheet present for each of the containers listed on the BDR cover sheet and measurement control sheet(s) that covers the range of dates for each of the container data sheets.	☑ YES ☐ NO
The container data sheets and associated measurement control sheets are complete and contain:	
• Instrument calibration is satisfactory. (Accuracy)	☑ YES ☐ NO
• Instrument battery check is satisfactory.	☑ YES ☐ NO
• Instrument source check is satisfactory.	☑ YES ☐ NO
• The highest measured dose rate is at least three times greater than the measured background for each container not rejected by an NCR.	☑ YES ☐ NO
• The correct revision of the procedure was used.	☑ YES ☐ NO
• The Operator signed and dated each sheet, as applicable.	☑ YES ☐ NO
• Duplicate dose rate RPD ≤40%. (Precision)	☑ YES ☐ NO
The Quality Assurance Objectives have all been met.	☑ YES ☐ NO
Data generation and reduction were conducted in a technically correct manner in accordance with the methods used (procedure with revision).	☑ YES ☐ NO
Calculations have been verified by a valid calculation program, a spot check of verified calculation programs, and/or 100 percent check of all hand calculations.	☑ YES ☐ NO
The dose rates on the container data sheets are technically reasonable and reported in the proper units and correct number of significant figures.	☑ YES ☐ NO
The data has been checked for transcription errors between the container data sheets and the conversion records.	☑ YES ☐ NO
The conversion records are complete and show:	
• Total TRU activity concentration is greater than 100 nanoCuries per gram (nCi/g).	☑ YES ☐ NO
• Operator printed name, signature, and date.	☑ YES ☐ NO

NCR-RHANL-0509-13 rev. 1
Attachment 2 pg 5 of 8

04

Attachment 7 – ITR Checklist

BDR Number: ANLRHDTC12008

PB 3-27-13

Description of Criteria Reviewed	Criteria Met (Check One)
ITR Checklist	
The BDR contains no more than 20 containers.	☑ YES ☐ NO
There is a container data sheet present for each of the containers listed on the BDR cover sheet and measurement control sheet(s) that covers the range of dates for each of the container data sheets.	☑ YES ☐ NO
The container data sheets and associated measurement control sheets are complete and contain:	
• Instrument calibration is satisfactory. (Accuracy)	☑ YES ☐ NO
• Instrument battery check is satisfactory.	☑ YES ☐ NO
• Instrument source check is satisfactory.	☑ YES ☐ NO
• The highest measured dose rate is at least three times greater than the measured background for each container not rejected by an NCR.	☑ YES ☐ NO
• The correct revision of the procedure was used.	☑ YES ☐ NO
• The Operator signed and dated each sheet, as applicable.	☑ YES ☐ NO
• Duplicate dose rate RPD ≤40%. (Precision)	☑ YES ☐ NO
The Quality Assurance Objectives have all been met.	☑ YES ☐ NO
Data generation and reduction were conducted in a technically correct manner in accordance with the methods used (procedure with revision).	☑ YES ☐ NO
Calculations have been verified by a valid calculation program, a spot check of verified calculation programs, and/or 100 percent check of all hand calculations.	☑ YES ☐ NO
The dose rates on the container data sheets are technically reasonable and reported in the proper units and correct number of significant figures.	☑ YES ☐ NO
The data has been checked for transcription errors between the container data sheets and the conversion records.	☑ YES ☐ NO
The conversion records are complete and show:	
• Total TRU activity concentration is greater than 100 nanoCuries per gram (nCi/g).	☑ YES ☐ NO
• Operator printed name, signature, and date.	☑ YES ☐ NO

NOL-RHANL-0509-13 rev. 1
Attachment 2 pg 6 of 8

PB 3-27-13 ~~04~~ 04A

Attachment 7 – ITR Checklist (Continued)

BDR Number: ANLRHDTC12008

Description of Criteria Reviewed	Criteria Met (Check One)
The results shown on the conversion records are technically reasonable and reported in the proper units and correct number of significant figures.	☑YES ☐NO
The BDR is complete (i.e., contains the forms listed in the table of contents) for this point of generation.	☑YES ☐NO
Any NCRs generated are contained in the testing BDR.	☑YES ☐N/A
Comments: NCR-RHANL-0509-13 is ATTAched	
ITR Approval Kevin R. Klosowski — K R Kl — 3-28-13 Printed Name — Signature — Date	

NCR-RHANL-0509-13 rev.1
Attachment 2 pg. 7 of 8

05

Attachment 7 – ITR Checklist (Continued)

BDR Number: ANLRHTDC 12008

Description of Criteria Reviewed	Criteria Met (Check One)
The results shown on the conversion records are technically reasonable and reported in the proper units and correct number of significant figures.	☑YES ☐NO
The BDR is complete (i.e., contains the forms listed in the table of contents) for this point of generation.	☑YES ☐NO
Any NCRs generated are contained in the testing BDR.	☐YES ☑N/A
Comments: N/A	
ITR Approval Kevin R. Klosowski — K. R. Kl — 2-25-13 Printed Name — Signature — Date	

PB 3-27-13

NCR-RHANL-0509-13 rev. 1
Attachment 2 pg. 8 of 8

PB 3-27-13 ~~05~~ 05A

For Information Only
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Attachment 1 – CCP Nonconformance Report (NCR)

CCP NONCONFORMANCE REPORT (NCR)

(Use NCR Continuation, Attachment 2, if necessary)

NCR No. NCR- RHANL-0509-13 **Revision:** 0

1. Lot No., Heat No., or Serial No. (if applicable): NA	**2. Process (e.g., NDA, HSG, NDE, VE, Other):** RH 512 SAMPLING	**3. Batch Data Report #(s):** ANLRHDTC12008
4. Order/Work Order/Job Control Number (if applicable): NA	**5. PO # (if applicable):** NA	**Container #(s):** NA
	6. Supplier (if applicable): NA	

DESCRIPTION OF NONCONFORMANCE

7a. NCR Description: ☐ < 100 nCi/g ☐ Prohibited Item ☐ E-Flag ☐ Receipt Inspection ☐ Transportation ☐ WWIS/WDS ☑ Other

7b. Requirement(s) (Enter Implementing Procedure No., Revision, Section No., & Quoted Text): 02/27/13 LNS

CCP-TP-504, rev. 13 Section 4.4.1 states in part, "Assemble the BDR as follows... Attachment 4, Batch Data Report Cover Sheet, Attachment 5, Batch Data Report Table of Contents, Attachment 6 Batch Data Report Narrative Summary, Attachment 7 ITR Checklist .....Submit to the ITR. "

7c. Actual Condition:

The Attachment 5 Batch Data Report Table of Contents, Attachment 6 Batch Data Report Narrative Summary, and Attachment 7 ITR Checklist were all completed using the incorrect revision of CCP-TP-504.

7d. Have the CCP HOLD TAGS associated with this NCR been applied? ☐ YES ☑ NO **(If no is checked, explain:)**

See Block 24B

8. NCR Originator:

Laura Nelson — Laura Nelson — 2-27-13

printed name — signature — date

9. Does the identified condition have the potential to impact AK? ☐ YES ☑ NO ☐ INDETERMINATE

If YES or INDETERMINATE, enter Trend Code L in Block 10.

10. Trend Code: A

11. Responsible Manager: Laura Nelson

12. Significant Condition? ☐ YES ☒ NO **(If Yes, enter CAR No.:)**

13. Recurring Condition? ☐ YES ☒ NO **(If Yes, list NCRs and CARs:)**

14. CCP QA Engineer or CCP QA Designee validation:

Laura R Jones — Laura Rowen Jones — 02/27/2013

printed name — signature — date

SUPERSEDED BY REV 1 04/09/2013 LNS

Attachment 1 – CCP Nonconformance Report (NCR) (Continued)

NCR No. NCR- RHANL-0509-13 **Revision:** 0

INTERIM DISPOSITION

15a. Interim Disposition (Check Only One):

☑ N/A (See Final Disposition) ☐ Hold ☐ Conditionally Accept ☐ Conditionally Use

☐ Sort ☐ Reinspect or Retest ☐ Remediate

15b. Instructions for Completion of the Interim Disposition:

INTERIM DISPOSITION APPROVALS

16a. Responsible Manager or Individual:			**16b. CCP QA Engineer or CCP QA Designee:**		
printed name	signature	date	printed name	signature	date
Additional Approvals:			**Additional Approvals:**		
printed name	signature	date	printed name	signature	date

COMPLETION OF INTERIM DISPOSITION

17. Interim Disposition Complete – Responsible Manager or Individual:

printed name signature date

18. Interim Disposition Verified – CCP QA Engineer:

printed name signature date

Attachment 1 – CCP Nonconformance Report (NCR) (Continued)

NCR No. NCR- RHANL-0509-13 **Revision:** 0

FINAL DISPOSITION

19. Final Disposition (Check Only One):

☐ **Use-As-Is** ☐ **Repair**

19a. Technical Justification – Required for Use-As-Is or Repair dispositions. (Enter "N/A" for Reject, Rework, and Scrap:)

NA

☐ **Reject** ☑ **Rework** ☐ **Scrap**

19b. Instructions for Completion – Required for Reject, Repair, Rework, or Scrap. (Enter "N/A" for Use-As-Is:)

1. Have a qualified operator re-assemble the BDR using the correct revision for the Attachment 5, 6 and 7 and superseding the attachments with the incorrect revision . Filling the attachments out as appropriate.
2. Have a qualified operator review the corrections and fill out an ITR checklist with the correct revision and sign the correct ITR checklist.
3. Have a qualified operator review the corrections and fill out and sign the Attachment 6 with the correct revision.
4. Turn the corrected BDR into records for SPM review.

19c. Corrective Actions (Actions to Prevent Recurrence – For Repair or Rework, if applicable. Enter "N/A," if not applicable, and for Use-As-Is, Reject, and Scrap):

NA

FINAL DISPOSITION APPROVALS

20. Responsible Manager or Individual:			21. CCP QA Engineer or CCP QA Designee:		
Laura Nelson	Laura Nelson	2-27-13	Laura R Jones	Laura Rawson Jones	02/27/13
printed name	signature	date	printed name	signature	date
Additional Approvals:			**Additional Approvals:**		
printed name	signature	date	printed name	signature	date

CLOSURE

22. Final Disposition Complete – Responsible Manager or Individual:

printed name signature date

23. Attachments: 1-Email Documenting Reportability

24a. HOLD TAG removal has been verified and reconciled for all nonconforming items on the NCR. ☐

24b. Check if not applicable (N/A) and explain. ☑

Due to ALARA considerations NCR tagging will not be applied for this NCR. Administrative control will be applied through container entry in the CCP Data Center. In addition, a listing of containers has been posted on the CCP sftp site identifying those containers where NCR tagging is not being applied due to ALARA. Container information for this NCR has been included in the listing which is to alert Mobile Loading Unit personnel as a second control mechanism for non-tagged containers. The current listing has been uploaded to the sftp site.

25. Final Disposition Verified – NCR Closed **CCP QA Engineer:**

printed name signature date

Jones, Laura - NWP

From: Pearcy, Mark - NWP
Sent: Wednesday, February 27, 2013 1:52 PM
To: Jones, Laura - NWP
Subject: RE: New NCR-RHANL-0509-13

Not reportable

Mark Pearcy
Central Characterization Program
Nuclear Waste Partnership LLC
Contractor for the U.S. Department of Energy
575-234-7394 (W)
575-499-7339 (C)

Nuclear Waste Partnership LLC

A URS-led partnership with B&W and AREVA

From: Jones, Laura - NWP
Sent: Wednesday, February 27, 2013 1:46 PM
To: Nelson, Laura - NWP; Joo, Irene - NWP; Reeves, Ron - NWP; Pearcy, Sheila - Stoller; Pearcy, Mark - NWP; Martin, Linda - Stoller; Punchios, Sheri - Stoller; Kantrowitz, Rich - NWP
Cc: Jones, Laura - NWP
Subject: New NCR-RHANL-0509-13

Laura/Irene/Ron – For your information.
Mark – Please review for notification purposes.
Linda – please post this open NCR.

Thanks,

Laura R. Jones
Quality Assurance NCR Coordinator
Nuclear Waste Partnership LLC
Contractor for the U.S. Department of Energy
Office: (575) 234-7244
Email: laura.jones@wipp.ws
Fax: (575) 234-7071

NCR - RHANL-0509-13 Rev. 0

Attachment 1 Page 1 of 2

Jones, Laura - NWP

From:	IDC [SQLMaster@wipp.ws]
Sent:	Wednesday, February 27, 2013 1:52 PM
To:	Jones, Laura - NWP; Mueller, Terry - NWP; Walker, Mak (Maryann) - NWP; Morrison, Jim - NWP
Subject:	Project Office NCR [NCR-RHANL0509130] was just reviewed.

Certification Manager/Designee has just reviewed the project office NCR NCR-RHANL0509130 and has indicated that it [should NOT] be reported to CBFO. IDC has already updated the NCR for you.

NCR -RHANL-0509-15 Rev. 0

Attachment 1 Page 2 of 2

CORRECTED DURING THE AUDIT

1.0 CDA #	2.0 Audit Number:	3.0 Responsible Organization	4.0 Identified By/Date
CDA-2	A-13-24	ANL/CCP	Katie Martin 8/28/13

5.0 Description of Condition Adverse to Quality:

(Concern #2)

Three completed radiological surveys and three completed removable lid canister loading forms were not available in CCP Records during the audit.

6.0 Requirements not met (include document number, revision number, and paragraph):

CCP-QP-008, *CCP Records Management*, Rev. 21, Section 4.1.10 states, "Send completed QA records (e.g. BDRs) via Attachment 2 to the Records Custodians/Facility Records Custodians."

7.0 Actions Taken By Auditee:

During the audit, the completed radiological surveys and removable lid canister loading forms were transmitted to NTPC Records where they were received and processed.

Verified By:		Trend Cause Code:
Auditor	Date	RM-07
Katie Martin	8/28/13	

* Note: 1) All blocks are to be filled out by the audit team member who identified the deficiency.
2) Trend Cause Codes are provided in Attachment II of MP 3.2.

Audit Number: A-13-24 Date: Aug. 27 – 29, 2013

AUDIT CONCERN FORM

AUDITOR: Katie Martin **Checklist Activity (Item No):** _____

CONCERN NO. 2

I WHAT IS THE CONCERN?:

Three completed radiological surveys and three completed removable lid canister loading forms were not available in CCP Records during the audit.

CONCERN DISCUSSED WITH WHOM?: Sheila Pearcy
Sample size 15 **Population Size** (If known) 45

II DOCUMENT REQUIREMENTS (Name, Revision, Paragraph):

CCP-QP-008, *CCP Records Management*, Rev. 21, Section 4.1.10 states, "Send completed QA records (e.g. BDRs) via Attachment 2 to the Records Custodians/Facility Records Custodians."

III CONCERN DISPOSITION:

CDA X **CAR** _____ **OBS** _____

REC _____ **Exem Prac.** _____ **NONE** _____

IV VERIFICATION OF ACTIONS TAKEN DURING THE AUDIT:

During the audit, the completed radiological surveys and removable lid canister loading forms were transmitted to NTPC Records where they were received and processed.

V If the concern is a deficiency (CAR or CDA), the ATL must answer the following questions:

1. **Does this deficiency affect waste already shipped to WIPP? Yes** _____ **NO**

   Why? Surveys were performed, the issue is with submittal of the documentation to Records. The physical waste is unaffected.

2. **Does this deficiency affect waste that the site is currently certified to ship? Yes** _____ **NO**

   Why? Surveys were performed, the issue is with submittal of the documentation to Records. The physical waste is unaffected.

If the answer to question 1 or 2 is yes, Office of the National TRU Program (NTP) must be notified immediately.

Name of NTP person notified: N/A

Time and Date of notification: _____ _____

The information contained on this form is preliminary. All concerns are subject to final review and validation by the Carlsbad Field Office.

Attachment 1 – RLC Loading Form Page 1 of 1

RLC Inspection

RLC Canister ID: AE0132
RLC Serial Number: 110097

Filter Type Number	Filter Serial Numbers	Date Filter Installed
1 NUCFil-019 DS	1 DL-467	1 8·29·12
2	2 N/A	2
3	3	3
4	4	4

Pintle Cap Screws
Torque Wrench Serial Number: N/A Cal Due Date: N/A

Filters/Pipe Plugs
Torque Wrench Serial Number: XC00066 Cal Due Date: 11·11·12

Maintenance/Inspections Complete
Canister Loading Operator
Printed Name Brandon Rigby Signature [signature] Date 8·29·12

Dunnage Container is empty? YES ☐ NO ☐ NA ☒

Dunnage Container is dry? YES ☐ NO ☐ NA ☒

Dunnage Container vent port plug removed? YES ☐ NO ☐ NA ☒

Dunnage Container Weight in pounds (lbs) : N/a

COPY

RH Waste Container Numbers	Operator Initials	Peer Verifier Initials
1129	BR	[signature]
1128	BR	[signature]
1127	BR	[signature]

Peer Verifier – Waste containers loaded into RLC match RH Waste Container Numbers listed above.
Printed Name Mike Tyson Signature [signature] Date 8·29·12

RLC Closure Date: 8·29·12

Gross Weight in pounds (lbs) : 1510
Load Cell Serial Number: XC0525 Calibration Due Date: 1·28·13

Canister Loading Operator 158842
Printed Name ~~XC0~~ Brandon Rigby Signature [signature] Date 8·29·12

Supervisor
Printed Name Brandon Rigby Signature [signature] Date 8·29·12

NTPC RECORDS ORIGINAL
DATE REC'D 8/28/13

Attachment 8 – SPM Checklist

BDR Number: ANLRHDTC12008

Description of Criteria Reviewed	Criteria Met (Check One)
The Independent Technical Review has been completed and signed.	☑ YES ☐ NO
The results are technically reasonable.	☑ YES ☐ NO
The data have been checked for transcription errors.	☑ YES ☐ NO
Instrument calibration is satisfactory. (Accuracy)	☑ YES ☐ NO
Instrument source check is satisfactory.	☑ YES ☐ NO
Dose rate duplicate RPD ≤40%.	☑ YES ☐ NO
The highest dose rate was at least three times the measured background for each container not rejected by an NCR.	☑ YES ☐ NO
The correct revision of the procedure was used.	☑ YES ☐ NO
The BDR is complete (i.e., contains the forms listed in the table of contents) for this point of generation.	☑ YES ☐ NO
Data meet all applicable Quality Assurance Objectives (QAOs).	☑ YES ☐ NO
Any NCRs generated are contained in the testing BDR.	☑ YES ☐ NO ☐ N/A

Comments:

NCR-RHANL-0509-13
The signatures on the Attachment 1 for 10/10/12 was incorrectly entered as the calibration date for the probe. However the operator caught the mistake and corrected it ~~the same day~~.

SPM Approval

Printed Name	Signature	Date
Laura Nelson	Laura Nelson	4-11-13
Richard Kantrowitz new page 22	RM Kantrowitz	8/28/13

COPY

Attachment 4 – Batch Data Report Cover Sheet

Site ID: RHANL	BDR Number: ANLRHDTC12008
	Waste Container ID Number:
1	1138
2	1147
3	1149
4	1157
5	1158
6	1159
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	

WR 2-25-13

NTPC RECORDS ORIGINAL
DATE REC'D 2.26.13

01

Attachment 5 – Batch Data Report Table of Contents

BDR Number: ANLRHDTC12008

Testing Facility: ANL 331 Shell

SECTION	PAGE NUMBER
Batch Data Report Cover Sheet, Attachment 4	1
Batch Data Report Table of Contents, Attachment 5	2
Batch Data Report Narrative Summary, Attachment 6	3
ITR Checklist, Attachment 7	4
Measurement Control Report(s), Attachment 1	6
Container Data Sheet(s), Attachment 2	8
Waste Container Dose-to-Curie Conversion Record(s)	14
Gamma Spectroscopy Daily Check List and Measurement Controls, Attachment 9 (if applicable)	N/A
Evaluation of Gamma Spectroscopy results (if applicable)	N/A
Duplicate Container Data Sheet(s), Attachment 10	20
Relative Percent Difference Spreadsheet(s) (if applicable)	21
Relative Percent Difference, Attachment 12 (if applicable)	N/A
Copies of NCR(s) (if applicable)	22

Attachment 5 – Batch Data Report Table of Contents

BDR Number: ANLRHDTC12008

Testing Facility: ANL 331 Shell

SECTION	PAGE NUMBER
Batch Data Report Cover Sheet, Attachment 4	1
Batch Data Report Table of Contents, Attachment 5	2
Batch Data Report Narrative Summary, Attachment 6	3
ITR Checklist, Attachment 7	4
Measurement Control Report(s), Attachment 1	6
Container Data Sheet(s), Attachment 2	8
Waste Container Dose-to-Curie Conversion Record(s)	14
Gamma Spectroscopy Daily Check List and Measurement Controls, Attachment 9 (if applicable)	N/A
Evaluation of Gamma Spectroscopy results (if applicable)	N/A
Duplicate Container Data Sheet(s), Attachment 10	20
Relative Percent Difference Spreadsheet(s) (if applicable)	21
Relative Percent Difference, Attachment 12 (if applicable)	N/A
Copies of NCR(s) (if applicable)	N/A

PB 3-27-13

02A

PB 3-27-13 ~~02~~

Attachment 6 – Batch Data Report Narrative Summary

BDR Number: ANL RH DTC 12008

BDR Date: 03-28-13

Quality Control Summary:

ALL quality control measurements are within Acceptable Limits.

Nonconformance:

NCR-RHANL-0509-13 Attached

Comments:

ANL RH DTC 12008 Reworked per NCR-RHANL-0509-13

Printed Name: F. Wesley Root

Signature and Date: F. Wesley Root, 03-28-13

Attachment 6 – Batch Data Report Narrative Summary

BDR Number: ANL RH DTC 12 008

BDR Date: 2-25-13

Quality Control Summary:

ALL quality control measurements are within Acceptable Limits.

Nonconformance:

N/A

Comments:

None

PB 3-27-13

Printed Name: F. Wesley Root

Signature and Date: F. Wesley Root, 2-25-13

03A
PB 3-27-13 ~~03~~

Attachment 7 – ITR Checklist

BDR Number: 4NLRHDTC12008

Description of Criteria Reviewed	Criteria Met (Check One)
ITR Checklist	
The BDR contains no more than 20 containers.	☑ YES ☐ NO
There is a container data sheet present for each of the containers listed on the BDR cover sheet and measurement control sheet(s) that covers the range of dates for each of the container data sheets.	☑ YES ☐ NO
The container data sheets and associated measurement control sheets are complete and contain:	
• Instrument calibration is satisfactory. (Accuracy)	☑ YES ☐ NO
• Instrument battery check is satisfactory.	☑ YES ☐ NO
• Instrument source check is satisfactory.	☑ YES ☐ NO
• The highest measured dose rate is at least three times greater than the measured background for each container not rejected by an NCR.	☑ YES ☐ NO
• The correct revision of the procedure was used.	☑ YES ☐ NO
• The Operator signed and dated each sheet, as applicable.	☑ YES ☐ NO
• Duplicate dose rate RPD ≤40%. (Precision)	☑ YES ☐ NO
The Quality Assurance Objectives have all been met.	☑ YES ☐ NO
Data generation and reduction were conducted in a technically correct manner in accordance with the methods used (procedure with revision).	☑ YES ☐ NO
Calculations have been verified by a valid calculation program, a spot check of verified calculation programs, and/or 100 percent check of all hand calculations.	☑ YES ☐ NO
The dose rates on the container data sheets are technically reasonable and reported in the proper units and correct number of significant figures.	☑ YES ☐ NO
The data has been checked for transcription errors between the container data sheets and the conversion records.	☑ YES ☐ NO
The conversion records are complete and show:	
• Total TRU activity concentration is greater than 100 nanoCuries per gram (nCi/g).	☑ YES ☐ NO
• Operator printed name, signature, and date.	☑ YES ☐ NO

PB 3-27-13

Attachment 7 – ITR Checklist

BDR Number: ANLRHDTC12008

Description of Criteria Reviewed	Criteria Met (Check One)
ITR Checklist	
The BDR contains no more than 20 containers.	☑ YES ☐ NO
There is a container data sheet present for each of the containers listed on the BDR cover sheet and measurement control sheet(s) that covers the range of dates for each of the container data sheets.	☑ YES ☐ NO
The container data sheets and associated measurement control sheets are complete and contain:	
• Instrument calibration is satisfactory. (Accuracy)	☑ YES ☐ NO
• Instrument battery check is satisfactory.	☑ YES ☐ NO
• Instrument source check is satisfactory.	☑ YES ☐ NO
• The highest measured dose rate is at least three times greater than the measured background for each container not rejected by an NCR.	☑ YES ☐ NO
• The correct revision of the procedure was used.	☑ YES ☐ NO
• The Operator signed and dated each sheet, as applicable.	☑ YES ☐ NO
• Duplicate dose rate RPD ≤40%. (Precision)	☑ YES ☐ NO
The Quality Assurance Objectives have all been met.	☑ YES ☐ NO
Data generation and reduction were conducted in a technically correct manner in accordance with the methods used (procedure with revision).	☑ YES ☐ NO
Calculations have been verified by a valid calculation program, a spot check of verified calculation programs, and/or 100 percent check of all hand calculations.	☑ YES ☐ NO
The dose rates on the container data sheets are technically reasonable and reported in the proper units and correct number of significant figures.	☑ YES ☐ NO
The data has been checked for transcription errors between the container data sheets and the conversion records.	☑ YES ☐ NO
The conversion records are complete and show:	
• Total TRU activity concentration is greater than 100 nanoCuries per gram (nCi/g).	☑ YES ☐ NO
• Operator printed name, signature, and date.	☑ YES ☐ NO

04A
PB 3-27-13 ~~04~~

Attachment 7 – ITR Checklist (Continued)

BDR Number: ANLRHDTC12008

Description of Criteria Reviewed	Criteria Met (Check One)
The results shown on the conversion records are technically reasonable and reported in the proper units and correct number of significant figures.	☑YES ☐NO
The BDR is complete (i.e., contains the forms listed in the table of contents) for this point of generation.	☑YES ☐NO
Any NCRs generated are contained in the testing BDR.	☑YES ☐N/A
Comments: NCR-RHANL-0509-13 is ATTAched	
ITR Approval Kevin R. Klosowski — K. R. Klosowski — 3-28-13 Printed Name — Signature — Date	

05

Attachment 7 – ITR Checklist (Continued)

BDR Number: ANLRHTDC 12008

Description of Criteria Reviewed	Criteria Met (Check One)
The results shown on the conversion records are technically reasonable and reported in the proper units and correct number of significant figures.	☑YES ☐NO
The BDR is complete (i.e., contains the forms listed in the table of contents) for this point of generation.	☑YES ☐NO
Any NCRs generated are contained in the testing BDR.	☐YES ☑N/A
Comments: N/A	
ITR Approval Kevin R. Klosowski — K. R. Kl[illegible] — 2-25-13 Printed Name — Signature — Date	

PB 3-27-13

05A
PB 3-27-13 ~~05~~

Attachment 1 – Measurement Control Report

BDR Number: ANLRHDTC12008

DATE:	8-29-12		
Scale ID.:	XC0407		
Scale Calibration Due Date:	10-17-12		
Scale Error:	±0.5 Kg		
Scale Check Acceptable:	(YES)	NO	
Instrument No.:	XC0433		
Instrument Calibration Due Date:	12-29-2012		
Probe No.:	XC0434		
Probe Calibration Due Date:	12-29-2012		
	Value	Acceptance Range	
Source Check Reference Value for LD probe or low range for FHZ 612 (mR/hr)	204	-20% 163	+20% 245
Source Check Reference Value for BM probe or high range for FHZ 612 (mR/hr)	NA	-20% NA	+20% NA
Battery Check	(YES)	NO	
Measured Daily Source Check Dose Rate Value for LD probe or low range for FHZ 612 (mR/hr)	206		
Daily Source Check for LD probe or low range for FHZ 612 Acceptable:	(YES)	NO	
Measured Daily Source Check Dose Rate Value for BM probe or high range for FHZ 612 (mR/hr)	NA		
Daily Source Check for BM probe or high range for FHZ 612 Acceptable	YES	NA	NO

Monterry Harris Monterry Harris 8-29-12
Printed Name Signature Date

06

Attachment 1 – Measurement Control Report

BDR Number: ANLRHDTC12008

DATE:	10-16-12		
Scale ID.:	XC0407		
Scale Calibration Due Date:	10-17-12		
Scale Error:	±0.5KG		
Scale Check Acceptable:	(YES)	NO	
Instrument No.:	XC0433		
Instrument Calibration Due Date:	12-29-12		
Probe No.:	XC0434		
Probe Calibration Due Date:	12-29-12		
	Value	Acceptance Range	
Source Check Reference Value for LD probe or low range for FHZ 612 (mR/hr)	204	-20% 163	+20% 245
Source Check Reference Value for BM probe or high range for FHZ 612 (mR/hr)	N/A	-20% N/A	+20% N/A
Battery Check	(YES)	NO	
Measured Daily Source Check Dose Rate Value for LD probe or low range for FHZ 612 (mR/hr)	202		
Daily Source Check for LD probe or low range for FHZ 612 Acceptable:	(YES)	NO	
Measured Daily Source Check Dose Rate Value for BM probe or high range for FHZ 612 (mR/hr)	N/A		
Daily Source Check for BM probe or high range for FHZ 612 Acceptable	YES N/A	NO	

Printed Name	Signature	Date
Pat Beallis	Pat Beallis	10-16-12 PB 10-16-12 ~~12-29-12~~

07

Attachment 2 – Container Data Sheet

BDR Number: ANLRHDTC12008

Date:	8-29-12
Container No.:	1138
Probe Position:	30 Gallon
Instrument No.:	XC0433
Probe No.:	XC0434
Measured Background Dose Rate (mR/hr):	6
Gross Weight (kg):	51.6
Dose Rate 1 (mR/hr):	146
Dose Rate 2 (mR/hr):	109
Dose Rate 3 (mR/hr):	90
Dose Rate 4 (mR/hr):	121
Highest measured dose rate is greater than three times the measured background.	(YES) NO

Monterry Harris	Monterry Harris	8-29-12
Printed Name	Signature	Date

08

Attachment 2 – Container Data Sheet

BDR Number: ANLRHDTC12008

Date:	8-29-12
Container No.:	1147
Probe Position:	30 gallon
Instrument No.:	XC0433
Probe No.:	XC0434
Measured Background Dose Rate (mR/hr):	6
Gross Weight (kg):	75.0
Dose Rate 1 (mR/hr):	154
Dose Rate 2 (mR/hr):	138
Dose Rate 3 (mR/hr):	72
Dose Rate 4 (mR/hr):	83
Highest measured dose rate is greater than three times the measured background.	(YES) NO

Printed Name	Signature	Date
Pat Beallis	Pat Beallis	8-29-12

09

Attachment 2 – Container Data Sheet

BDR Number: ANLRHDTC12008

Date:	8-29-12
Container No.:	1149
Probe Position:	30gallon
Instrument No.:	XC0433
Probe No.:	XC0434
Measured Background Dose Rate (mR/hr):	6
Gross Weight (kg):	53.4
Dose Rate 1 (mR/hr):	140
Dose Rate 2 (mR/hr):	130
Dose Rate 3 (mR/hr):	117
Dose Rate 4 (mR/hr):	122
Highest measured dose rate is greater than three times the measured background.	(YES) NO

Pat Beallis	Pat Beallis	8-29-12
Printed Name	Signature	Date

Attachment 2 – Container Data Sheet

BDR Number: ANLRHDTC12008

Date:	10-16-12
Container No.:	1157
Probe Position:	30gallon
Instrument No.:	XC0433
Probe No.:	XC0434
Measured Background Dose Rate (mR/hr):	1
Gross Weight (kg):	67.4
Dose Rate 1 (mR/hr):	62
Dose Rate 2 (mR/hr):	136
Dose Rate 3 (mR/hr):	169
Dose Rate 4 (mR/hr):	109
Highest measured dose rate is greater than three times the measured background.	(YES) NO

Pat Beallis	Pat Beallis	10-16-12
Printed Name	Signature	Date

Attachment 2 – Container Data Sheet

BDR Number: ANLRHDTC12008

Date:	10-16-12
Container No.:	1158
Probe Position:	30gallon
Instrument No.:	XC0433
Probe No.:	XC0434
Measured Background Dose Rate (mR/hr):	1
Gross Weight (kg):	82.6
Dose Rate 1 (mR/hr):	62
Dose Rate 2 (mR/hr):	54
Dose Rate 3 (mR/hr):	21
Dose Rate 4 (mR/hr):	25
Highest measured dose rate is greater than three times the measured background.	(YES) NO

Pat Beallis	Pat Beallis	10-16-12
Printed Name	Signature	Date

12

Attachment 2 – Container Data Sheet

BDR Number: ANLRHDTC12008

Date:	10-16-12
Container No.:	1159
Probe Position:	30gallon
Instrument No.:	XC0433
Probe No.:	XC0434
Measured Background Dose Rate (mR/hr):	1
Gross Weight (kg):	57.4
Dose Rate 1 (mR/hr):	32
Dose Rate 2 (mR/hr):	34
Dose Rate 3 (mR/hr):	30
Dose Rate 4 (mR/hr):	26
Highest measured dose rate is greater than three times the measured background.	(YES) NO

Printed Name	Signature	Date
Pat Beallis	Pat Beallis	10-16-12

Waste Container Dose-to-Curie Conversion Record

SCO 697 AERHDM Dose-to-Curie Spreadsheet Rev. 2 Addendum 3 Microsoft Excel 2003 and 2007; Microsoft Windows XP Professional 2002 and 2003

Operating Procedure		CCP-TP-504 Rev.12		
Date of Survey		8/29/2012		
Waste Stream Designation		AERHDM		
Container Number		1138		
Container Gross Weight		51.6	kg	
Waste Cans	Can #1	Can #2	Can #3	
Can Sizes	7	7		gallons
Estimate Fill Percentages	90	90		%
Container Net Weight		28.1		
Measured Container Dose Rate				Background
Quadrant #1		146	mR/hr	6 mR/hr
Quadrant #2		109	mR/hr	
Quadrant #3		90	mR/hr	
Quadrant #4		121	mR/hr	
Average Dose Rate Minus Background		110.5	mR/hr	

Nuclide	Curie Scaling Factors	Activity (Ci)	Grams	FGE	PECi	Watts	Uncertainty	Uncertainty in Curies	Uncertainty in Grams
U-233	2.59E-09	1.81E-09	1.85E-07	1.66E-07	4.63E-10	5.25E-11	80.68%	1.46E-09	1.49E-07
U-234	6.48E-05	4.52E-05	7.15E-03	0.00E+00	0.00E+00	1.30E-06	59.35%	2.68E-05	4.24E-03
U-235	1.99E-06	1.38E-06	6.31E-01	4.06E-01	0.00E+00	3.81E-08	64.07%	8.86E-07	4.04E-01
U-238	2.32E-06	1.62E-06	4.76E+00	0.00E+00	0.00E+00	4.10E-08	49.82%	8.06E-07	2.37E+00
Pu-238	5.70E-02	3.97E-02	2.29E-03	2.59E-04	3.61E-02	1.31E-03	59.46%	2.36E-02	1.36E-03
Pu-239	1.80E-02	1.25E-02	1.99E-01	1.99E-01	1.25E-02	3.88E-04	78.42%	9.82E-03	1.56E-01
Pu-240	1.23E-02	8.59E-03	3.74E-02	8.41E-04	8.59E-03	2.68E-04	74.86%	6.43E-03	2.80E-02
Pu-241	8.11E-01	5.65E-01	5.43E-03	1.22E-02	1.11E-02	1.80E-05	54.29%	3.07E-01	2.95E-03
Pu-242	3.01E-05	2.09E-05	5.28E-03	3.96E-05	1.90E-05	6.17E-07	55.16%	1.16E-05	2.91E-03
Am-241	3.11E-02	2.17E-02	6.24E-03	1.17E-04	2.17E-02	7.24E-04	68.89%	1.49E-02	4.30E-03
Cs-137	1.00E+00	6.96E-01	7.91E-03	0.00E+00	0.00E+00	7.71E-04	29.09%	2.03E-01	2.30E-03
Ba-137m	9.46E-01	6.59E-01	1.22E-09	0.00E+00	0.00E+00	2.60E-03	29.09%	1.92E-01	3.56E-10
Sr-90	6.40E-01	4.45E-01	3.23E-03	0.00E+00	0.00E+00	5.16E-04	31.26%	1.39E-01	1.01E-03
Y-90	6.40E-01	4.45E-01	8.19E-07	0.00E+00	0.00E+00	2.46E-03	31.26%	1.39E-01	2.56E-07
Totals		2.89E+00	5.66E+00	6.18E-01	8.99E-02	9.06E-03			

	Value	(one Sigma)	
TRU Alpha Activity Concentration	2.94E+03	1.28E+03	nCi/g
TRU Alpha Activity	8.25E-02	3.61E-02	Ci
Total Pu-239 Equiv Activity	8.99E-02	3.69E-02	Ci
Total Pu-239 Fissile Gram Equiv	6.18E-01	3.27E-01	g
Total Decay Heat	9.06E-03	2.84E-03	W
Volume Activity	2.55E-02	7.81E-03	Ci/L

Originator Pat Beallis (Print Name)

Signed Pat Beallis Date 08-30-12

Waste Container Dose-to-Curie Conversion Record

SCO 697 AERHDM Dose-to-Curie Spreadsheet Rev. 2 Addendum 3 Microsoft Excel 2003 and 2007; Microsoft Windows XP Professional 2002 and 2003

Operating Procedure		CCP-TP-504 Rev.12		
Date of Survey		8/29/2012		
Waste Stream Designation		AERHDM		
Container Number		1147		
Container Gross Weight		75	kg	
Waste Cans	Can #1	Can #2	Can #3	
Can Sizes	7	7		gallons
Estimate Fill Percentages	90	90		%
Container Net Weight		51.5		
Measured Container Dose Rate				Background
Quadrant #1		154	mR/hr	6 mR/hr
Quadrant #2		138	mR/hr	
Quadrant #3		72	mR/hr	
Quadrant #4		83	mR/hr	
Average Dose Rate Minus Background		105.75	mR/hr	

Nuclide	Curie Scaling Factors	Activity (Ci)	Grams	FGE	PECi	Watts	Uncertainty	Uncertainty in Curies	Uncertainty in Grams
U-233	2.59E-09	2.16E-09	2.22E-07	1.99E-07	5.55E-10	6.29E-11	82.55%	1.79E-09	1.83E-07
U-234	6.48E-05	5.41E-05	8.56E-03	0.00E+00	0.00E+00	1.56E-06	61.87%	3.35E-05	5.30E-03
U-235	1.99E-06	1.66E-06	7.56E-01	4.86E-01	0.00E+00	4.57E-08	66.41%	1.10E-06	5.02E-01
U-238	2.32E-06	1.94E-06	5.70E+00	0.00E+00	0.00E+00	4.91E-08	52.81%	1.02E-06	3.01E+00
Pu-238	5.70E-02	4.76E-02	2.75E-03	3.11E-04	4.32E-02	1.57E-03	61.98%	2.95E-02	1.70E-03
Pu-239	1.80E-02	1.50E-02	2.38E-01	2.38E-01	1.50E-02	4.65E-04	80.34%	1.21E-02	1.92E-01
Pu-240	1.23E-02	1.03E-02	4.48E-02	1.01E-03	1.03E-02	3.21E-04	76.87%	7.92E-03	3.44E-02
Pu-241	8.11E-01	6.76E-01	6.50E-03	1.46E-02	1.33E-02	2.15E-05	57.04%	3.86E-01	3.71E-03
Pu-242	3.01E-05	2.51E-05	6.32E-03	4.74E-05	2.28E-05	7.40E-07	57.87%	1.45E-05	3.66E-03
Am-241	3.11E-02	2.60E-02	7.48E-03	1.40E-04	2.60E-02	8.68E-04	71.08%	1.85E-02	5.32E-03
Cs-137	1.00E+00	8.34E-01	9.48E-03	0.00E+00	0.00E+00	9.24E-04	33.95%	2.83E-01	3.22E-03
Ba-137m	9.46E-01	7.89E-01	1.47E-09	0.00E+00	0.00E+00	3.11E-03	33.95%	2.68E-01	4.98E-10
Sr-90	6.40E-01	5.34E-01	3.87E-03	0.00E+00	0.00E+00	6.19E-04	35.83%	1.91E-01	1.39E-03
Y-90	6.40E-01	5.34E-01	9.81E-07	0.00E+00	0.00E+00	2.95E-03	35.83%	1.91E-01	3.51E-07
Totals		3.47E+00	6.78E+00	7.41E-01	1.08E-01	1.09E-02			

	Value	(one Sigma)	
TRU Alpha Activity Concentration	1.92E+03	9.04E+02	nCi/g
TRU Alpha Activity	9.88E-02	4.65E-02	Ci
Total Pu-239 Equiv Activity	1.08E-01	4.81E-02	Ci
Total Pu-239 Fissile Gram Equiv	7.41E-01	4.13E-01	g
Total Decay Heat	1.09E-02	3.92E-03	W
Volume Activity	3.05E-02	1.08E-02	Ci/L

Originator Pat Beallis (Print Name)

Signed Pat Beallis Date 08-30-12

Waste Container Dose-to-Curie Conversion Record

SCO 697 AERHDM Dose-to-Curie Spreadsheet Rev. 2 Addendum 3 Microsoft Excel 2003 and 2007; Microsoft Windows XP Professional 2002 and 2003

Operating Procedure		CCP-TP-504 Rev.12		
Date of Survey		8/29/2012		
Waste Stream Designation		AERHDM		
Container Number		1149		
Container Gross Weight		53.4	kg	
Waste Cans	Can #1	Can #2	Can #3	
Can Sizes	7	7		gallons
Estimate Fill Percentages	90	90		%
Container Net Weight		29.9		

Measured Container Dose Rate			Background	
Quadrant #1	140	mR/hr	6	mR/hr
Quadrant #2	130	mR/hr		
Quadrant #3	117	mR/hr		
Quadrant #4	122	mR/hr		
Average Dose Rate Minus Background	121.25	mR/hr		

Nuclide	Curie Scaling Factors	Activity (Ci)	Grams	FGE	PECi	Watts	Uncertainty	Uncertainty in Curies	Uncertainty in Grams
U-233	2.59E-09	2.01E-09	2.06E-07	1.86E-07	5.17E-10	5.86E-11	80.78%	1.63E-09	1.67E-07
U-234	6.48E-05	5.04E-05	7.97E-03	0.00E+00	0.00E+00	1.45E-06	59.48%	3.00E-05	4.74E-03
U-235	1.99E-06	1.54E-06	7.05E-01	4.53E-01	0.00E+00	4.26E-08	64.19%	9.91E-07	4.52E-01
U-238	2.32E-06	1.80E-06	5.31E+00	0.00E+00	0.00E+00	4.57E-08	49.99%	9.02E-07	2.65E+00
Pu-238	5.70E-02	4.43E-02	2.56E-03	2.89E-04	4.03E-02	1.47E-03	59.59%	2.64E-02	1.53E-03
Pu-239	1.80E-02	1.40E-02	2.22E-01	2.22E-01	1.40E-02	4.33E-04	78.52%	1.10E-02	1.74E-01
Pu-240	1.23E-02	9.59E-03	4.17E-02	9.38E-04	9.59E-03	2.99E-04	74.96%	7.19E-03	3.13E-02
Pu-241	8.11E-01	6.30E-01	6.06E-03	1.36E-02	1.24E-02	2.01E-05	54.44%	3.43E-01	3.30E-03
Pu-242	3.01E-05	2.34E-05	5.89E-03	4.42E-05	2.12E-05	6.89E-07	55.31%	1.29E-05	3.26E-03
Am-241	3.11E-02	2.42E-02	6.97E-03	1.30E-04	2.42E-02	8.08E-04	69.01%	1.67E-02	4.81E-03
Cs-137	1.00E+00	7.77E-01	8.83E-03	0.00E+00	0.00E+00	8.60E-04	29.37%	2.28E-01	2.59E-03
Ba-137m	9.46E-01	7.35E-01	1.37E-09	0.00E+00	0.00E+00	2.90E-03	29.37%	2.16E-01	4.02E-10
Sr-90	6.40E-01	4.97E-01	3.60E-03	0.00E+00	0.00E+00	5.76E-04	31.52%	1.57E-01	1.14E-03
Y-90	6.40E-01	4.97E-01	9.14E-07	0.00E+00	0.00E+00	2.75E-03	31.52%	1.57E-01	2.88E-07
Totals		3.23E+00	6.32E+00	6.90E-01	1.00E-01	1.01E-02			

	Value	(one Sigma)	
TRU Alpha Activity Concentration	3.08E+03	1.35E+03	nCi/g
TRU Alpha Activity	9.21E-02	4.04E-02	Ci
Total Pu-239 Equiv Activity	1.00E-01	4.14E-02	Ci
Total Pu-239 Fissile Gram Equiv	6.90E-01	3.66E-01	g
Total Decay Heat	1.01E-02	3.20E-03	W
Volume Activity	2.84E-02	8.79E-03	Ci/L

Originator Pat Beallis (Print Name)

Signed Pat Beallis Date 08-30-12

Waste Container Dose-to-Curie Conversion Record

SCO 697 AERHDM Dose-to-Curie Spreadsheet Rev. 2 Addendum 3 Microsoft Excel 2003 and 2007; Microsoft Windows XP Professional 2002 and 2003

Operating Procedure		CCP-TP-504 Rev.13		
Date of Survey		10/16/2012		
Waste Stream Designation		AERHDM		
Container Number		1157		
Container Gross Weight		67.4	kg	
Waste Cans	Can #1	Can #2	Can #3	
Can Sizes	7	7		gallons
Estimate Fill Percentages	90	90		%
Container Net Weight		43.9		

Measured Container Dose Rate			Background	
Quadrant #1	62	mR/hr	1	mR/hr
Quadrant #2	136	mR/hr		
Quadrant #3	169	mR/hr		
Quadrant #4	109	mR/hr		
Average Dose Rate Minus Background	118	mR/hr		

Nuclide	Curie Scaling Factors	Activity (Ci)	Grams	FGE	PECi	Watts	Uncertainty	Uncertainty in Curies	Uncertainty in Grams
U-233	2.59E-09	2.24E-09	2.30E-07	2.07E-07	5.75E-10	6.52E-11	81.81%	1.83E-09	1.88E-07
U-234	6.48E-05	5.61E-05	8.87E-03	0.00E+00	0.00E+00	1.61E-06	60.88%	3.41E-05	5.40E-03
U-235	1.99E-06	1.72E-06	7.84E-01	5.04E-01	0.00E+00	4.73E-08	65.49%	1.12E-06	5.13E-01
U-238	2.32E-06	2.01E-06	5.90E+00	0.00E+00	0.00E+00	5.09E-08	51.64%	1.04E-06	3.05E+00
Pu-238	5.70E-02	4.93E-02	2.85E-03	3.22E-04	4.48E-02	1.63E-03	60.99%	3.01E-02	1.74E-03
Pu-239	1.80E-02	1.55E-02	2.47E-01	2.47E-01	1.55E-02	4.82E-04	79.58%	1.24E-02	1.97E-01
Pu-240	1.23E-02	1.07E-02	4.64E-02	1.04E-03	1.07E-02	3.32E-04	76.08%	8.12E-03	3.53E-02
Pu-241	8.11E-01	7.01E-01	6.74E-03	1.52E-02	1.37E-02	2.23E-05	55.97%	3.92E-01	3.77E-03
Pu-242	3.01E-05	2.60E-05	6.55E-03	4.91E-05	2.36E-05	7.66E-07	56.81%	1.48E-05	3.72E-03
Am-241	3.11E-02	2.69E-02	7.75E-03	1.45E-04	2.69E-02	8.99E-04	70.22%	1.89E-02	5.44E-03
Cs-137	1.00E+00	8.65E-01	9.83E-03	0.00E+00	0.00E+00	9.57E-04	32.11%	2.78E-01	3.15E-03
Ba-137m	9.46E-01	8.18E-01	1.52E-09	0.00E+00	0.00E+00	3.22E-03	32.11%	2.63E-01	4.88E-10
Sr-90	6.40E-01	5.53E-01	4.01E-03	0.00E+00	0.00E+00	6.41E-04	34.09%	1.89E-01	1.37E-03
Y-90	6.40E-01	5.53E-01	1.02E-06	0.00E+00	0.00E+00	3.06E-03	34.09%	1.89E-01	3.47E-07
Totals		3.59E+00	7.03E+00	7.68E-01	1.12E-01	1.13E-02			

	Value	(one Sigma)	
TRU Alpha Activity Concentration	2.33E+03	1.07E+03	nCi/g
TRU Alpha Activity	1.02E-01	4.69E-02	Ci
Total Pu-239 Equiv Activity	1.12E-01	4.83E-02	Ci
Total Pu-239 Fissile Gram Equiv	7.68E-01	4.19E-01	g
Total Decay Heat	1.13E-02	3.86E-03	W
Volume Activity	3.16E-02	1.06E-02	Ci/L

Originator Pat Beallis (Print Name)

Signed Pat Beallis Date 02-25-13

Waste Container Dose-to-Curie Conversion Record

SCO 697 AERHDM Dose-to-Curie Spreadsheet Rev. 2 Addendum 3 Microsoft Excel 2003 and 2007; Microsoft Windows XP Professional 2002 and 2003

Operating Procedure		CCP-TP-504 Rev.13		
Date of Survey		10/16/2012		
Waste Stream Designation		AERHDM		
Container Number		1158		
Container Gross Weight		82.6	kg	
Waste Cans	Can #1	Can #2	Can #3	
Can Sizes	7	7		gallons
Estimate Fill Percentages	70	90		%
Container Net Weight		59.1		
Measured Container Dose Rate				Background
Quadrant #1		62	mR/hr	1 mR/hr
Quadrant #2		54	mR/hr	
Quadrant #3		21	mR/hr	
Quadrant #4		25	mR/hr	
Average Dose Rate Minus Background		39.5	mR/hr	

Nuclide	Curie Scaling Factors	Activity (Ci)	Grams	FGE	PECi	Watts	Uncertainty	Uncertainty in Curies	Uncertainty in Grams
U-233	2.59E-09	9.30E-10	9.53E-08	8.58E-08	2.39E-10	2.71E-11	84.27%	7.84E-10	8.03E-08
U-234	6.48E-05	2.33E-05	3.68E-03	0.00E+00	0.00E+00	6.70E-07	64.14%	1.49E-05	2.36E-03
U-235	1.99E-06	7.13E-07	3.25E-01	2.09E-01	0.00E+00	1.97E-08	68.53%	4.88E-07	2.23E-01
U-238	2.32E-06	8.33E-07	2.45E+00	0.00E+00	0.00E+00	2.11E-08	55.45%	4.62E-07	1.36E+00
Pu-238	5.70E-02	2.05E-02	1.18E-03	1.34E-04	1.86E-02	6.77E-04	64.24%	1.31E-02	7.59E-04
Pu-239	1.80E-02	6.45E-03	1.03E-01	1.03E-01	6.45E-03	2.00E-04	82.10%	5.30E-03	8.42E-02
Pu-240	1.23E-02	4.43E-03	1.93E-02	4.33E-04	4.43E-03	1.38E-04	78.71%	3.49E-03	1.52E-02
Pu-241	8.11E-01	2.91E-01	2.80E-03	6.29E-03	5.70E-03	9.26E-06	59.50%	1.73E-01	1.66E-03
Pu-242	3.01E-05	1.08E-05	2.72E-03	2.04E-05	9.81E-06	3.18E-07	60.29%	6.51E-06	1.64E-03
Am-241	3.11E-02	1.12E-02	3.22E-03	6.02E-05	1.12E-02	3.73E-04	73.06%	8.16E-03	2.35E-03
Cs-137	1.00E+00	3.59E-01	4.08E-03	0.00E+00	0.00E+00	3.97E-04	37.93%	1.36E-01	1.55E-03
Ba-137m	9.46E-01	3.40E-01	6.31E-10	0.00E+00	0.00E+00	1.34E-03	37.93%	1.29E-01	2.39E-10
Sr-90	6.40E-01	2.30E-01	1.66E-03	0.00E+00	0.00E+00	2.66E-04	39.61%	9.09E-02	6.59E-04
Y-90	6.40E-01	2.30E-01	4.22E-07	0.00E+00	0.00E+00	1.27E-03	39.61%	9.09E-02	1.67E-07
Totals		1.49E+00	2.92E+00	3.19E-01	4.64E-02	4.67E-03			

	Value	(one Sigma)	
TRU Alpha Activity Concentration	7.19E+02	3.60E+02	nCi/g
TRU Alpha Activity	4.25E-02	2.13E-02	Ci
Total Pu-239 Equiv Activity	4.64E-02	2.21E-02	Ci
Total Pu-239 Fissile Gram Equiv	3.19E-01	1.86E-01	g
Total Decay Heat	4.67E-03	1.87E-03	W
Volume Activity	1.31E-02	5.14E-03	Ci/L

Originator Pat Beallis (Print Name)

Signed Pat Beallis Date 10-16-12

Waste Container Dose-to-Curie Conversion Record

SCO 697 AERHDM Dose-to-Curie Spreadsheet Rev. 2 Addendum 3 Microsoft Excel 2003 and 2007; Microsoft Windows XP Professional 2002 and 2003

Operating Procedure		CCP-TP-504 Rev.13		
Date of Survey		10/16/2012		
Waste Stream Designation		AERHDM		
Container Number		1159		
Container Gross Weight		57.4	kg	
Waste Cans	Can #1	Can #2	Can #3	
Can Sizes	7	7		gallons
Estimate Fill Percentages	90	90		%
Container Net Weight		33.9		
Measured Container Dose Rate				Background
Quadrant #1		32	mR/hr	1 mR/hr
Quadrant #2		34	mR/hr	
Quadrant #3		30	mR/hr	
Quadrant #4		26	mR/hr	
Average Dose Rate Minus Background		29.5	mR/hr	

Nuclide	Curie Scaling Factors	Activity (Ci)	Grams	FGE	PECi	Watts	Uncertainty	Uncertainty in Curies	Uncertainty in Grams
U-233	2.59E-09	5.09E-10	5.22E-08	4.69E-08	1.31E-10	1.48E-11	81.03%	4.12E-10	4.23E-08
U-234	6.48E-05	1.27E-05	2.01E-03	0.00E+00	0.00E+00	3.67E-07	59.83%	7.62E-06	1.21E-03
U-235	1.99E-06	3.90E-07	1.78E-01	1.14E-01	0.00E+00	1.08E-08	64.51%	2.52E-07	1.15E-01
U-238	2.32E-06	4.56E-07	1.34E+00	0.00E+00	0.00E+00	1.16E-08	50.39%	2.30E-07	6.76E-01
Pu-238	5.70E-02	1.12E-02	6.47E-04	7.31E-05	1.02E-02	3.71E-04	59.94%	6.71E-03	3.88E-04
Pu-239	1.80E-02	3.53E-03	5.61E-02	5.61E-02	3.53E-03	1.09E-04	78.78%	2.78E-03	4.42E-02
Pu-240	1.23E-02	2.42E-03	1.05E-02	2.37E-04	2.42E-03	7.54E-05	75.24%	1.82E-03	7.93E-03
Pu-241	8.11E-01	1.59E-01	1.53E-03	3.44E-03	3.12E-03	5.07E-06	54.82%	8.73E-02	8.39E-04
Pu-242	3.01E-05	5.91E-06	1.49E-03	1.12E-05	5.37E-06	1.74E-07	55.68%	3.29E-06	8.28E-04
Am-241	3.11E-02	6.11E-03	1.76E-03	3.29E-05	6.11E-03	2.04E-04	69.31%	4.23E-03	1.22E-03
Cs-137	1.00E+00	1.96E-01	2.23E-03	0.00E+00	0.00E+00	2.17E-04	30.06%	5.90E-02	6.71E-04
Ba-137m	9.46E-01	1.86E-01	3.45E-10	0.00E+00	0.00E+00	7.32E-04	30.06%	5.58E-02	1.04E-10
Sr-90	6.40E-01	1.26E-01	9.10E-04	0.00E+00	0.00E+00	1.46E-04	32.16%	4.04E-02	2.93E-04
Y-90	6.40E-01	1.26E-01	2.31E-07	0.00E+00	0.00E+00	6.95E-04	32.16%	4.04E-02	7.43E-08
Totals		8.16E-01	1.60E+00	1.74E-01	2.54E-02	2.56E-03			

	Value	(one Sigma)	
TRU Alpha Activity Concentration	6.86E+02	3.04E+02	nCi/g
TRU Alpha Activity	2.33E-02	1.03E-02	Ci
Total Pu-239 Equiv Activity	2.54E-02	1.06E-02	Ci
Total Pu-239 Fissile Gram Equiv	1.74E-01	9.32E-02	g
Total Decay Heat	2.56E-03	8.25E-04	W
Volume Activity	7.19E-03	2.27E-03	Ci/L

Originator Pat Beallis (Print Name)

Signed Pat Beallis Date 10-16-12

Attachment 10 – Duplicate Container Data Sheet

BDR Number: ANLRHDTC12008

Date:	8-29-12
Container No.:	1138
Probe Position:	30gallon
Instrument No.:	XC0433
Probe No.:	XC0434
Dose Rate 1 (mR/hr):	143
Dose Rate 2 (mR/hr):	109
Dose Rate 3 (mR/hr):	88
Dose Rate 4 (mR/hr):	122

Pat Beallis	Pat Beallis	08-29-12
Printed Name	Signature	Date

RELATIVE PERCENT DIFFERENCE

SCO 1154 RPD Version 0; Microsoft Excel 2003 and 2007; Microsoft Windows XP Professional

Dose-to-Curie or Contact Dose Rate		
Container Number:	1138	
	Original Measurement (CCP-TP-504 Attachment 2 or host site contact dose rate measurement)	Duplicate Measurement (CCP-TP-504 Attachment 10 or host site contact dose rate measurement)
Dose Rate 1 (mR/hr)	146	143
Dose Rate 2 (mR/hr)	109	109
Dose Rate 3 (mR/hr)	90	88
Dose Rate 4 (mR/hr)	121	122
Average	116.5	115.5
RPD must be ≤ 40%	0.86	Pass

Pat Beallis	Pat Beallis	8-29-12
Printed Name	Signature	Date

$$RPD = \frac{C_1 - C_2}{\frac{(C_1 + C_2)}{2}} \times 100$$

where C_1 and C_2 are the average dose rate values obtained by from the original and duplicate samples. C1 is the larger of the two observed values.

Attachment 1 – CCP Nonconformance Report (NCR)

CCP NONCONFORMANCE REPORT (NCR)

(Use NCR Continuation, Attachment 2, if necessary)

NCR No. NCR- RHANL-0509-13 **Revision:** 1

1. Lot No., Heat No., or Serial No. (if applicable): NA	**2. Process (e.g., NDA, HSG, NDE, VE, Other):** RH-DTC 04/9/13 LRJ	**3. Batch Data Report #(s):** ANLRHDTC12008
4. Order/Work Order/Job Control Number (if applicable): NA	**5. PO # (if applicable):** NA	**Container #(s):** NA
	6. Supplier (if applicable): NA	

DESCRIPTION OF NONCONFORMANCE

7a. NCR Description: ☐ < 100 nCi/g ☐ Prohibited Item ☐ E-Flag ☐ Receipt Inspection ☐ Transportation ☐ WWIS/WDS ☒ Other

7b. Requirement(s) (Enter Implementing Procedure No., Revision, Section No., & Quoted Text):

CCP-TP-504 rev. 13 Section 4.4.1 states in part, "Assemble the BDR as follows...Attachment 4, Batch Data Report Cover Sheet, Attachment 5, Batch Data Report Table of Contents, Attachment 6 Batch Data Report Narrative Summary, Attachment 7 ITR Checklist...Submit to the ITR"

7c. Actual Condition:

The Attachment 5 Batch Data Report Table of Contents, Attachment 6 Batch Data Report Narrative Summary, and the Attachment 7 ITR checklist were all completed using the incorrect revision of CCP-TP-504.

Reason for Revision 1: Correct the Process in Block 2 from RH 512 Sampling to RH DTC. 04/9/13 LRJ

7d. Have the CCP HOLD TAGS associated with this NCR been applied? ☐ YES ☒ NO **(If no is checked, explain:)**

See Block 24B

8. NCR Originator:

Laura Nelson — Laura Nelson — 4-9-13
printed name — signature — date

9. Does the Identified condition have the potential to impact AK? ☐ YES ☒ NO ☐ INDETERMINATE

If YES or INDETERMINATE, enter Trend Code L in Block 10.

10. Trend Code: A	**11. Responsible Manager:** Laura Nelson
12. Significant Condition? ☐ YES ☒ NO **(If Yes, enter CAR No.:)**	**13. Recurring Condition?** ☐ YES ☒ NO **(If Yes, list NCRs and CARs:)**

14. CCP QA Engineer or CCP QA Designee validation:

Laura R. Jones — V. K. Conner for Laura Jones 8/28/13 — 04/9/2013
printed name — signature — date

NTPC RECORDS ORIGINAL
DATE REC'D 5-21-13

22 RK 8/28/13

Attachment 1 – CCP Nonconformance Report (NCR) (Continued)

NCR No. NCR-RHANL-0509-13 **Revision:** 1

INTERIM DISPOSITION

15a. Interim Disposition (Check Only One):

☒ N/A (See Final Disposition) ☐ Hold ☐ Conditionally Accept ☐ Conditionally Use

☐ Sort ☐ Reinspect or Retest ☐ Remediate

15b. Instructions for Completion of the Interim Disposition:

INTERIM DISPOSITION APPROVALS

16a. Responsible Manager or Individual:			16b. CCP QA Engineer or CCP QA Designee:		
printed name	signature	date	printed name	signature	date
Additional Approvals:			Additional Approvals:		
printed name	signature	date	printed name	signature	date

COMPLETION OF INTERIM DISPOSITION

17. Interim Disposition Complete – Responsible Manager or Individual:

printed name signature date

18. Interim Disposition Verified – CCP QA Engineer:

printed name signature date

23 RK 4/11/13

Attachment 1 – CCP Nonconformance Report (NCR) (Continued)

NCR No. NCR-RHANL-0509-13 **Revision:** 1

FINAL DISPOSITION

19. Final Disposition (Check Only One):
☐ Use-As-Is ☐ Repair

19a. Technical Justification – Required for Use-As-Is or Repair dispositions. (Enter "N/A" for Reject, Rework, and Scrap:)

NA

LN 4-9-13

☐ Reject ☒ Rework ☐ Scrap

19b. Instructions for Completion – Required for Reject, Repair, Rework, or Scrap. (Enter "N/A" for Use-As-Is:)

1. Have a qualified operator re-assemble the BDR using the correct revision for the Attachment 5, 6, and 7 and supersede the attachments with the incorrect revision. Filling the attachments out as appropriate.
2. Have a qualified operator review the corrections and fill out the ITR checklist with the correct revision and sign the correct ITR checklist.
3. Have a qualified operator review the corrections and fill out and sign the Attachment 6 with the correct revision.
4. Turn in the corrected BDR to records for SPM review.

19c. Corrective Actions (Actions to Prevent Recurrence – For Repair or Rework, if applicable. Enter "N/A," if not applicable, and for Use-As-Is, Reject, and Scrap):

NA

FINAL DISPOSITION APPROVALS

20. Responsible Manager or Individual:			21. CCP QA Engineer or CCP QA Designee:		
Laura Nelson	Laura Nelson	4-9-13	Laura R Jones	Laura Rowan Jones	04/9/13
printed name	signature	date	printed name	signature	date
Additional Approvals:			Additional Approvals:		
printed name	signature	date	printed name	signature	date

CLOSURE

22. Final Disposition Complete – Responsible Manager or Individual:

printed name signature date

23. Attachments:

24a. HOLD TAG removal has been verified and reconciled for all nonconforming items on the NCR. ☐

24b. Check if not applicable (N/A) and explain. ☒

Due to ALARA considerations NCR tagging will not be applied for this NCR. Administrative control will be applied through container entry in this CCP Data Center. In addition a listing of containers has been posted on the CCP sftp site identifying those containers where NCR tagging is not being applied due to ALARA. Container information for this NCR has been included in the listing which is to alert Mobile Loading Unit Personnel as a second control mechanism for non-tagged containers. The current listing has been uploaded to the sftp site.

25. Final Disposition Verified – NCR Closed CCP QA Engineer:

printed name signature date

24 AR 4/11/13

Attachment 1 – CCP Nonconformance Report (NCR)

CCP NONCONFORMANCE REPORT (NCR)

(Use NCR Continuation, Attachment 2, if necessary)

NCR No. NCR- RHANL-0509-13 **Revision:** 0

1. Lot No., Heat No., or Serial No. (if applicable): NA	**2. Process (e.g., NDA, HSG, NDE, VE, Other):** RH 512 SAMPLING	**3. Batch Data Report #(s):** ANLRHDTC12008
4. Order/Work Order/Job Control Number (if applicable): NA	**5. PO # (if applicable):** NA	**Container #(s):** NA
	6. Supplier (if applicable): NA	

DESCRIPTION OF NONCONFORMANCE

7a. NCR Description: ☐ < 100 nCi/g ☐ Prohibited Item ☐ E-Flag ☐ Receipt Inspection ☐ Transportation ☐ WWIS/WDS ☑ Other

7b. Requirement(s) (Enter Implementing Procedure No., Revision, Section No., & Quoted Text): 02/28/13 LR

CCP-TP-504, rev. 13 Section 4.4.1 states in part, "Assemble the BDR as follows... Attachment 4, Batch Data Report Cover Sheet, Attachment 5, Batch Data Report Table of Contents, Attachment 6 Batch Data Report Narrative Summary, Attachment 7 ITR Checklist .....Submit to the ITR. "

7c. Actual Condition:

The Attachment 5 Batch Data Report Table of Contents, Attachment 6 Batch Data Report Narrative Summary, and Attachment 7 ITR Checklist were all completed using the incorrect revision of CCP-TP-504.

7d. Have the CCP HOLD TAGS associated with this NCR been applied? ☐ YES ☑ NO (If no is checked, explain:)

See Block 24B

8. NCR Originator:

Laura Nelson — Laura Nelson — 2-27-13

printed name — signature — date

9. Does the identified condition have the potential to impact AK? ☐ YES ☑ NO ☐ INDETERMINATE

If YES or INDETERMINATE, enter Trend Code L in Block 10.

10. Trend Code: A

11. Responsible Manager: Laura Nelson

12. Significant Condition? ☐ YES ☒ NO (If Yes, enter CAR No.:)

13. Recurring Condition? ☐ YES ☒ NO (If Yes, list NCRs and CARs:)

14. CCP QA Engineer or CCP QA Designee validation:

Laura R Jones — Laura Renee Jones — 02/27/2013

printed name — signature — date

SUPERSEDED BY REV 1 04/09/2013 LR

25 RK 4/11/13

Attachment 1 – CCP Nonconformance Report (NCR) (Continued)

NCR No. NCR- RHANL-0509-13 **Revision:** 0

INTERIM DISPOSITION

15a. Interim Disposition (Check Only One):

☑ N/A (See Final Disposition) ☐ Hold ☐ Conditionally Accept ☐ Conditionally Use

☐ Sort ☐ Reinspect or Retest ☐ Remediate

15b. Instructions for Completion of the Interim Disposition:

INTERIM DISPOSITION APPROVALS

16a. Responsible Manager or Individual:			16b. CCP QA Engineer or CCP QA Designee:		
printed name	signature	date	printed name	signature	date
Additional Approvals:			**Additional Approvals:**		
printed name	signature	date	printed name	signature	date

COMPLETION OF INTERIM DISPOSITION

17. Interim Disposition Complete – Responsible Manager or Individual:

printed name signature date

18. Interim Disposition Verified – CCP QA Engineer:

printed name signature date

26 RK 4/11/13

Attachment 1 – CCP Nonconformance Report (NCR) (Continued)

NCR No. NCR- RHANL-0509-13 **Revision:** 0

FINAL DISPOSITION

19. Final Disposition (Check Only One):

☐ Use-As-Is ☐ Repair

19a. Technical Justification – Required for Use-As-Is or Repair dispositions. (Enter "N/A" for Reject, Rework, and Scrap:)

NA

☐ Reject ☑ Rework ☐ Scrap

19b. Instructions for Completion – Required for Reject, Repair, Rework, or Scrap. (Enter "N/A" for Use-As-Is:)

1. Have a qualified operator re-assemble the BDR using the correct revision for the Attachment 5, 6 and 7 and superseding the attachments with the incorrect revision . Filling the attachments out as appropriate.
2. Have a qualified operator review the corrections and fill out an ITR checklist with the correct revision and sign the correct ITR checklist.
3. Have a qualified operator review the corrections and fill out and sign the Attachment 6 with the correct revision.
4. Turn the corrected BDR into records for SPM review.

19c. Corrective Actions (Actions to Prevent Recurrence – For Repair or Rework, if applicable. Enter "N/A," if not applicable, and for Use-As-Is, Reject, and Scrap):

NA

FINAL DISPOSITION APPROVALS

20. Responsible Manager or Individual:			21. CCP QA Engineer or CCP QA Designee:		
Laura Nelson	Laura Nelson	2-27-13	Laura R Jones	Laura Renae Jones	02/27/13
printed name	signature	date	printed name	signature	date
Additional Approvals:			**Additional Approvals:**		
printed name	signature	date	printed name	signature	date

CLOSURE

22. Final Disposition Complete – Responsible Manager or Individual:

printed name signature date

23. Attachments: 1=Email Documenting Reportability

24a. HOLD TAG removal has been verified and reconciled for all nonconforming items on the NCR. ☐

24b. Check if not applicable (N/A) and explain. ☑

Due to ALARA considerations NCR tagging will not be applied for this NCR. Administrative control will be applied through container entry in the CCP Data Center. In addition, a listing of containers has been posted on the CCP sfp site identifying those containers where NCR tagging is not being applied due to ALARA. Container information for this NCR has been included in the listing which is to alert Mobile Loading Unit personnel as a second control mechanism for non-tagged containers. The current listing has been uploaded to the sfp site.

25. Final Disposition Verified – NCR Closed **CCP QA Engineer:**

printed name signature date

27 RK 4/11/13

GEN1

Attachment 3 – Visual Examination Site Project Manager Checklist

Batch Data Report No.: ANLRHVE12019

1. Has all the data received an independent technical review as evidenced by a completed checklist (Attachment 2) and the appropriate ITR signature?		☐ NO	☑ YES
2. Are BDR contents complete and match the Visual Examination Batch Data Report Table of Contents?		☐ NO	☑ YES
3. Is the BDR complete (appropriately filled in forms for each container)?		☐ NO	☑ YES
4. Have the RH Quality Assurance Objectives (QAOs) for VE been met?			
Precision – reconciled discrepancies between operators		☐ NO	☑ YES
Accuracy – trained operators		☐ NO	☑ YES
Representativeness – description of container contents		☐ NO	☑ YES
Completeness – completed data form and/or recording		☐ NO	☑ YES
Comparability – proper training and adequate AK for unopened containers		☐ NO	☑ YES
5. Were NCRs generated included in the BDR?	☐ NO	☐ YES	☑ N/A

Comments

No NCR'S.

SPM:

Laura Nelson — Printed Name

Laura Nelson — Signature

12-4-12 — Date

CCP RECORDS ORIGINAL
DATE REC'D 12.4.12

Attachment 4 – Visual Examination Batch Data Report Cover Sheet

Batch Data Report No.: ANLBHVE12019 Date: 11-13-12

	Waste Container ID Number:
1	1146
2	1148
3	1150
4	1151
5	1152
6	1153
7	1154
8	
9	
10	
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	

CB
11-13-12

01

CCP RECORDS ORIGINAL
DATE REC'D 12-4-12

Attachment 5 – Visual Examination Batch Data Report Table of Contents

Batch Data Report No.: ANLRHVE12019 Date: 11-13-12

Item	Description	Page No.
1	Visual Examination Batch Data Report Cover Sheet (Attachment 4)	01
2	Visual Examination Batch Data Report Table of Contents (Attachment 5)	02
3	Visual Examination Data Forms (Attachment 1)	03
4	Visual Examination Independent Technical Reviewer Checklist (Attachment 2)	73
5	Copy of NCRs (N/A [If not applicable])	NA

Attachment 1 – Visual Examination Data Form

Site ID: RHANC	
Examination Date: 8-13-12	Batch Number: NA
Procedure #: CCP-TP-500	Revision #: 11 / Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A	Recording Start: NA / Recording Stop: NA
Initial Container ☒N/A	Final Container ☐ N/A
Container or Package ID Number:	Container or Package ID Number: 1146
Container Type:	Container Type: 30 GALLON CONTAINER
Waste Matrix Code:	Waste Matrix Code: S5400
Waste Stream:	Waste Stream: AEBHDM
	Rigid Liner: ☒Y ☐N Type: 140 MIL / Rigid Liner Lid: ☐ Y ☒N
	Rigid Liner Vented or Hole Size: NA
Percent Fill: / Percent Organic Waste:	Percent Fill: 85% / Percent Organic Waste: 0%
Layers of Confinement: / Closure Method:	Layers of Confinement: 1 / Closure Method: HEAT SEALED FILTERS
Comments (e.g., filter information, NCRs): VE COMPLETED ON 8-14-12	

Waste Description:

BOTTOM CAN: 1005

TOP CAN: 1053

03

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1146

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
Eric Bond (Print Name) — Eric Bond (Signature) — 8-14-12 (Date)

Visual Examination Operator 2:
William H. Riley (Print Name) — William H. Riley (Signature) — 08-14-12 (Date)

04

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 6-6-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 1005		Container or Package ID Number:	
Container Type: 7 GALLON CONTAINER		Container Type:	
Waste Matrix Code: S5409		Waste Matrix Code:	
Waste Stream: AERADM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 85	Percent Organic Waste: 0	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7 GALLON CONTAINER (EM)
SHIELD POT CENTERING RING (EM)
SHIELD POT #7173

05

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1005

	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 52B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1: ERIC BOND Print Name	Eric Bond Signature	6-6-12 Date
Visual Examination Operator 2: William H. Riley Print Name	William H. Riley Signature	06-06-12 Date

06

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 6-6-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 7173		Container or Package ID Number:	
Container Type: 1GALLON SHIELD POT		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 0	Percent Organic Waste: 0	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NO WASTE WAS ADDED TO SHIELD POT			
Waste Description: VENTED 1GALLON "1" INCH THICK LEAD LINED SHIELD POT (om)(om)			

07

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 7173

	YES	NO	N/A
Prohibited Items Inventory			
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
Bag Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:

Print Name	Signature	Date
ERIC BOND	[signature]	6-6-12

Visual Examination Operator 2:

Print Name	Signature	Date
William H. Riley	[signature]	06-06-12

08

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 06-20-12		Batch Number: NA	
Procedure #CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒N/A	
Container or Package ID Number: 1053		Container or Package ID Number:	
Container Type: 7-Gallon Container		Container Type:	
Waste Matrix Code: 55400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 85%	Percent Organic Waste: 0%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7-Gallon Container-(IM)
Shield Pot Centering Ring-(IM)
Shield Pot # 7094

09

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1053

Prohibited Item(s) Summary	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH/CH Check			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
William H. Riley — Print Name
Signature — Date: 06-20-12

Visual Examination Operator 2:
ERIC BOND — Print Name
Signature — Date: 6-20-12

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 6-24-11		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 7094		Container or Package ID Number:	
Container Type: 1 GALLON SHIELD POT		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type	Rigid Liner Lid: ☐Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 60% Percent Organic Waste: 0%		Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): LID INSTALLED AND SHIELD POT COMPLETE ON 6-27-11			

Waste Description: VENTED 1 GALLON 3/4 INCH THICK LEAD SHIELD POT (OM)(IM)

FUEL SPECIMEN # 057A8 (OM)
FUEL SPECIMEN # 057A1 (OM)
FUEL SPECIMEN # 057A3A (OM)
FUEL SPECIMEN # 057A3B (OM)
FUEL SPECIMEN # 057A9A (OM)
FUEL SPECIMEN # 057A9B (OM)

11

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 7094

Prohibited Item(s) Summary	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:

Print Name	Signature	Date
ERIC BOND	Eric Bond	6-27-11

Visual Examination Operator 2:

Print Name	Signature	Date
GLORIA RUPPERT	Gloria Ruppert	6-27-11

Attachment 1 – Visual Examination Data Form

Site ID: RHANL	
Examination Date: 08-15-12	Batch Number: NA
Procedure #: CCP-TP-500	Revision #: 11 / Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A	Recording Start: NA / Recording Stop: NA
Initial Container ☒N/A	Final Container ☐ N/A
Container or Package ID Number:	Container or Package ID Number: 1148
Container Type:	Container Type: 30-Gallon Container
Waste Matrix Code:	Waste Matrix Code: S5400
Waste Stream:	Waste Stream: AERHDM
	Rigid Liner: ☒Y ☐N Type: 140 MIL / Rigid Liner Lid: ☐Y ☒N
	Rigid Liner Vented or Hole Size: NA
Percent Fill: / Percent Organic Waste:	Percent Fill: 85% / Percent Organic Waste: 0%
Layers of Confinement: / Closure Method:	Layers of Confinement: 1 / Closure Method: Heat Sealed filtered
Comments (e.g., filter information, NCRs): NA	

Waste Description:

Bottom Can: 1013

Top Can: 970

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1148

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
William H. Biley — Print Name
Will. H. Biley — Signature
08-15-12 — Date

Visual Examination Operator 2:
ERIC BOND — Print Name
Eric Bond — Signature
8-15-12 — Date

Attachment 1 – Visual Examination Data Form

Site ID: RHAM	
Examination Date: 6-6-12	Batch Number: NA
Procedure #: CCP-TP-500	Revision #: 11 / Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A	Recording Start: NA / Recording Stop: NA
Initial Container ☐ N/A	Final Container ☒ N/A
Container or Package ID Number: 1013	Container or Package ID Number:
Container Type: 7 GALLON CONTAINER	Container Type:
Waste Matrix Code: S5400	Waste Matrix Code:
Waste Stream: AERHAM	Waste Stream:
	Rigid Liner: ☐Y ☐N Type: / Rigid Liner Lid: ☐Y ☐N
	Rigid Liner Vented or Hole Size:
Percent Fill: 85 / Percent Organic Waste: 0	Percent Fill: / Percent Organic Waste:
Layers of Confinement: 0 / Closure Method: NA	Layers of Confinement: / Closure Method:
Comments (e.g., filter information, NCRs): NA	

Waste Description:

7 GALLON CONTAINER (TM)
SHIELD POT CENTERING RING (TM)
SHIELD POT #7171

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1013

Prohibited Items Summary	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1: ERIC BOND Print Name	Eric Bond Signature	6-6-12 Date
Visual Examination Operator 2: William H. Riley Print Name	William H. Riley Signature	06-06-12 Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 6-6-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 7171		Container or Package ID Number:	
Container Type: 1 GALLON SHIELD POT		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 0	Percent Organic Waste: 0	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NO WASTE HAS BEEN ADDED TO SHIELD POT			
Waste Description: VENTED 1GALLON 1 INCH THICK LEAD LINED SHIELD POT (OM)(IM)			

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Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 7171

Prohibited Item(s) Summary	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH T2B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
ERIC BOND — Print Name
[signature] — Signature
6-6-12 — Date

Visual Examination Operator 2:
William H. Riley — Print Name
[signature] — Signature
06-06-12 — Date

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Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 5-24-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 970		Container or Package ID Number:	
Container Type: 7 GALLON CONTAINER		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: A E B H D M		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 85%	Percent Organic Waste: 0%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7 GALLON CONTAINER (IM)
SHIELD POT CENTERING RING (IM)
SHIELD POT # 7167

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 970

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1: ERIC BOND Print Name	Eric Bond Signature	5-24-12 Date
Visual Examination Operator 2: F. Wesley Root Print Name	F. Wesley Root Signature	5-24-12 Date

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Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 09-26-11		Batch Number: NA	
Procedure # CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒N/A	
Container or Package ID Number: 7167		Container or Package ID Number:	
Container Type: 1-Gallon Container		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 40%	Percent Organic Waste: 0%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description: Vented 1-Gallon 1-INCH thick lead Lined shield Pot - (OM) (IM)

Fuel Specimen - (074F3) - (OM)

Fuel Specimen - (074F4) - (OM)

Fuel Specimen - (074F2) - (OM)

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Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 7167

Prohibited Item(s) Summary	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
William H. Riley — Print Name
Will H. Ri — Signature
09-26-11 — Date

Visual Examination Operator 2:
ERIC BOND — Print Name
Eric Bond — Signature
9-26-11 — Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 08-15-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☒N/A		Final Container ☐ N/A	
Container or Package ID Number:		Container or Package ID Number: 1150	
Container Type:		Container Type: 30-Gallon Container	
Waste Matrix Code:		Waste Matrix Code: S5400	
Waste Stream:		Waste Stream: AERHDM	
		Rigid Liner: ☒Y ☐N Type: 140 mil	Rigid Liner Lid: ☐ Y ☒N
		Rigid Liner Vented or Hole Size: NA	
Percent Fill:	Percent Organic Waste:	Percent Fill: 85%	Percent Organic Waste: 0%
Layers of Confinement:	Closure Method:	Layers of Confinement: 1	Closure Method: Heat sealed filtered
Comments (e.g., filter information, NCRs): NA			

Waste Description:

Bottom Can: 1007

Top Can: 1057

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1150

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
William H. Riley — Print Name
Will H. Riley — Signature
08-15-12 — Date

Visual Examination Operator 2:
ERIC BOWIS — Print Name
Eric Bowis — Signature
8-15-12 — Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 6-5-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 1007		Container or Package ID Number:	
Container Type: 7 GALLON CONTAINER		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AEBHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 85	Percent Organic Waste: 0	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7 GALLON CONTAINER (EM)

SHIELD POT CENTERING RING (EM)

SHIELD POT #7172

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1007

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
ERIC BOWIS (Print Name) — Signature — 6-5-12 (Date)

Visual Examination Operator 2:
William H. Riley (Print Name) — Signature — 06-05-12 (Date)

Attachment 1 – Visual Examination Data Form

Site ID: RHANC	
Examination Date: 6-5-12	Batch Number: NA
Procedure #: CCP-TP-500	Revision #: 11 / Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A	Recording Start: NA / Recording Stop: NA
Initial Container ☐ N/A	Final Container ☒ N/A
Container or Package ID Number: 7172	Container or Package ID Number:
Container Type: 1 GALLON SHIELD POT	Container Type:
Waste Matrix Code: S5400	Waste Matrix Code:
Waste Stream: AERHAM	Waste Stream:
	Rigid Liner: ☐Y ☐N Type: / Rigid Liner Lid: ☐ Y ☐N
	Rigid Liner Vented or Hole Size:
Percent Fill: 0 / Percent Organic Waste: 0	Percent Fill: / Percent Organic Waste:
Layers of Confinement: 0 / Closure Method: NA	Layers of Confinement: / Closure Method:
Comments (e.g., filter information, NCRs): NO WASTE WAS ADDED TO SHIELD POT	
Waste Description: VENTED 1 GALLON "1" INCH THICK LEAD LINED SHIELD POT (cm) (cm)	

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Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 7172

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
ERIC BOWDS (Print Name) — Eric Bowds (Signature) — 6-5-12 (Date)

Visual Examination Operator 2:
William H. Riley (Print Name) — Will H. Ry (Signature) — 06-05-12 (Date)

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 06-07-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒N/A	
Container or Package ID Number: 1057		Container or Package ID Number:	
Container Type: 7-Gallon Container		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 85%	Percent Organic Waste: 0%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7-Gallon Container-(IM)
Shield Pot Centering Ring-(IM)
Shield Pot # 7168

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1057

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1: William H. Riley Print Name	Will H. R Signature	06-07-12 Date
Visual Examination Operator 2: ERIC BOND Print Name	Eric Bond Signature	6-7-12 Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 09-27-11		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 7168		Container or Package ID Number:	
Container Type: 1-Gallon Container		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 45%	Percent Organic Waste: 0%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description: Vented 1-Gallon 1-INCH Thick Lead Lined Shield Pot-(OM)(IM)
Fuel Specimen-074B2-(OM)
Fuel Specimen-074B3-(OM)
Fuel Specimen-074B4-(OM)
Fuel Specimen-074B1-(OM)

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 7168

	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
[illegible]			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
William H. Riley — Print Name
Will H. Ri — Signature
09-27-11 — Date

Visual Examination Operator 2:
ERIC BOND — Print Name
Eric Bond — Signature
9-27-11 — Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 08-15-12		Batch Number: NA	
Procedure #CCP-TP-500		Revision #: 11	Video Number NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☒ N/A		Final Container ☐ N/A	
Container or Package ID Number:		Container or Package ID Number: 1151	
Container Type:		Container Type: 30-Gallon Container	
Waste Matrix Code:		Waste Matrix Code: S5400	
Waste Stream:		Waste Stream: AERHDM	
		Rigid Liner: ☒Y ☐N Type: 140 MiL	Rigid Liner Lid: ☐ Y ☒N
		Rigid Liner Vented or Hole Size: NA	
Percent Fill:	Percent Organic Waste:	Percent Fill: 85%	Percent Organic Waste: 0%
Layers of Confinement:	Closure Method:	Layers of Confinement: 1	Closure Method: Heat Sealed filtered
Comments (e.g., filter information, NCRs): NA			

Waste Description:

Bottom Can: 998

Top Can: 1066

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 115

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
William H. Riley — Print Name
William H. Riley — Signature
08-15-12 — Date

Visual Examination Operator 2:
ERIC BONS — Print Name
Eric Bons — Signature
8-15-12 — Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANI			
Examination Date: 6-5-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 998		Container or Package ID Number:	
Container Type: 7 GALLON CONTAINER		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 85	Percent Organic Waste: 0	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7 GALLON CONTAINER (IM)
SHIELD POT CENTERING RING (IM)
SHIELD POT # 7178

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 998

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match *Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC*)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
ERIC BOND (Print Name) — Eric Bond (Signature) — 6-5-12 (Date)

Visual Examination Operator 2:
William H. Riley (Print Name) — Will. H. R. (Signature) — 06-05-12 (Date)

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 6-5-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 7178		Container or Package ID Number:	
Container Type: 1 GALLON SHIELD POT		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHGM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 0	Percent Organic Waste: 0	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NO WASTE WAS ADDED TO SHIELD POT			
Waste Description: VENTED 1 GALLON "1" INCH THICK LEAD LINED SHIELD POT (cm) (in)			

3D

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 7178

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:		
ERIC BOND	[signature]	6-5-12
Print Name	Signature	Date

Visual Examination Operator 2:		
William H. Riley	[signature]	06-05-12
Print Name	Signature	Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL	
Examination Date: 06-08-12	Batch Number: NA
Procedure #: CCP-TP-500	Revision #: 11 / Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A	Recording Start: NA / Recording Stop: NA
Initial Container ☐ N/A	**Final Container** ☒ N/A
Container or Package ID Number: 1066	Container or Package ID Number:
Container Type: 7-Gallon Container	Container Type:
Waste Matrix Code: S5400	Waste Matrix Code:
Waste Stream: AERHDM	Waste Stream:
	Rigid Liner: ☐Y ☐N Type: / Rigid Liner Lid: ☐Y ☐N
	Rigid Liner Vented or Hole Size:
Percent Fill: 85% / Percent Organic Waste: 0%	Percent Fill: / Percent Organic Waste:
Layers of Confinement: 0 / Closure Method: NA	Layers of Confinement: / Closure Method:
Comments (e.g., filter information, NCRs): NA	

Waste Description:

7-Gallon Container - (IM)
Shield Pot Centering Ring - (IM)
Shield Pot # 7169

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1066

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste ddes **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
William H. Riley (Print Name) | Will H. Ri (Signature) | 06-08-12 (Date)

Visual Examination Operator 2:
ERIC BONIS (Print Name) | Eric Bonis (Signature) | 6-8-12 (Date)

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 9-29-11		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 7169		Container or Package ID Number:	
Container Type: 1 GALLON CONTAINER		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 40% Percent Organic Waste: 0%		Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description VENTED 1 GALLON 1-INCH THICK LEAD LINED SHIELD POT (OM) (IM)

FUEL SPECIMEN 074G5 (OM)
FUEL SPECIMEN 074G6 (OM)
FUEL SPECIMEN 074G2 (OM)
FUEL SPECIMEN 074G3 (OM)
FUEL SPECIMEN 074G4 (OM)

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 7169

Prohibited Item(s) Summary	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
William H. Riley — Print Name
Will H. Ry — Signature
09-29-11 — Date

Visual Examination Operator 2:
ERIC BOND — Print Name
Eric Bond — Signature
9-29-11 — Date

Attachment 1 – Visual Examination Data Form

Site ID: RHAWL			
Examination Date: 8-16-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☒ N/A		Final Container ☐ N/A	
Container or Package ID Number:		Container or Package ID Number: 1152	
Container Type:		Container Type: 30 GALLON CONTAINER	
Waste Matrix Code:		Waste Matrix Code: S5400	
Waste Stream:		Waste Stream: AERADM	
		Rigid Liner: ☒Y ☐N Type: 140 MIL	Rigid Liner Lid: ☐ Y ☒N
		Rigid Liner Vented or Hole Size: NA	
Percent Fill:	Percent Organic Waste:	Percent Fill: 85%	Percent Organic Waste: 0%
Layers of Confinement:	Closure Method:	Layers of Confinement: 1	Closure Method: HEAT SEALED FILTERED
Comments (e.g., filter information, NCRs): VE COMPLETE ON 8-17-12			

Waste Description:

BOTTOM CAN: 1004

TOP CAN: 1073

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Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1152

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
William H. Riley — Print Name
[signature] — Signature
08-17-12 — Date

Visual Examination Operator 2:
ERIC BOND — Print Name
[signature] — Signature
8-17-12 — Date

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Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 06-07-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 1004		Container or Package ID Number:	
Container Type: 7-Gallon Container		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 85%	Percent Organic Waste: 0%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7-Gallon Container - (IM)
Shield Pot Centering Ring - (IM)
Shield Pot #7210

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1004

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
William H. Riley — Print Name
Will H. Ri — Signature
06-07-12 — Date

Visual Examination Operator 2:
ERIC BOND — Print Name
Eric Bond — Signature
6-7-12 — Date

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Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 09-27-11		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒N/A	
Container or Package ID Number: 7210		Container or Package ID Number:	
Container Type: 1-Gallon Container		Container Type:	
Waste Matrix Code: 55400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 45%	Percent Organic Waste: 0%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description: Vented 1-Gallon 3/4-INCH thick Lead Lined Shield Pot-(OM)(IM)

Fuel Specimen-074A3-(OM)
Fuel Specimen-074A4-(OM)
Fuel Specimen-074A2-(OM)

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 7210

Prohibited Item(s) Summary	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
William H. Riley — Print Name
Will H. Ri — Signature
09-27-11 — Date

Visual Examination Operator 2:
ERIC BOND — Print Name
Eric Bond — Signature
9-27-11 — Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 6-6-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 1073		Container or Package ID Number:	
Container Type: 7 GALLON CONTAINER		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 85	Percent Organic Waste: 0	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7 GALLON CONTAINER [IM]
SHIELD POT CENTERING RING [IM]
SHIELD POT # 7177

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Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1073

Prohibited Items Summary	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
10 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
ERIC BOND — Print Name
Eric Bond — Signature
6-6-12 — Date

Visual Examination Operator 2:
William H. Riley — Print Name
William H. Riley — Signature
06-06-12 — Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 6-8-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 7177		Container or Package ID Number:	
Container Type: 1 GALLON SHIELD POT		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHAM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 0	Percent Organic Waste: 0	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NO WASTE WAS ADDED TO SHIELD POT			
Waste Description: VENTED 1 GALLON "1" INCH THICK LEAD LINED SHIELD POT (cm)(in)			

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Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 7177

Prohibited Items Summary	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
10 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
ERIC BONDS (Print Name) — Eric Bond (Signature) — 6-6-12 (Date)

Visual Examination Operator 2:
William H. Riley (Print Name) — William H. Riley (Signature) — 06-06-12 (Date)

Attachment 1 – Visual Examination Data Form

Site ID: RHANL	
Examination Date: 08-17-12	Batch Number: NA
Procedure #: CCP-TP-500	Revision #: 11 / Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A	Recording Start: NA / Recording Stop: NA
Initial Container ☒N/A	Final Container ☐ N/A
Container or Package ID Number:	Container or Package ID Number: 1153
Container Type:	Container Type: 30-Gallon Container
Waste Matrix Code:	Waste Matrix Code: S5400
Waste Stream:	Waste Stream: AERHDM
	Rigid Liner: ☒Y ☐N Type: 140 Mil / Rigid Liner Lid: ☐ Y ☒N
	Rigid Liner Vented or Hole Size: NA
Percent Fill: / Percent Organic Waste:	Percent Fill: 85% / Percent Organic Waste: 0%
Layers of Confinement: / Closure Method:	Layers of Confinement: 1 / Closure Method: Heat Sealed filtered
Comments (e.g., filter information, NCRs): NA	

Waste Description:

BOTTOM CAN: 1014

TOP CAN: 960

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1153

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
William H. Riley — Print Name
William H. Riley — Signature
08-17-12 — Date

Visual Examination Operator 2:
Monty Harris — Print Name
Monterey Harris — Signature
8-17-12 — Date

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Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 6-6-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒N/A	
Container or Package ID Number: 1014		Container or Package ID Number:	
Container Type: 7 GALLON CONTAINER		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AE RHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 85	Percent Organic Waste: 0	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7 GALLON CONTAINER (IM)
SHIELD POT CENTERING RING (IM)
SHIELD POT #7176

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Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1014

Prohibited Items Summary	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
TRU Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
ERIC BOND — Print Name
Eric Bond — Signature
6-6-12 — Date

Visual Examination Operator 2:
William H. Riley — Print Name
Will. H. Ri — Signature
06-06-12 — Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANC	
Examination Date: 6-6-12	Batch Number: NA
Procedure #: CCP-TP-500	Revision #: 11 / Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A	Recording Start: NA / Recording Stop: NA
Initial Container ☐ N/A	Final Container ☒ N/A
Container or Package ID Number: 7176	Container or Package ID Number:
Container Type: 1GALLON SHIELD POT	Container Type:
Waste Matrix Code: S5400	Waste Matrix Code:
Waste Stream: AERHAM	Waste Stream:
	Rigid Liner: ☐Y ☐N Type: / Rigid Liner Lid: ☐Y ☐N
	Rigid Liner Vented or Hole Size:
Percent Fill: 0 / Percent Organic Waste: 0	Percent Fill: / Percent Organic Waste:
Layers of Confinement: 0 / Closure Method: NA	Layers of Confinement: / Closure Method:
Comments (e.g., filter information, NCRs): NO WASTE WAS ADDED TO SHIELD POT	

Waste Description:

VENTED 1GALLON "1" INCH THICK LEAD LINED SHIELD POT [0M][1M]

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Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 7176

Prohibited Item(s) Summary	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1: ERIC BOND — Print Name; Eric Bond — Signature; 6-6-12 — Date

Visual Examination Operator 2: William H. Riley — Print Name; Will. H. Ri — Signature; 06-06-12 — Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 5-24-12	Batch Number: NA		
Procedure #: CCP-TP-500	Revision #: 11	Video Number: NA	
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A	Recording Start: NA	Recording Stop: NA	
Initial Container ☐ N/A	**Final Container** ☒ N/A		
Container or Package ID Number: 960	Container or Package ID Number:		
Container Type: 7 GALLON CONTAINER	Container Type:		
Waste Matrix Code: S5400	Waste Matrix Code:		
Waste Stream: AEBHDM	Waste Stream:		
	Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐Y ☐N	
	Rigid Liner Vented or Hole Size:		
Percent Fill: 85% Percent Organic Waste: 0%	Percent Fill:	Percent Organic Waste:	
Layers of Confinement: 0 Closure Method: NA	Layers of Confinement:	Closure Method:	
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7 GALLON CONTAINER (IM)

SHIELD POT CENTERING RING (IM)

SHIELD POT # 7216

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 960

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:		
ERIC BOND	Eric Bond	5-24-12
Print Name	Signature	Date

Visual Examination Operator 2:		
F. Wesley Root	F. Wesley Root	5-24-12
Print Name	Signature	Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 09-26-11		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒N/A	
Container or Package ID Number: 7216		Container or Package ID Number:	
Container Type: 1-Gallon Container		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size	
Percent Fill: 45%	Percent Organic Waste: 0%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description: Vented 1-Gallon 3/4-INCH thick Lead Lined shield Pot-(OM) (IM)

Fuel Specimen-074C3-(OM)
Fuel Specimen-074C4-(OM)
Fuel Specimen-074C2-(OM)
Fuel Specimen-074C5-(OM)

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 7216

Prohibited Item(s) Summary	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, *whichever is greater in an internal container?*	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** *defined in the* applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
William H. Riley — Print Name
Will. H. Ri — Signature
09-26-11 — Date

Visual Examination Operator 2:
ERIC BOND — Print Name
Eric Bond — Signature
9-26-11 — Date

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Attachment 1 – Visual Examination Data Form

Site ID: RHANL	
Examination Date: 09-17-12	Batch Number: NA
Procedure #: CCP-TP-500	Revision #: 11 / Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A	Recording Start: NA / Recording Stop: NA
Initial Container ☒N/A	Final Container ☐ N/A
Container or Package ID Number:	Container or Package ID Number: 1154
Container Type:	Container Type: 30-Gallon Container
Waste Matrix Code:	Waste Matrix Code: S5400
Waste Stream:	Waste Stream: AERHDM
	Rigid Liner: ☒Y ☐N Type: 140 MIL / Rigid Liner Lid: ☐ Y ☒N
	Rigid Liner Vented or Hole Size: NA
Percent Fill: / Percent Organic Waste:	Percent Fill: 85% / Percent Organic Waste: 0%
Layers of Confinement: / Closure Method:	Layers of Confinement: 1 / Closure Method: Heat Sealed filtered
Comments (e.g., filter information, NCRs): NA	

Waste Description:

Bottom CAN: 994

Top CAN: 1061

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1154

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
William H. Riley — Print Name
Will H. Ri — Signature
09-17-12 — Date

Visual Examination Operator 2:
ERIC BOND — Print Name
[illegible] — Signature
9-17-12 — Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL	
Examination Date: 6-5-12	Batch Number: NA
Procedure #: CCP-TP-500	Revision #: 11 / Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A	Recording Start: NA / Recording Stop: NA

Initial Container ☐ N/A	Final Container ☒ N/A
Container or Package ID Number: 994	Container or Package ID Number:
Container Type: 7 GALLON CONTAINER	Container Type:
Waste Matrix Code: S5400	Waste Matrix Code:
Waste Stream: AERHDM	Waste Stream:
	Rigid Liner: ☐Y ☐N Type: / Rigid Liner Lid: ☐ Y ☐N
	Rigid Liner Vented or Hole Size:
Percent Fill: 85 / Percent Organic Waste: 0	Percent Fill: / Percent Organic Waste:
Layers of Confinement: 0 / Closure Method: NA	Layers of Confinement: / Closure Method:

Comments (e.g., filter information, NCRs):

NA

Waste Description:

7 GALLON CONTAINER (IM)

SHIELD POT CENTERING RING (IM)

SHIELD POT #7170

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Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 994

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:

Print Name	Signature	Date
ERIC BOWD	[signature]	6-5-12

Visual Examination Operator 2:

Print Name	Signature	Date
William H. Biley	[signature]	06-05-12

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Attachment 1 – Visual Examination Data Form

Site ID: BHANL			
Examination Date: 6-5-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 7170		Container or Package ID Number:	
Container Type: 1 GALLON SHIELD POT		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHSM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 0	Percent Organic Waste: 0	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NO WASTE WAS ADDED TO SHIELD POT			
Waste Description: VENTED 1 GALLON "1" INCH THICK LEAD LINED SHIELD POT (OM)(FM)			

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Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 7170

	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
ERIC BOND (Print Name) — Eric Bond (Signature) — 6-5-12 (Date)

Visual Examination Operator 2:
William H. Biley (Print Name) — William H. Biley (Signature) — 06-05-12 (Date)

Attachment 1 – Visual Examination Data Form

Site ID: RHANL	
Examination Date: 06-20-12	Batch Number: NA
Procedure #: CCP-TP-500	Revision #: 11 / Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A	Recording Start: NA / Recording Stop: NA

Initial Container ☐ N/A	Final Container ☒ N/A
Container or Package ID Number: 1061	Container or Package ID Number:
Container Type: 7-Gallon Container	Container Type:
Waste Matrix Code: S5400	Waste Matrix Code:
Waste Stream: AERHDM	Waste Stream:
	Rigid Liner: ☐Y ☐N Type: / Rigid Liner Lid: ☐Y ☐N
	Rigid Liner Vented or Hole Size:
Percent Fill: 85% / Percent Organic Waste: 0%	Percent Fill: / Percent Organic Waste:
Layers of Confinement: 0 / Closure Method: NA	Layers of Confinement: / Closure Method:
Comments (e.g., filter information, NCRs): NA	

Waste Description:

7-Gallon Container- (IM)
Shield Pot Centering Ring- (IM)
Shield Pot # 7223

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Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1061

Prohibited Item(s) Summary	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
William H. Riley — Print Name
Will. H. Ri — Signature
06-20-12 — Date

Visual Examination Operator 2:
ERIC BONP — Print Name
Eric Bond — Signature
6-20-12 — Date

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Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 09-27-11		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒N/A	
Container or Package ID Number: 7223		Container or Package ID Number:	
Container Type: 1-Gallon Container		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 40%	Percent Organic Waste: 0%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description: Vented 1-Gallon 3/4-INCH Thick Lead Lined Shield Pot-(OM)(IM)

Fuel Specimen-074K3-(OM)

Fuel Specimen-074K4-(OM)

Fuel Specimen-074K2-(OM)

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Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 7223

Prohibited Items Summary	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
William H. Riley — Print Name
Will H. Ri — Signature
09-27-11 — Date

Visual Examination Operator 2:
ERIC BOND — Print Name
Eric Bond — Signature
9-27-11 — Date

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Attachment 2 – Visual Examination Independent Technical Reviewer Checklist

Batch Data Report No.: ANLRHVE12019

1. Were data generation and reduction conducted in a technically correct manner in accordance with the methods (procedure) used?	☐ NO	☒ YES	☐ N/A
2. Was the correct revision of the operating procedure used?	☐ NO	☒ YES	☐ N/A
3. Were all the transcription errors corrected?	☐ NO	☐ YES	☒ N/A
4. Are BDR contents complete and match the Visual Examination Batch Data report Table of Contents?	☐ NO	☒ YES	☐ N/A
5. Does the BDR include VE for no more than 20 containers?	☐ NO	☒ YES	☐ N/A
6. Is all data recorded signed and dated in reproducible ink?	☐ NO	☒ YES	☐ N/A
7. Is all raw data recorded clearly, legibly, and accurately?	☐ NO	☒ YES	☐ N/A
8. Are all changes to original data lined out, initialed and dated by the individual making the changes or an individual authorized to make the change?	☐ NO	☐ YES	☒ N/A
9. Is there an adequate written description of the contents?	☐ NO	☒ YES	☐ N/A
10. Were the recording equipment checks satisfactory?	☐ NO	☐ YES	☒ N/A
11. Has each container in this BDR been evaluated for the presence of prohibited wastes?	☐ NO	☒ YES	☐ N/A
12. Has the physical waste form in each container in this BDR been evaluated against the Waste Stream Description and the Waste Matrix Code?	☐ NO	☒ YES	☐ N/A
13. Have the RH Quality Assurance Objectives (QAOs) for VE been met?	☐ NO	☒ YES	☐ N/A
Precision – reconciled discrepancies between operators or between the operator and ITR.	☐	☒	☐
Accuracy – trained operators	☐	☒	☐
Representativeness – description of container contents	☐	☒	☐
Completeness – completed data form and/or recording	☐	☒	☐
Comparability – proper training and adequate AK source documents are available for unopened containers.	☐	☒	☐
14. Were NCRs generated included in the BDR?	☐ NO	☐ YES	☒ N/A
Comments: NA			

Independent Technical Reviewer:

Gary Redman — Printed Name

Gary Redman — Signature

11-15-12 — Date

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DIVIDER PAGE ONLY

Not part of page count

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523 or 575-234-7431

Fax Number: 575-234-7033

[X] Original Record
[ ] Fax Record
[ ] Electronic Record
[ ] Copy

Attn:	Sheri Punchios	From:	Wes Root
Ship to:	S. M. Stoller WIPP Rec. Mgmt. Govt.	Site:	ANL-E
	CCP Records	Company:	Nuclear Waste Partnership LLC
	4021 National Parks Hwy	Telephone Number:	630-252-8306
	Carlsbad, NM 88220	Date Sent:	11-30-12
Telephone Number:	575-234-7095		

Document Number	Title / Description	Record Date	Total Pages
ANLRHVE12019	Batch Data Report – Waste Container ID Numbers: 1146, 1148, 1150, 1151, 1152, 1153, and 1154.	11-13-12	73

Comments

None

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

	Signature	Printed Name	Date
Records Accepted [✓]	Linda Martin	Linda Martin	12.4.12
Records Rejected [ ]			

Reason for Rejection:

Re-submittal:

Signature	Printed Name	Date

****
*** TX REPORT ***
****

TRANSMISSION OK

TX/RX NO	1983
DESTINATION TEL #	916302526706
DESTINATION ID	WES ROOT
ST. TIME	12/04 07:33
TIME USE	00'16
PAGES SENT	1
RESULT	OK

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523 or 575-234-7431

Fax Number: 575-234-7033

[X] Original Record [ ] Copy
[ ] Fax Record
[ ] Electronic Record

Attn:	Sheri Punchios	From:	Wes Root
Ship to:	S. M. Stoller WIPP Rec. Mgmt. Govt.	Site:	ANL-E
	CCP Records	Company:	Nuclear Waste Partnership LLC
	4021 National Parks Hwy	Telephone Number:	630-252-8306
	Carlsbad, NM 88220	Date Sent:	11-30-12
Telephone Number:	575-234-7095		

Document Number	Title / Description	Record Date	Total Pages
ANLRHVE12019	Batch Data Report – Waste Container ID Numbers: 1146, 1148, 1150, 1151, 1152, 1153, and 1154.	11-13-12	73

Comments

None

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

	Signature	Printed Name	Date
Records Accepted [✓]	Linda Martin	Linda Martin	12.4.12
Records Rejected [ ]			

Reason for Rejection:

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523 or 575-234-7431

Fax Number: 575-234-7033

[ ] Original Record
[ ] Fax Record
[x] Electronic Record
[ ] Copy

Attn:	Linda Martin	From:	Laura Nelson
Ship to:	CCP Records	Site:	Denver
	4021 National Parks Hwy	Company:	WTS
	MS:GSA:212	Telephone Number:	303-843-2269
	Carlsbad, NM 88220	Date Sent:	12-4-12
Telephone Number:	575-234-7523		

Document Number	Title / Description	Record Date	Total Pages
ANLRHVE12019	SPM Checklist	12-4-12	1
	NA		

Comments

NA

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

Records Accepted [✓] Linda Martin — Signature | Linda Martin — Printed Name | 12.4.12 — Date

Records Rejected [ ] _____ Signature | _____ Printed Name | _____ Date

Reason for Rejection:

Re-submittal: _____ Signature | _____ Printed Name | _____ Date

****
*** TX REPORT ***
****

TRANSMISSION OK

TX/RX NO	2069
DESTINATION TEL #	913038432208
DESTINATION ID	DENVER
ST. TIME	12/04 14:54
TIME USE	00'17
PAGES SENT	1
RESULT	OK

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523 or 575-234-7431

Fax Number: 575-234-7033

[ ] Original Record [ ] Copy
[ ] Fax Record
[x] Electronic Record

Attn:	Linda Martin	From:	Laura Nelson
Ship to:	CCP Records	Site:	Denver
	4021 National Parks Hwy	Company:	WTS
	MS:GSA:212	Telephone Number:	303-843-2269
	Carlsbad, NM 88220	Date Sent:	12-4-12
Telephone Number:	575-234-7523		

Document Number	Title / Description	Record Date	Total Pages
ANLRHVE12019	SPM Checklist	12-4-12	1
	NA		

Comments

NA

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

DIVIDER

PAGE

Attachment 3 – Visual Examination Site Project Manager Checklist

Batch Data Report No.: ANLRHVE13001

1. Has all the data received an independent technical review as evidenced by a completed checklist (Attachment 2) and the appropriate ITR signature?		☐ NO	☑ YES
2. Are BDR contents complete and match the Visual Examination Batch Data Report Table of Contents?		☐ NO	☑ YES
3. Is the BDR complete (appropriately filled in forms for each container)?		☐ NO	☑ YES
4. Have the RH Quality Assurance Objectives (QAOs) for VE been met?			
Precision – reconciled discrepancies between operators		☐ NO	☑ YES
Accuracy – trained operators		☐ NO	☑ YES
Representativeness – description of container contents		☐ NO	☑ YES
Completeness – completed data form and/or recording		☐ NO	☑ YES
Comparability – proper training and adequate AK for unopened containers		☐ NO	☑ YES
5. Were NCRs generated included in the BDR?	☐ NO	☐ YES	☑ N/A

Comments

No NCR's.

SPM:

Laura Nelson
Printed Name

Laura Nelson
Signature

2-13-13
Date

NTPC RECORDS ORIGINAL
DATE REC'D 2.14.13

Attachment 4 – Visual Examination Batch Data Report Cover Sheet

Batch Data Report No.: ANL RHVE 13001 Date: 02-07-13

	Waste Container ID Number:
1	1171
2	1173
3	1175
4	1177
5	1179
6	1181
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	

GP 02-07-13

CCP RECORDS ORIGINAL
DATE REC'D 2.12.13

01

Attachment 5 – Visual Examination Batch Data Report Table of Contents

Batch Data Report No.: ANLRHVE13001 Date: 02-07-13

Item	Description	Page No.
1	Visual Examination Batch Data Report Cover Sheet (Attachment 4)	01
2	Visual Examination Batch Data Report Table of Contents (Attachment 5)	02
3	Visual Examination Data Forms (Attachment 1)	03
4	Visual Examination Independent Technical Reviewer Checklist (Attachment 2)	39
5	Copy of NCRs (N/A [If not applicable])	NA

Attachment 1 – Visual Examination Data Form

Site ID: RHANL	
Examination Date: 1-23-13	Batch Number: NA
Procedure #: CCP-TP-500	Revision #: 11 / Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A	Recording Start: NA / Recording Stop: NA
Initial Container ☒ N/A	Final Container ☐ N/A
Container or Package ID Number:	Container or Package ID Number: 1171
Container Type:	Container Type: 30 GALLON CONTAINER
Waste Matrix Code:	Waste Matrix Code: S5400
Waste Stream:	Waste Stream: AE RHDM
	Rigid Liner: ☒Y ☐N Type: 140 MIL / Rigid Liner Lid: ☐ Y ☒N
	Rigid Liner Vented or Hole Size: NA
Percent Fill: / Percent Organic Waste:	Percent Fill: 85% / Percent Organic Waste: 30%
Layers of Confinement: / Closure Method:	Layers of Confinement: 1 / Closure Method: HEAT SEALED FILTERED
Comments (e.g., filter information, NCRs): NA	

Waste Description:

BOTTOM CAN: 1062

TOP CAN: 1117

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1171

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: N/A

Visual Examination Operator 1:
ERIC BOND (Print Name) — Signature — 1-23-13 (Date)

Visual Examination Operator 2:
GLORIA RUPPERT (Print Name) — Gloria Ruppert (Signature) — 1-23-13 (Date)

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 4-19-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 1062		Container or Package ID Number:	
Container Type: 7 GALLON CONTAINER		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AEPHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 80%	Percent Organic Waste: 50%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7 GALLON CONTAINER (IM)
DRY RAGS (C)
GREEN SCRUBBING PAD (P)
METAL HARDWARE (IM)
EMPTY BOTTLES (P)
TAPE (C)
EMPTY BAGS (P)
BROKEN GLASS (OIM)

05

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1062

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:

Print Name	Signature	Date
ERIC BOND	Eric Bond	9-19-12

Visual Examination Operator 2:

Print Name	Signature	Date
William H. Riley	William H. Riley	09-19-12

06

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 10-31-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 1117		Container or Package ID Number:	
Container Type: 7 GALLON CONTAINER		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AEBHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 80%	Percent Organic Waste: 20%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7 GALLON CONTAINER (IM)
METAL LABWARE (IM) (AM)
NAY RAGS (C)
PLASTIC PIECES (P)
EMPTY TUBES (IM)
FIREBRICK (OIM)
PAPER (C)

07

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1117

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:

Print Name	Signature	Date
ERIC BOND	[signature]	10-31-12

Visual Examination Operator 2:

Print Name	Signature	Date
William H. Riley	[signature]	10-31-12

08

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 1-24-13		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☒ N/A		Final Container ☐ N/A	
Container or Package ID Number:		Container or Package ID Number: 1173	
Container Type:		Container Type: 30 GALLON CONTAINER	
Waste Matrix Code:		Waste Matrix Code: S5400	
Waste Stream:		Waste Stream: AERHDM	
		Rigid Liner: ☒Y ☐N Type 140 MIL	Rigid Liner Lid: ☐ Y ☒N
		Rigid Liner Vented or Hole Size: NA	
Percent Fill:	Percent Organic Waste:	Percent Fill: 85%	Percent Organic Waste: 30%
Layers of Confinement:	Closure Method:	Layers of Confinement: 1	Closure Method: HEAT SEALED FILTERED
Comments (e.g., filter information, NCRs): NA			

Waste Description:

BOTTOM CAN: 1083

TOP CAN: 947

09

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1173

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:		
ERIC BOND	Eric Bond	1-24-13
Print Name	Signature	Date

Visual Examination Operator 2:		
GLORIA RUPPERT	Gloria Ruppert	1-24-13
Print Name	Signature	Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 11-01-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒N/A	
Container or Package ID Number: 1083		Container or Package ID Number:	
Container Type: 7-Gallon Container		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 90%	Percent Organic Waste: 30%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7-Gallon Container-(IM)
Dry Rags-(C)
Plastic Pieces-(P)
Metal hardware-(IM)
Empty Cans-(AM)
Empty Plastic Bags-(P)
Electrical Cord-(P)(OM)(IM)
Metal Pieces-(AM)(IM)
Empty tubes-(IM)
Steel wheel-(IM)
Asbestos Insulation-(OIM)

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1083

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
William H. Biley — Print Name
William H. Biley — Signature
11-01-12 — Date

Visual Examination Operator 2:
ERIC BOND — Print Name
Eric Bond — Signature
11-1-12 — Date

Attachment 1 – Visual Examination Data Form

Site ID: RHAM			
Examination Date: 9-14-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 947		Container or Package ID Number:	
Container Type: 7 GALLON CONTAINER		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHAM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 80%	Percent Organic Waste: 40%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7 GALLON CONTAINER (IM)

CUT UP PIECES OF METAL (IM) O-RINGS (R)

DRY RAGS (C)

POUCH MATERIAL (P)

ELECTRICAL CORD (P)(OM)(IM)

PAPER (C)

TAPE (C)

SAW BLADE (IM)

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 947

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
ERIC BONDS (Print Name) — Eric Bond (Signature) — 9-14-12 (Date)

Visual Examination Operator 2:
William H. Riley (Print Name) — William H. Riley (Signature) — 09-14-12 (Date)

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 1-28-13		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☒ N/A		Final Container ☐ N/A	
Container or Package ID Number:		Container or Package ID Number: 1175	
Container Type:		Container Type: 30 GALLON CONTAINER	
Waste Matrix Code:		Waste Matrix Code: S5400	
Waste Stream:		Waste Stream: AERAM	
		Rigid Liner: ☒Y ☐N Type: 140 MIL	Rigid Liner Lid: ☐ Y ☒N
		Rigid Liner Vented or Hole Size: NA	
Percent Fill:	Percent Organic Waste:	Percent Fill: 85%	Percent Organic Waste: 30%
Layers of Confinement:	Closure Method:	Layers of Confinement: 1	Closure Method: HEAT SEALED FILTERED
Comments (e.g., filter information, NCRs): NA			

Waste Description:

BOTTOM CAN: 1097

TOP CAN: 929

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1175

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1: ERIC BOND Print Name	Eric Bond Signature	1-28-13 Date
Visual Examination Operator 2: GLORIA RUPPERT Print Name	Gloria Ruppert Signature	1-28-13 Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL	
Examination Date: 10-25-12	Batch Number: NA
Procedure #: CCP-TP-500	Revision #: 11 / Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A	Recording Start: NA / Recording Stop: NA

Initial Container ☐ N/A	Final Container ☒ N/A
Container or Package ID Number: 1097	Container or Package ID Number:
Container Type: 7 GALLON CONTAINER	Container Type:
Waste Matrix Code: S5400	Waste Matrix Code:
Waste Stream: AERHDM	Waste Stream:
	Rigid Liner: ☐Y ☐N Type: / Rigid Liner Lid: ☐Y ☐N
	Rigid Liner Vented or Hole Size:
Percent Fill: 90% / Percent Organic Waste: 30%	Percent Fill: / Percent Organic Waste:
Layers of Confinement: 0 / Closure Method: NA	Layers of Confinement: / Closure Method:

Comments (e.g., filter information, NCRs):

NA

Waste Description:

7 GALLON CONTAINER (IM) FIREBRICK (OIM)
DRY RAGS (C)
MET MOUNT FRAGMENTS (P) (IM)
PAPER (C)
METAL LABWARE (IM) (AM)
GLASS (OIM)

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1097

Prohibited Item(s) Summary	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:

Print Name	Signature	Date
ERIC BOWDS	[signature]	10-25-12

Visual Examination Operator 2:

Print Name	Signature	Date
William H. Riley	[signature]	10-25-12

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 9-19-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒N/A	
Container or Package ID Number: 429		Container or Package ID Number:	
Container Type: 7 GALLON CONTAINER		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 80%	Percent Organic Waste: 30%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7 GALLON CONTAINER (IM)
DRY RAGS (C)
BROKEN GLASS (OIM)
METAL HARDWARE (IM)
EMPTY BOTTLES (P)
DRY SCRUBBING PAD (P)
SHW ZAW BLADES (IM)
RUBBER BAND (R)

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 929

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
ERIC BOND (Print Name) — Signature — 9-19-12 (Date)

Visual Examination Operator 2:
William H. Riley (Print Name) — Signature — 09-19-12 (Date)

Attachment 1 – Visual Examination Data Form

Site ID: BHANL			
Examination Date: 1-29-13		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☒N/A		Final Container ☐ N/A	
Container or Package ID Number:		Container or Package ID Number: 1177	
Container Type:		Container Type: 30 GALLON CONTAINER	
Waste Matrix Code:		Waste Matrix Code: S5400	
Waste Stream:		Waste Stream: AERHOM	
		Rigid Liner: ☒Y ☐N Type: 140 MIL	Rigid Liner Lid: ☐ Y ☒N
		Rigid Liner Vented or Hole Size: NA	
Percent Fill:	Percent Organic Waste:	Percent Fill: 85%	Percent Organic Waste: 10%
Layers of Confinement:	Closure Method:	Layers of Confinement: 1	Closure Method: HEAT SEALED FILTERED
Comments (e.g., filter information, NCRs): NA			

Waste Description:

BOTTOM CAN: 1098

TOP CAN: 1022

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1177

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
GLORIA RUPPERT — Print Name
Gloria Ruppert — Signature
1-29-13 — Date

Visual Examination Operator 2:
ERIC BOND — Print Name
Eric Bond — Signature
1-29-13 — Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 11-8-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 1098		Container or Package ID Number:	
Container Type: 7 GALLON CONTAINER		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AEHADM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 80%	Percent Organic Waste: 10%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7 GALLON CONTAINER (IM)
FIREBRICK PIECES (OIM)
DRY RAGS (C)
METAL LABWARE (IM)(AM)
EMPTY BOTTLES (P)
CUT UP SAW HANDLE (P)(C)
PAPER (C)
CLOTH ROPE (C)

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1098

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:		
ERIC BOND	Eric Bond	11-8-12
Print Name	Signature	Date

Visual Examination Operator 2:		
William H. Riley	William H. Riley	11-08-12
Print Name	Signature	Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 11-8-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 1022		Container or Package ID Number:	
Container Type: 7 GALLON CONTAINER		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHAM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 90%	Percent Organic Waste: 10%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7 GALLON CONTAINER (IM) PLASTIC LABWARE (P)
SAW BLADE (IM)
METAL LABWARE (IM)
FIRE BRICK PIECES (OIM)
EMPTY BOTTLES (P)
ELECTRICAL CABLE (R)(IM)(OM)
EMPTY TUBES (IM)
PAPER (C)

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1022

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:

Print Name	Signature	Date
ERIC BORN	[signature]	11-8-12

Visual Examination Operator 2:

Print Name	Signature	Date
William H. Riley	[signature]	11-08-12

Attachment 1 – Visual Examination Data Form

Site ID: RHANL	
Examination Date: 1-29-13	Batch Number: NA
Procedure #: CCP-TP-500	Revision #: 11 / Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A	Recording Start: NA / Recording Stop: NA
Initial Container ☒ N/A	Final Container ☐ N/A
Container or Package ID Number:	Container or Package ID Number: 1179
Container Type:	Container Type: 30 GALLON CONTAINER
Waste Matrix Code:	Waste Matrix Code: S5400
Waste Stream:	Waste Stream: AERHDM
	Rigid Liner: ☒Y ☐N Type: 140 MIL / Rigid Liner Lid: ☐ Y ☒N
	Rigid Liner Vented or Hole Size: NA
Percent Fill: / Percent Organic Waste:	Percent Fill: 85% / Percent Organic Waste: 20%
Layers of Confinement: / Closure Method:	Layers of Confinement: 1 / Closure Method: HEAT SEALED FILTERED
Comments (e.g., filter information, NCRs): NA	

Waste Description:

BOTTOM CAN: 912

TOP CAN: 1100

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1179

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: N.A

Visual Examination Operator 1:
GLORIA RUPPERT — Print Name
Gloria Ruppert — Signature
01-29-13 — Date

Visual Examination Operator 2:
ERIC BONI — Print Name
Eric Boni — Signature
1-29-13 — Date

Attachment 1 – Visual Examination Data Form

Site ID: BHAWL			
Examination Date: 9-19-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 912		Container or Package ID Number:	
Container Type: 7 GALLON CONTAINER		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: A E R H D M		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 85%	Percent Organic Waste: 40%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7 GALLON CONTAINER (IM)
DRY RAGS (C)
EMPTY BAGS (P)
TAPE (C)
LEAD BRICK (OM)
MET MOUNT FRAGMENTS (P)(IM)
METAL HARDWARE (IM)
BROKEN GLASS (OIM)
EMPTY PLASTIC BOTTLES (P)
SAW BLADES (IM)

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 912

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:		
ERIC BOND	Eric Bond	9-19-12
Print Name	Signature	Date

Visual Examination Operator 2:		
William H. Riley	William H. Riley	09-19-12
Print Name	Signature	Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 11-8-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 1100		Container or Package ID Number:	
Container Type: 7 GALLON CONTAINER		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 90%	Percent Organic Waste: 10%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7 GALLON CONTAINER (IM)
CUT UP METAL PIECES (IM)(AM)
BOTTLE CAPS (P)
EMPTY BOTTLES (P)
RUBBER LABWARE (R)
FIREBRICK PIECES (OIM)
ELECTRICAL CORD (R)(IM)(OM)

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1100

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1: ERIC BOND Print Name	Eric Bond Signature	11-8-12 Date
Visual Examination Operator 2: William H. Riley Print Name	William H. Riley Signature	11-08-12 Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 01-31-13		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☒N/A		Final Container ☐ N/A	
Container or Package ID Number:		Container or Package ID Number: 1181	
Container Type:		Container Type: 30 Gallon Container	
Waste Matrix Code:		Waste Matrix Code: S 5400	
Waste Stream:		Waste Stream: AERHDM	
		Rigid Liner: ☒Y ☐N Type: 140 Mil	Rigid Liner Lid: ☐ Y ☒N
		Rigid Liner Vented or Hole Size: NA	
Percent Fill:	Percent Organic Waste:	Percent Fill: 85	Percent Organic Waste: 40
Layers of Confinement:	Closure Method:	Layers of Confinement: 1	Closure Method: Heat Sealed Filtered
Comments (e.g., filter information, NCRs): NA			

Waste Description:

Bottom Can: 1114

Top Can: 1045

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1181

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
Gary Redman — Print Name
Gary Redman — Signature
01-31-13 — Date

Visual Examination Operator 2:
GLORIA RUPPERT — Print Name
Gloria Ruppert — Signature
01-31-13 — Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 10-31-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 114		Container or Package ID Number:	
Container Type: 7 GALLON CONTAINER		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AEBHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 80%	Percent Organic Waste: 20%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7 GALLON CONTAINER (IM)
METAL LABWARE (IM) (AM)
MET MOUNT FRAGEMENTS (IM) ~~(R)~~ (P)
GLASS (OIM)
FIRE BRICK (OIM)
PAPER (C)
DAY RAGS (C)
GLOVES (R)
EMPTY CANS (IM)

EB 1-31-13

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1114

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:

Print Name	Signature	Date
ERIC BOND	Eric Bond	10-31-12
ERIC BOND	Eric Bond	1-31-13

Visual Examination Operator 2:

Print Name	Signature	Date
William H. Riley	William H. Riley	10-31-12
William H. Riley	William H. Riley	01-31-13

Attachment 1 – Visual Examination Data Form

Site ID: RHANL	
Examination Date: 08-20-12	Batch Number: NA
Procedure #: CCP TP-500	Revision #: 11 / Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A	Recording Start: NA / Recording Stop: NA
Initial Container ☐ N/A	**Final Container** ☒ N/A
Container or Package ID Number: 1045	Container or Package ID Number:
Container Type: 7 Gallon Container	Container Type:
Waste Matrix Code: S 5400	Waste Matrix Code:
Waste Stream: AERIDM	Waste Stream:
	Rigid Liner: ☐Y ☐N Type: / Rigid Liner Lid: ☐Y ☐N
GR 08-20-12	Rigid Liner Vented or Hole Size:
Percent Fill: 90 / Percent Organic Waste: ~~65~~ 60	Percent Fill: / Percent Organic Waste:
Layers of Confinement: 0 / Closure Method: NA	Layers of Confinement: / Closure Method:
Comments (e.g., filter information, NCRs): NA	

Waste Description:

7 Gallon Container (Im)
Manipulator Tape (Im)
hard ware (Im)
radio receivers(om)(P)
Tape (c)(P)
dry rags (c)
glove box gloves (R)
Flash light (om)(Im)
electrical cord (om)(P)
hand Tools (Im)
Battery charger (Im)(om)(P)
engraver (om)(Im)(P)
Circuit Board (P)(om)(Im)
glass (OIm)
suction cup (P)(R)
Metal pieces (Im)(Am)
empty plastic bag (P)
plastic cap (P)
08-20-12 WHR ~~Q Tips (c)~~
Manipulator part (Im)(Am)
empty metal Tube (Im)
O rings (R)
brush (P)(c)
electrical plug (om)(P)(Im)
metal cable (Im)
met mount Fragments (om)(Im) (P)
Saw blades (Im) (OIm)
Cotton Swabs - (c)

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 10215

Prohibited Items Summary	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste ddes **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
Shipping Items			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: N/A

Visual Examination Operator 1:
Gary Redman (Print Name) — Gary Redman (Signature) — 08-20-12 (Date)

Visual Examination Operator 2:
William H. Riley (Print Name) — William H. Riley (Signature) — 08-20-12 (Date)

Attachment 2 – Visual Examination Independent Technical Reviewer Checklist

Batch Data Report No.: ANLRHVE13001

1. Were data generation and reduction conducted in a technically correct manner in accordance with the methods (procedure) used?	☐ NO	☒ YES	☐ N/A
2. Was the correct revision of the operating procedure used?	☐ NO	☒ YES	☐ N/A
3. Were all the transcription errors corrected?	☐ NO	☐ YES	☒ N/A
4. Are BDR contents complete and match the Visual Examination Batch Data report Table of Contents?	☐ NO	☒ YES	☐ N/A
5. Does the BDR include VE for no more than 20 containers?	☐ NO	☒ YES	☐ N/A
6. Is all data recorded signed and dated in reproducible ink?	☐ NO	☒ YES	☐ N/A
7. Is all raw data recorded clearly, legibly, and accurately?	☐ NO	☒ YES	☐ N/A
8. Are all changes to original data lined out, initialed and dated by the individual making the changes or an individual authorized to make the change?	☐ NO	☒ YES	☐ N/A
9. Is there an adequate written description of the contents?	☐ NO	☒ YES	☐ N/A
10. Were the recording equipment checks satisfactory?	☐ NO	☐ YES	☒ N/A
11. Has each container in this BDR been evaluated for the presence of prohibited wastes?	☐ NO	☒ YES	☐ N/A
12. Has the physical waste form in each container in this BDR been evaluated against the Waste Stream Description and the Waste Matrix Code?	☐ NO	☒ YES	☐ N/A
13. Have the RH Quality Assurance Objectives (QAOs) for VE been met?	☐ NO	☒ YES	☐ N/A
Precision – reconciled discrepancies between operators or between the operator and ITR.	☐	☒	☐
Accuracy – trained operators	☐	☒	☐
Representativeness – description of container contents	☐	☒	☐
Completeness – completed data form and/or recording	☐	☒	☐
Comparability – proper training and adequate AK source documents are available for unopened containers.	☐	☒	☐
14. Were NCRs generated included in the BDR?	☐ NO	☐ YES	☒ N/A
Comments: NA			

Independent Technical Reviewer:

Monty Harris — Printed Name

Monterey Harris — Signature

2-8-13 — Date

DIVIDER PAGE ONLY

Not part of page count

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523 or 575-234-7431

Fax Number: 575-234-7033

[X] Original Record
[ ] Fax Record
[ ] Electronic Record
[ ] Copy

Attn:	Sheri Punchios	From:	Wes Root
Ship to:	S. M. Stoller WIPP Rec. Mgmt. Govt.	Site:	ANL-E
	CCP Records	Company:	Nuclear Waste Partnership LLC
	4021 National Parks Hwy	Telephone Number:	630-252-8306
	Carlsbad, NM 88220	Date Sent:	2-8-13
Telephone Number:	575-234-7095		

Document Number	Title / Description	Record Date	Total Pages
ANLRHVE13001	Batch Data Report – Waste Container ID Numbers: 1171, 1173, 1175, 1177, 1179 and 1181.	02-07-13	39

Comments

None

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

	Signature	Printed Name	Date
Records Accepted [✓]	Linda Martin	LINDA MARTIN	2/12/13
Records Rejected [ ]			

Reason for Rejection:

Re-submittal:

Signature	Printed Name	Date

```
*********************
***   TX REPORT   ***
*********************

TRANSMISSION OK

TX/RX NO                3003
DESTINATION TEL #       916302526706
DESTINATION ID          WES ROOT
ST. TIME                02/12 07:47
TIME USE                00'17
PAGES SENT                1
RESULT                  OK
```

Controlled Copy

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523 or 575-234-7431

Fax Number: 575-234-7033

[X] Original Record [ ] Copy
[ ] Fax Record
[ ] Electronic Record

Attn:	Sheri Punchios	From:	Wes Root
Ship to:	S. M. Stoller WIPP Rec. Mgmt. Govt.	Site:	ANL-E
	CCP Records	Company:	Nuclear Waste Partnership LLC
	4021 National Parks Hwy	Telephone Number:	630-252-8306
	Carlsbad, NM 88220	Date Sent:	2-8-13
Telephone Number:	575-234-7095		

Document Number	Title/Description	Date	Pages
ANLRHVE13001	Batch Data Report – Waste Container ID Numbers: 1171, 1173, 1175, 1177, 1179 and 1181.	02-07-13	39

Comments

None

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

	Signature	Printed Name	Date
Records Accepted [✓]	Linda Martin	LINDA MARTIN	2.12.13
Records Rejected [ ]			

Reason for Rejection:

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523 or 575-234-7431

Fax Number: 575-234-7033

- [ ] Original Record
- [ ] Fax Record
- [x] Electronic Record
- [ ] Copy

Attn:	Linda Martin	From:	Laura Nelson
Ship to:	CCP Records	Site:	Denver
	4021 National Parks Hwy	Company:	WTS
	MS:GSA:212	Telephone Number:	303-843-2269
	Carlsbad, NM 88220	Date Sent:	2-13-13
Telephone Number:	575-234-7523		

Document Number	Title / Description	Record Date	Total Pages
ANLRHVE13001	SPM Checklist	2-13-13	1
	NA		

Comments

NA

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

	Signature	Printed Name	Date
Records Accepted [✓]	Linda Martin	LINDA MARTIN	2.14.13
Records Rejected [ ]			

Reason for Rejection:

Re-submittal:

Signature	Printed Name	Date

```
*********************
***   TX REPORT   ***
*********************
```

TRANSMISSION OK

TX/RX NO	3065
DESTINATION TEL #	913038432208
DESTINATION ID	DENVER
ST. TIME	02/14 08:08
TIME USE	00'15
PAGES SENT	1
RESULT	OK

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523 or 575-234-7431

Fax Number: 575-234-7033

[ ] Original Record [ ] Copy
[ ] Fax Record
[x] Electronic Record

Attn:	Linda Martin	From:	Laura Nelson
Ship to:	CCP Records	Site:	Denver
	4021 National Parks Hwy	Company:	WTS
	MS:GSA:212	Telephone Number:	303-843-2269
	Carlsbad, NM 88220	Date Sent:	2-13-13
Telephone Number:	575-234-7523		

Document Number	Title/Description	Record Date	Total Pages
ANLRHVE13001	SPM Checklist	2-13-13	1
	NA		

Comments

NA

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

DIVIDER

PAGE

Attachment 3 – Visual Examination Site Project Manager Checklist

Batch Data Report No.: ANLRHVE13007

1. Has all the data received an independent technical review as evidenced by a completed checklist (Attachment 2) and the appropriate ITR signature?		☐ NO	☑ YES
2. Are BDR contents complete and match the Visual Examination Batch Data Report Table of Contents?		☐ NO	☑ YES
3. Is the BDR complete (appropriately filled in forms for each container)?		☐ NO	☑ YES
4. Have the RH Quality Assurance Objectives (QAOs) for VE been met?			
Precision – reconciled discrepancies between operators		☐ NO	☑ YES
Accuracy – trained operators		☐ NO	☑ YES
Representativeness – description of container contents		☐ NO	☑ YES
Completeness – completed data form and/or recording		☐ NO	☑ YES
Comparability – proper training and adequate AK for unopened containers		☐ NO	☑ YES
5. Were NCRs generated included in the BDR?	☐ NO	☐ YES	☑ N/A

Comments

No NCR'S.

SPM:

Laura Nelson
Printed Name

Laura Nelson
Signature

6/12/2013
Date

NTPC RECORDS ORIGINAL
DATE REC'D 6/12/13

Attachment 4 – Visual Examination Batch Data Report Cover Sheet

Batch Data Report No.: ANLRHVE13007 Date: 05-31-13

	Waste Container ID Number:
1	1241
2	1242
3	
4	
5	
6	
7	
8	
9	05-31-13
10	
11	
12	WHR
13	
14	
15	
16	
17	
18	
19	
20	

NTPC RECORDS ORIGINAL
DATE REC'D 6/12/13

01

Attachment 5 – Visual Examination Batch Data Report Table of Contents

Batch Data Report No.: ANLRHVE13007 Date: 05-31-13

Item	Description	Page No.
1	Visual Examination Batch Data Report Cover Sheet (Attachment 4)	1
2	Visual Examination Batch Data Report Table of Contents (Attachment 5)	2
3	Visual Examination Data Forms (Attachment 1)	3
4	Visual Examination Independent Technical Reviewer Checklist (Attachment 2)	15
5	Copy of NCRs (N/A [If not applicable])	NA

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 5-30-13		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☒ N/A		Final Container ☐ N/A	
Container or Package ID Number:		Container or Package ID Number: 1241	
Container Type:		Container Type: 30 GALLON CONTAINER	
Waste Matrix Code:		Waste Matrix Code: S5400	
Waste Stream:		Waste Stream: AERHDM	
		Rigid Liner: ☒Y ☐N Type: 140 MIL	Rigid Liner Lid: ☐ Y ☒N
		Rigid Liner Vented or Hole Size: NA	
Percent Fill:	Percent Organic Waste:	Percent Fill: 85	Percent Organic Waste: 20
Layers of Confinement:	Closure Method:	Layers of Confinement: 1	Closure Method: HEAT SEALED FILTERED
Comments (e.g., filter information, NCRs): NA			

Waste Description:

BOTTOM CAN: 949

TOP CAN: 1070

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1241

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:		
ERIC BOND	[signature]	5-30-13
Print Name	Signature	Date

Visual Examination Operator 2:		
William H. Riley	[signature]	05-30-13
Print Name	Signature	Date

04

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 09-13-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 949		Container or Package ID Number:	
Container Type: 7 GALLON CONTAINER		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 90	Percent Organic Waste: 20	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

(Im) 7 GALLON CONTAINER
(Im) SAW BLADE
(c) DRY RAGS
~~(c)~~ (P) WHR-09-13-12 PLASTIC PIECE
(Om) LEAD PIECE
(Im) STEEL FRAME WITH WHEEL
(Im) METAL HARDWARE
(c) TAPE
(c) CARDBOARD
(P) VACUUM HOSE
(R) GLOVE BOX GLOVE
(Im) MANIPULATOR TAPE

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 949

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
GLORIA RUPPERT — Print Name
Gloria Ruppert — Signature
9-13-12 — Date

Visual Examination Operator 2:
William H. Riley — Print Name
William H. Riley — Signature
09-13-12 — Date

06

Attachment 1 – Visual Examination Data Form

Site ID: RHBNL			
Examination Date: 3-11-13		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 1070		Container or Package ID Number:	
Container Type: 7 GALLON CONTAINER		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHSM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 80%	Percent Organic Waste: 20%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7 GALLON CONTAINER (IM)
METAL LABWARE (IM)(AM)
EMPTY BAGS (P)
EMPTY BOTTLES (P)
TAPE (C)
PAPER (C)
SAW BLADES (IM)

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1070

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:		
ERIC BOND	Eric Bond	3-11-13
Print Name	Signature	Date

Visual Examination Operator 2:		
William H. Riley	William H. Riley	03-11-13
Print Name	Signature	Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 5-30-13		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☒ N/A		Final Container ☐ N/A	
Container or Package ID Number:		Container or Package ID Number: 1242	
Container Type:		Container Type: 30 GALLON CONTAINER	
Waste Matrix Code:		Waste Matrix Code: S5400	
Waste Stream:		Waste Stream: AERHAM	
		Rigid Liner: ☒Y ☐N Type: 140 MIL	Rigid Liner Lid: ☐ Y ☒N
		Rigid Liner Vented or Hole Size: NA	
Percent Fill:	Percent Organic Waste:	Percent Fill: 85%	Percent Organic Waste: 30%
Layers of Confinement:	Closure Method:	Layers of Confinement: 1	Closure Method: HEAT SEALED FILTERED
Comments (e.g., filter information, NCRs): NA			

Waste Description:

BOTTOM CAN: 1133

TOP CAN: 1021

09

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1242

Prohibited Items Survey	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH-TRU Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
ERIC BOND (Print Name) — Signature — 5-30-13 (Date)

Visual Examination Operator 2:
William H. Riley (Print Name) — Signature — 05-30-13 (Date)

Attachment 1 – Visual Examination Data Form

Site ID: RHANC			
Examination Date: 3-11-13		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 1133		Container or Package ID Number:	
Container Type: 7 GALLON CONTAINER		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHAM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 90%	Percent Organic Waste: 30%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description: 7 GALLON CONTAINER (IM)
MANIPULATOR TAPE (IM)
GLOVEBOX GLOVES (R)
METAL LABWARE (IM)
TAPE (C)
EMPTY CANS (AM)
O-RING (R)
PLASTIC LABWARE (P)
CARDBOARD (C)

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1133

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: N/A

Visual Examination Operator 1:
ERIC BOND (Print Name) — Signature — 3-11-13 (Date)

Visual Examination Operator 2:
William H. Riley (Print Name) — Signature — 03-11-13 (Date)

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 11-01-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒N/A	
Container or Package ID Number: 1021		Container or Package ID Number:	
Container Type: 7-Gallon Container		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 90%	Percent Organic Waste: 30%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description: 7-Gallon Container - (IM)
Metal Pieces - (IM)
Asbestos Insulation - (OIM)
Dry Rags - (C)
Empty tubes - (IM)
Metal hardware - (IM)
Empty Cans WHR 11-01-12 - (~~AM~~) (IM)
Plastic Cap - (P)
Empty plastic bags - (P)
tape - (C)
Paper - (C)

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1021

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:

Print Name	Signature	Date
William H. Riley	William H. Riley	11-01-12

Visual Examination Operator 2:

Print Name	Signature	Date
ERIC BOND	Eric Bond	11-1-12

Attachment 2 – Visual Examination Independent Technical Reviewer Checklist

Batch Data Report No.: ANL RHVE 13 007

1. Were data generation and reduction conducted in a technically correct manner in accordance with the methods (procedure) used?	☐ NO	☒ YES	☐ N/A
2. Was the correct revision of the operating procedure used?	☐ NO	☒ YES	☐ N/A
3. Were all the transcription errors corrected?	☐ NO	☐ YES	☒ N/A
4. Are BDR contents complete and match the Visual Examination Batch Data report Table of Contents?	☐ NO	☒ YES	☐ N/A
5. Does the BDR include VE for no more than 20 containers?	☐ NO	☒ YES	☐ N/A
6. Is all data recorded signed and dated in reproducible ink?	☐ NO	☒ YES	☐ N/A
7. Is all raw data recorded clearly, legibly, and accurately?	☐ NO	☒ YES	☐ N/A
8. Are all changes to original data lined out, initialed and dated by the individual making the changes or an individual authorized to make the change?	☐ NO	☒ YES	☐ N/A
9. Is there an adequate written description of the contents?	☐ NO	☒ YES	☐ N/A
10. Were the recording equipment checks satisfactory?	☐ NO	☐ YES	☒ N/A
11. Has each container in this BDR been evaluated for the presence of prohibited wastes?	☐ NO	☒ YES	☐ N/A
12. Has the physical waste form in each container in this BDR been evaluated against the Waste Stream Description and the Waste Matrix Code?	☐ NO	☒ YES	☐ N/A
13. Have the RH Quality Assurance Objectives (QAOs) for VE been met?	☐ NO	☒ YES	☐ N/A
Precision – reconciled discrepancies between operators or between the operator and ITR.	☐	☒	☐
Accuracy – trained operators	☐	☒	☐
Representativeness – description of container contents	☐	☒	☐
Completeness – completed data form and/or recording	☐	☒	☐
Comparability – proper training and adequate AK source documents are available for unopened containers.	☐	☒	☐
14. Were NCRs generated included in the BDR?	☐ NO	☐ YES	☒ N/A

Comments: NA

Independent Technical Reviewer:

Printed Name	Signature	Date
Gary Redman	Gary Redman	06-10-13

DIVIDER PAGE ONLY

Not part of page count

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523, 575-234-7431, or 575-234-7095

Fax Number: 575-234-7033

[X] Original Record
[ ] Fax Record
[ ] Electronic Record
[ ] Copy

Attn:	Sheila Pearcy	From:	Wes Root
Ship to:	S.M. Stoller Rec. Mgmt. Govt.	Site:	ANL-E
	CCP Records	Company:	Nuclear Waste Partnership LLC
	4021 National Parks Hwy	Telephone Number:	630-252-8306
	Carlsbad, NM 88220	Date Sent:	6-10-13
Telephone Number:	575-234-7523		

Document Number	Title / Description	Record Date	Total Pages
ANLRHVE13007	Batch Data Report – Waste Container ID Numbers: 1241, 1242	5-31-13	15
	WR 6-10-13		

Comments

None

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

	Signature	Printed Name	Date
Records Accepted [X]	JM Patterson	Jeffrey Patterson	6/11/13
Records Rejected [ ]			

Reason for Rejection:

Re-submittal:

Signature	Printed Name	Date

```
*********************
***   TX REPORT   ***
*********************

TRANSMISSION OK

TX/RX NO                2540
DESTINATION TEL #       916302526706
DESTINATION ID          WES ROOT
ST. TIME                06/12 09:40
TIME USE                00'16
PAGES SENT                1
RESULT                  OK
```

Controlled Copy

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523, 575-234-7431, or 575-234-7095

Fax Number: 575-234-7033

[X] Original Record
[ ] Fax Record
[ ] Electronic Record
[ ] Copy

Attn:	Sheila Pearcy	From:	Wes Root
Ship to:	S.M. Stoller Rec. Mgmt. Govt.	Site:	ANL-E
	CCP Records	Company:	Nuclear Waste Partnership LLC
	4021 National Parks Hwy	Telephone Number:	630-252-8306
	Carlsbad, NM 88220	Date Sent:	6-10-13
Telephone Number:	575-234-7523		

Document Number	Title / Description	Record Date	Total Pages
ANLRHVE13007	Batch Data Report – Waste Container ID Numbers: 1241 1242	5-31-13	15
	WR 6-12-13		

Comments

None

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523, 575-234-7431, or 575-234-7095

Fax Number: 575-234-7033

- [ ] Original Record
- [ ] Fax Record
- [x] Electronic Record
- [ ] Copy

Attn:	Jeff Patterson	From:	Laura Nelson
Ship to:	CCP Records	Site:	Denver
	4021 National Parks Highway	Company:	NWP
	MS:GSA:212	Telephone Number:	303-843-2269
	Carlsbad, NM 88220	Date Sent:	6/10/13
Telephone Number:	575-234-7523		

Document Number	Title / Description	Record Date	Total Pages
ANLRHVE13007	SPM Checklist	6/10/13	1
	NA		

Comments

NA

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

	Signature	Printed Name	Date
Records Accepted [x]	J. Patterson	Jeffrey Patterson	6/12/13
Records Rejected [ ]			

Reason for Rejection:

Re-submittal:

Signature	Printed Name	Date

```
**********************
***   TX REPORT   ***
**********************

TRANSMISSION OK

TX/RX NO                4747
DESTINATION TEL #       913038432208
DESTINATION ID          DENVER
ST. TIME                06/12 10:55
TIME USE                00'15
PAGES SENT                1
RESULT                  OK
```


Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523, 575-234-7431, or 575-234-7095

Fax Number: 575-234-7033

[ ] Original Record
[ ] Fax Record
[X] Electronic Record
[ ] Copy

Attn:	Jeff Patterson	From:	Laura Nelson
Ship to:	CCP Records	Site:	Denver
	4021 National Parks Highway	Company:	NWP
	MS:GSA:212	Telephone Number:	303-843-2269
	Carlsbad, NM 88220	Date Sent:	6/10/13
Telephone Number:	575-234-7523		

Document Number	Title / Description	Record Date	Total Pages
ANLRHVE13007	SPM Checklist	6/10/13	1
	NA		

Comments

NA

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

GEN2

GEN2

Washington
TRU Solutions LLC

CP:08:00374
UFC:5900.00

INTER-OFFICE CORRESPONDENCE

DATE: July 23, 2008

FROM: I. S. Quintana LOCATION: Special Operations and RH Development

TO: CCP Records Custodian LOCATION: Retrieval, Characterization & Transportation

SUBJECT: TRANSMITTAL OF WASTE STREAM PROFILE FORM, ATTACHMENT 2, FOR REMOTE-HANDLED WASTE STREAM AERHDM AT THE ARGONNE NATIONAL LABORATORY

Please accept the attached Waste Stream Profile Form, Attachment 2, to be placed in records for the Remote-Handled Argonne National Laboratory waste stream, AERHDM.

ISQ:jmc

Attachment

cc: (w/o attachment)
L. Porter ED

Attachment 2 – CCP Waste Stream Profile Form

(1) Waste Stream Profile Number: AERHDM					
(2) Generator site name: Argonne National Laboratory			(4)Technical contact: Larry Porter		
(3) Generator site EPA ID: IL3890008946			(6) Technical contact phone number: 505-234-7481		
(5) Date of audit report approval by New Mexico Environment Department (NMED): 10/31/2007					
(7) Title, version number, and date of documents used for WAP Certification: CCP-PO-001, CCP Transuranic Waste Characterization Quality Assurance Project Plan, Revision 16, October 31, 2007 CCP-PO-002, CCP Transuranic Waste Certification Plan, Revision 20, November 2, 2007 CCP-PO-500, CCP/ANL RH-TRU Waste Interface Document, Revision 1, November 16, 2006					
(8) Did your facility generate this waste?	YES	X	NO		
(9) If no, provide the name and EPA ID of the original generator:					
Waste Stream Information[1]					
(10) WIPP ID: AE-T009			(11) Summary Category Group: S5000		
(12) Waste Matrix Code Group: Heterogeneous Waste			(13) Waste Stream Name: Remote Handled Heterogeneous Debris from the Argonne National Laboratory		
(14) Description from the TWBIR: This waste is generated primarily as a result of fuel research activities.					
(15) Defense TRU Waste:	YES	X	NO		
(16) Check One:	CH		RH	X	
(17) Number of SWBs 0	(18) Number of Drums 0			(19) Number of Canisters 48[3]	
(20) Batch Data report numbers supporting this waste stream characterization: See Characterization Information Summary (CIS) Correlation of Container Identification Numbers to Batch Data Report Numbers					
(21) List applicable EPA Hazardous Waste Numbers:[2] D004, D005, D006, D007, D008, D009, D010, D011, D019, D028, D029, F002 and F005					
(22) Applicable TRUCON Content Numbers: AE 321, AE 325					
(23)**Acceptable Knowledge Information**[1]					
[For the following, enter the supporting documentation used (i.e., references and dates)]					
Required Program Information					
(23A) Map of site: CCP-AK-ANLE-500, Rev. 3, May 8, 2008, Attachments 1 and 2					
(23B) Facility mission description: CCP-AK-ANLE-500, Rev. 3, May 8, 2008, Section 4.1.3					
(23C) Description of operations that generate waste: CCP-AK-ANLE-500, Rev. 3, May 8, 2008, Sections 5.3					
(23D) Waste identification/categorization schemes: CCP-AK-ANLE-500, Rev. 3, May 8, 2008, Sections 5.4.1 and 5.4.2					
(23E) Types and quantities of waste generated: CCP-AK-ANLE-500, Rev. 3, May 8, 2008, Sections 4.2.1					
(23F) Correlation of waste streams generated from the same building and process, as applicable: CCP-AK-ANLE-500, Rev. 3, May 8, 2008, Section 4.2.2					
(24) Waste certification procedures: CCP-TP-530, CCP RH TRU Waste Certification and WWIS Data Entry, Rev. 5, July 23, 2007					
(25)Required Waste Stream Information					

(25A) Area(s) and building(s) from which the waste stream was generated: CCP-AK-ANLE-500, Rev. 3, May 8, 2008, Section 5.1			
(25B) Waste stream volume and time period of generation: CCP-AK-ANLE-500, Rev. 3, May 8, 2008, Section 5.2			
(25C) Waste generating process description for each building: CCP-AK-ANLE-500, Rev. 3, May 8, 2008, Section 5.3			
(25D) Waste Process flow diagrams: CCP-AK-ANLE-500, Rev. 3, May 8, 2008, Attachment 4			
(25E) Material inputs or other information identifying chemical/radionuclide content and physical waste form: CCP-AK-ANLE-500, Rev. 3, May 8, 2008, Section 5.4			
(25F) Waste Material Parameter Weight Estimates per unit of waste: See Table 2 of the Summation of Aspects of AK Summary Report: AERHDM			
(26) Which Defense Activity generated the waste: (check one)			
	Weapons activities including defense inertial confinement fusion	X	Naval Reactors development
	Verification and control technology		Defense research and development
	Defense nuclear waste and material by products management		Defense nuclear material production
	Defense nuclear waste and materials security and safeguards and security investigations		
(27)Supplemental Documentation			
(27A) Process design documents: See S1 AK#s on Attachment 1 to Summation of Aspects of AK Summary Report			
(27B) Standard operating procedures: See S2 AK#s on Attachment 1 to Summation of Aspects of AK Summary Report			
(27C) Safety Analysis Reports: See S3 AK#s on Attachment 1 to Summation of Aspects of AK Summary Report			
(27D) Waste packaging logs: See S4 AK#s on Attachment 1 to Summation of Aspects of AK Summary Report			
(27E) Test plans/research project reports: See S5 AK#s on Attachment 1 to Summation of Aspects of AK Summary Report			
(27F) Site databases: See S6 AK#s on Attachment 1 to Summation of Aspects of AK Summary Report			
(27G) Information from site personnel: See S7 AK#s on Attachment 1 to Summation of Aspects of AK Summary Report			
(27H) Standard industry documents: See S8 AK#s on Attachment 1 to Summation of Aspects of AK Summary Report			
(27I) Previous analytical data: See S9 AK#s on Attachment 1 to Summation of Aspects of AK Summary Report			
(27J) Material safety data sheets: See S10 AK#s on Attachment 1 to Summation of Aspects of AK Summary Report			
(27K) Sampling and analysis data from comparable/surrogate Waste: See S12 AK#s on Attachment 1 to Summation of Aspects of AK Summary Report			
(27L) Laboratory notebooks: N/A			
Confirmation Information			
For the following, when applicable, enter procedure title(s), number(s) and date(s)			
(28)	Radiography: N/A		
(29)	Visual Examination: CCP Remote-Handled Waste Visual Examination, CCP-TP-500, Revision 6, 10/25/2007		

(30)Comments:
For a list of the waste characterization procedures used and the reference and date of the respective procedures see the list of procedures on the attached CIS.

Reviewed by AK Expert: YES [X] Date: 5/9/008

Reviewed by STR (if necessary): YES [X] NA [ ] Date: 1/8/08

Waste Stream Profile Form Certification:

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

(31)	(32) Irene Quintana	(33) 5/19/08
Signature of Site Project Manager	Printed Name	Date

NOTE: (1) Use back of sheet or continuation sheets, if required.
(2) If radiography, visual examination, headspace gas analysis, and/or homogeneous solids/soils/gravel sample analysis were used to determine EPA Hazardous Waste Codes, attach signed Characterization Information Summary documenting this determination.
(3) This waste stream consists of 44 30-gallon drums packaged, with a projection of up to100 additional 30-gallon drums. Three 30-gallon drums will be packaged into 1 canister.

CHARACTERIZATION INFORMATION SUMMARY

WSPF # AERHDM

Lot 1

TABLE OF CONTENTS

Characterization Information Cover Page..... 002

Correlation of Container Identification Numbers to Batch Data Report Numbers..... 003

CCP Headspace Gas UCL_{90} Evaluation Form..... 005

Headspace Gas Summary Data..... 007

RTR/VE Summary of Prohibited Items and AK Confirmation..... 008

Reconciliation with Data Quality Objectives..... 009

CCP Characterization Information Summary Cover Page

Waste Stream # AERHDM Sub-Lot #: 1

AK Expert Review. Kevin Peters Date: 5/8/2008

SPM Review. Irene Quintana Date: 5/8/2008

SPM signature certifies that through Acceptable Knowledge testing and/or analysis that the waste identified in this summary is not corrosive, ignitable, reactive, or incompatible with the TSDF

A summary of the Acceptable Knowledge regarding this waste stream containing specific information about the corrosivity, reactivity, and ignitability of the waste stream is included as an attachment to the Waste Stream Profile Form. By reference, that information is included in this lot

List of procedures used:

Radiography (RTR/NDE)

NA	NA	NA	NA

Headspace Gas Sampling and Analysis (HSG):

CCP-TP-093	Rev 13	03/19/07	CCP Sampling of TRU Waste Containers
CCP-TP-106	Rev 5	11/16/06	CCP Headspace Gas Sampling Batch Data Report Preparation
CCP-TP-173	Rev. 0	05/03/07	CCP Analysis of Gas Samples for VOCs by GC/FID
CCP-TP-175	Rev. 0	05/02/07	CCP Analysis of Gas Samples for VOCs by GC/MS

Visual Examination (VE):

CCP-TP-500	Rev. 6	10/25/07	CCP Remote-Handled Waste Visual Examination
CCP-TP-500	Rev 5	06/01/07	CCP Remote-Handled Waste Visual Examination
CCP-TP-500	Rev. 4	11/16/06	CCP Remote-Handled Waste Visual Examination

Project Level Data Validation / DQO Reconciliation:

CCP-TP-001	Rev. 17	09/24/07	CCP Project Level Data Validation and Verification
CCP-TP-001	Rev 16	04/26/07	CCP Project Level Data Validation and Verification
CCP-TP-002	Rev. 19	12/22/06	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-003	Rev. 16	10/02/07	Data Analysis for S3000, S4000, and S5000 Characterization
CCP-TP-005	Rev. 18	11/16/06	CCP Acceptable Knowledge Documentation

WAP Certification:

CCP-PO-001	Rev. 16	10/31/07	CCP Transuranic Waste Characterization Quality Assurance Project Plan

CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

Waste Stream: # AERHDM

Sub-Lot # 1

Container ID Number	Historical Container ID	NDA BDR or Radiological Characterization BDR (CH only)	VE BDR	RTR BDR	Solids Sampling BDR	Solids Analytical BDR	Load Management/ Overpack Yes	Permit Required Headspace Gas BDR			
								Sample	Analysis		
00786	NA	NA	RHANLVE060002	NA	NA	NA		NA	NA	NA	NA
00790*	NA	NA	RHANLVE060002	NA	NA	NA		ANHSGS070001	ECL07038M	ECL07038G	NA
00810	NA	NA	RHANLVE060001_R1	NA	NA	NA		NA	NA	NA	NA
00811	NA	NA	RHANLVE060002	NA	NA	NA		NA	NA	NA	NA
00812	NA	NA	RHANLVE060003	NA	NA	NA		NA	NA	NA	NA
00813	NA	NA	RHANLVE060003	NA	NA	NA		NA	NA	NA	NA
00814	NA	NA	RHANLVE060003	NA	NA	NA		NA	NA	NA	NA
'00815*	NA	NA	RHANLVE060001_R1	NA	NA	NA		ANHSGS070001	ECL07038M	ECL07038G	NA
00816*	NA	NA	RHANLVE060001_R1	NA	NA	NA		ANHSGS070001	ECL07038M	ECL07038G	NA
00817	NA	NA	RHANLVE060001_R1	NA	NA	NA		NA	NA	NA	NA
00818*	NA	NA	RHANLVE060002	NA	NA	NA		ANHSGS070001	ECL07038M	ECL07038G	NA
00819*	NA	NA	RHANLVE060002	NA	NA	NA		ANHSGS070001	ECL07038M	ECL07038G	NA
00820*	NA	NA	RHANLVE060001_R1	NA	NA	NA		ANHSGS070001	ECL07038M	ECL07038G	NA
00821	NA	NA	RHANLVE060002	NA	NA	NA		NA	NA	NA	NA
00822*	NA	NA	RHANLVE060002	NA	NA	NA		ANHSGS070001	ECL07038M	ECL07038G	NA
00823	NA	NA	RHANLVE060003	NA	NA	NA		NA	NA	NA	NA
00824	NA	NA	RHANLVE060001_R1	NA	NA	NA		NA	NA	NA	NA
00826	NA	NA	RHANLVE060001_R1	NA	NA	NA		NA	NA	NA	NA
00827	NA	NA	RHANLVE060002	NA	NA	NA		NA	NA	NA	NA
00828	NA	NA	RHANLVE060002	NA	NA	NA		NA	NA	NA	NA
00829* #	NA	NA	NA	NA	NA	NA		ANHSGS070001	ECL07038M	ECL07038G	NA
00830	NA	NA	RHANLVE060002	NA	NA	NA		NA	NA	NA	NA
00831	NA	NA	RHANLVE060001_R1	NA	NA	NA		NA	NA	NA	NA
00832	NA	NA	RHANLVE060003	NA	NA	NA		NA	NA	NA	NA
00833*	NA	NA	RHANLVE060002	NA	NA	NA		ANHSGS070001	ECL07038M	ECL07038G	NA
00834	NA	NA	RHANLVE060002	NA	NA	NA		NA	NA	NA	NA
00836	NA	NA	RHANLVE060003	NA	NA	NA		NA	NA	NA	NA
00837	NA	NA	RHANLVE060002	NA	NA	NA		NA	NA	NA	NA
00839*	NA	NA	RHANLVE060002	NA	NA	NA		ANHSGS070001	ECL07038M	ECL07038G	NA
00840	NA	NA	RHANLVE060002	NA	NA	NA		NA	NA	NA	NA
00841	NA	NA	RHANLVE060003	NA	NA	NA		NA	NA	NA	NA
00842	NA	NA	RHANLVE060002	NA	NA	NA		NA	NA	NA	NA
00843	NA	NA	RHANLVE060002	NA	NA	NA		NA	NA	NA	NA
00844	NA	NA	RHANLVE060003	NA	NA	NA		NA	NA	NA	NA
00846	NA	NA	RHANLVE060002	NA	NA	NA		NA	NA	NA	NA
00847	NA	NA	RHANLVE060002	NA	NA	NA		NA	NA	NA	NA
00848	NA	NA	RHANLVE060003	NA	NA	NA		NA	NA	NA	NA
00849	NA	NA	RHANLVE060003	NA	NA	NA		NA	NA	NA	NA

CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

Waste Stream: # AERHDM

Sub-Lot # 1

Container ID Number	Historical Container ID	NDA BDR or Radiological Characterization BDR (CH only)	VE BDR	RTR BDR	Solids Sampling BDR	Solids Analytical BDR	Load Management/ Overpack Yes	Permit Required Headspace Gas BDR	
								Sample	Analysis

* HSG lot 1 randomly selected for verifying the assignment of Hazardous Waste Numbers.

\# Container rejected in VE process and can not be certified for shipment to WIPP.

Signature of Site Project Manager

Irene Quintana
Printed Name

5/8/2008
Date

CCP Headspace Gas UCL_{90} Evaluation Form

WSPF #: AERHDM **Waste Stream Lot Number** 1 through 1

ANALYTE	Transform Data Used (No, Data-Log, SQRT, other)	# Samples above MDL (1)	# Samples	Maximum (ppmv)	Mean (ppmv)	SD (ppmv)	UCL_{90} (ppmv)	PRQL (ppmv)	Transformed PRQL (N/A or Value)	UCL_{90} > PRQL Yes	EPA Code
Benzene	SQRT	5	10	0.84	0.50	0.20	0.59	10	3.16		
Bromoform	Log	0	10	-1.58	-3.46	1.00	-3.02	10	2.30		
Carbon tetrachloride	Log	0	10	-1.09	-2.97	1.00	-2.53	10	2.30		
Chlorobenzene	Log	0	10	-0.77	-2.63	1.00	-2.20	10	2.30		
Chloroform	Log	8	10	1.03	-0.57	1.02	-0.12	10	2.30		
Cyclohexane [a]	Log	0	10	-0.51	-2.42	1.01	-1.98	10	2.30		
1,1-Dichloroethane	Log	0	10	-0.36	-2.20	0.99	-1.76	10	2.30		
1,2-Dichloroethane	Log	0	10	-0.60	-2.44	1.00	-2.01	10	2.30		
1,1-Dichloroethylene	Log	0	10	-0.36	-2.22	1.00	-1.78	10	2.30		
cis-1,2-Dichloroethylene	Log	0	10	-0.51	-2.41	1.01	-1.97	10	2.30		
trans-1,2-Dichloroethylene	Log	0	10	-0.43	-2.30	1.00	-1.87	10	2.30		
Ethyl benzene	Log	5	10	1.67	-0.69	2.09	0.23	10	2.30		
Ethyl ether	Log	0	10	-0.11	-1.98	1.00	-1.54	10	2.30		
Methylene chloride	Log	3	10	-0.51	-2.11	0.99	-1.67	10	2.30		
1,1,2,2-Tetrachloroethane	Log	0	10	-1.45	-3.30	0.99	-2.87	10	2.30		
Tetrachloroethylene	Log	8	10	2.77	-0.52	2.08	0.39	10	2.30		
Toluene	Log	6	10	4.38	-1.25	2.14	-0.32	10	2.30		
1,1,1-Trichloroethane	Log	1	10	-0.98	-2.77	1.02	-2.33	10	2.30		
Trichloroethylene	Log	3	10	0.59	-1.96	1.53	-1.29	10	2.30		
1,1,2-Trichloro-1,2,2-trifluoroethane	Log	1	10	-0.80	-2.56	1.01	-2.12	10	2.30		
1,2,4-Trimethylbenzene[a]	Log	5	10	1.13	-1.09	2.10	-0.17	10	2.30		
1,3,5-Trimethylbenzene[a]	SQRT	5	10	1.00	0.56	0.33	0.70	10	3.16		
m-Xylene[b]	Log	6	10	3.00	0.02	2.70	1.20	10	2.30		
p-Xylene[b]	Log	6	10	3.00	0.02	2.70	1.20	10	2.30		
o-Xylene	Log	5	10	2.23	-0.40	2.38	0.63	10	2.30		
Acetone	Log	10	10	4.70	2.77	1.02	3.21	100	4.61		
1-Butanol	Log	10	10	1.74	0.75	0.69	1.05	100	4.61		
Methanol	Log	3	10	4.23	2.89	0.59	3.15	100	4.61		
Methyl ethyl ketone	Log	9	10	2.30	0.76	0.92	1.16	100	4.61		
Methyl isobutyl ketone	Log	5	10	0.10	-1.89	1.12	-1.40	100	4.61		

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CCP Headspace Gas UCL_{90} Evaluation Form

WSPF #: AERHDM **Waste Stream Lot Number** 1 through 1

ANALYTE	Transform Data Used (No, Data-Log, SQRT, other)	# Samples above MDL (1)	# Samples	Maximum (ppmv)	Mean (ppmv)	SD (ppmv)	UCL_{90} (ppmv)	PRQL (ppmv)	Transformed PRQL (N/A or Value)	UCL_{90} > PRQL Yes	EPA Code
Chloromethane[c]	Log	8	10	1.41	-0.22	1.03	0.23	10	2.30		
Carbon Disulfide[c]	Log	4	10	-0.36	-1.49	0.74	-1.17	10	2.30		
1,2-Dichloropropane[c]	Log	0	10	-0.78	-2.64	1.00	-2.20	10	2.30		
Trichlorofluoromethane[c]	Log	0	10	0.10	-2.45	0.99	-2.01	10	2.30		

[a] These compounds are from the TRAMPAC and are flammable VOCs that do not appear in the QAPJP or the WIPP WAP. These are not part of the target analyte list, but samples may be analyzed for these compounds.
[b] These xylene isomers cannot be resolved by the analytical methods employed in the program. m-Xylene and p-Xylene will be reported as "Total m-p-Xylene."
[c] Compounds are reported as target analytes by the Idaho Laboratory and have been added to the evaluation accordingly.

Comments:

(1) For analytes where there were no samples measured above the MDL value, 1/2 of the MDL value was used. (Per section B4 of the WAP, 1/2 of the MDL value is used in calculating the mean concentration.)

Signature of Site Project Manager

Irene Quintana
Printed Name

5/8/2008
Date

CCP Headspace Gas Summary Data

Waste Stream Number AERHDM Sub-Lot Number (s) 1

Tentatively Identified Compound	Maximum Observed Estimated Concentrations (ppmv)	# Samples Containing TIC	% Detected
None			

Data Supports EPA Hazardous Waste Numbers Assigned by AK? Yes ☑ No ☐

If no, describe the basis for assigning the EPA Hazardous Waste Codes:

SPM Signature [signature] Date 5/8/2008

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007

CCP RTR/VE Summary of Prohibited Items and AK Confirmation

Waste Stream Number: AERHDM Sub-Lot(s)#: 1

Container Number	RTR Prohibited Items [a]	Visual Examination Prohibited Items [a]
See correlation of container ID numbers for list of remaining drum numbers in this Lot.	Radiography was not used for verification of prohibited items in this lot.	None of the containers in this lot had prohibited items identified in Visual Examination.

a. See Batch Data Reports
b. If AK has assigned U134 to this waste stream, then any liquids in these containers are prohibited items (not acceptable by the TSDF).

Site Project Manager Signature	Irene Quintana Printed Name	5/8/2008 Date

CCP Reconcilliation with Data Quality Objectives

WSF# AERHDM Lot # 1

Sampling Completeness

VE
Number of Valid Samples: 37 Number of Total Samples Analyzed: 37
Percent Complete: 100 (QAO is 100%)

RTR
Number of Valid Samples: NA Number of Total Samples Analyzed: NA
Percent Complete: NA (QAO is 100%)

HSG
Number of Valid Samples: 10 Number of Total Samples collected: 10
Percent Complete: 100 (QAO is ≥90%)

Total VOC
Number of Valid Samples: NA Number of Total Samples collected: NA
Percent Complete: NA (QAO is ≥90%)
Number of Valid Samples: NA Number of Total Samples analyzed: NA
Percent Complete: NA (QAO is ≥90%)

Total SVOC
Number of Valid Samples: NA Number of Total Samples collected: NA
Percent Complete: NA (QAO is ≥90%)
Number of Valid Samples: NA Number of Total Samples analyzed: NA
Percent Complete: NA (QAO is ≥90%)

Total Metals
Number of Valid Samples: NA Number of Total Samples collected: NA
Percent Complete: NA (QAO is ≥90%)
Number of Valid Samples: NA Number of Total Samples analyzed: NA
Percent Complete: NA (QAO is ≥90%)

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CCP Reconcilliation with Data Quality Objectives

WSF# AERHDM Lot # 1

	Y/N/NA	Reconcilliation Parameter
1	Y	Waste Matrix Code.
2	Y	Waste Material Parameter Weights.
3	Y	The waste matrix code identified is consistent with the type of sampling and analysis used to characterize the waste.
4	Y	The TRU activity reported in the BDRs for each container demonstrates with a 95% probability that the container of waste contains TRU radioactive waste.
5	NA	AK Sufficiency. Is there an approved AK sufficiency Determination for this waste stream?
6	Y	Mean concentrations, UCL90 values for the mean concentration, standard deviations, and the number of samples collected for each VOC in the HSG of each container were calculated and compared with the program required quantitation limits, as reported in CCP TP 003, Attachment 3, and additional Environmental Protection Agency (EPA) Hazardous Waste Numbers were assigned as required. Samples were randomly collected (when appropriate).
7a	NA	Mean concentrations, UCL90 values for the mean concentration, standard deviations, and the number of samples collected for solids VOCs were calculated and compared with the program required quantitation limits and regulatory thresholds, as reported in the Characterization Information Summary, CCP-TP-003-Attachment 4, and additional EPA Hazardous Waste Numbers were assigned as required. Samples were randomly collected.
7b	NA	Mean concentrations, UCL90 values for the mean concentration, standard deviations, and the number of samples collected for solids SVOCs were calculated and compared with the program required quantitation limits and regulatory thresholds, as reported in the Characterization Information Summary, CCP TP 003 Attachment 5, and additional EPA Hazardous Waste Numbers were assigned as required. Samples were randomly collected.
7c	NA	Mean concentrations, (UCL90) values for the mean concentration, standard deviations, and the number of samples collected for total metals were calculated and compared with the program required quantitation limits and regulatory thresholds, as reported in the Characterization Information Summary, CCP TP 003 Attachment 6, and additional EPA Hazardous Waste Numbers were assigned as required. Samples were randomly collected.

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CCP Reconcilliation with Data Quality Objectives

WSF# AERHDM Lot # 1

8	Y	The data demonstrates whether the waste stream exhibits a toxicity characteristic under Title 40 Code of Federal Regulations (CFR), Part 261, Identification and Listing of Hazardous Waste, Subpart C, Characteristics of Hazardous Waste.
9	Y	Does the waste stream contain listed waste found in 20.4.1.200 NMAC incorporating 40 CFR Part 261, Subpart D, Lists of Hazardous Wastes.
10	Y	Waste stream can be classified as hazardous or nonhazardous at the 90-percent confidence level.
11	Y	Appropriate packaging configuration and Drum Age Criteria (DAC) is applied and documented in the headspace gas sampling documentation, and the drum age met prior to sampling.
12	Y	TICs were appropriately identified and reported in accordance with the requirements of Section B3-1 of the QAPjP.
13	Y	The PRQLs for headspace gas VOCs were met for all analyses as evidenced by the analytical batch data reports.
14		The overall completeness, comparability, and representativeness QAOs were met for each of the analytical and testing procedures as specified in CCP-PO-001 Sections B3-2 through B3-9 prior to submittal of a waste stream profile form for a waste steam or waste stream lot.

	Completeness	Comparability	Representativeness
Radiography	NA	NA	NA
VE	Y	Y	Y
Headspace Gas Analysis	Y	Y	Y
Solids Sampling	NA	NA	NA
Solids VOCs	NA	NA	NA
Solids SVOCs	NA	NA	NA
Solids Metals	NA	NA	NA

Comments: N/A

Irene Quintana — Signature of Site Project Manager

Irene Quintana — Printed Name

5/8/2008 — Date

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SUMMATION OF ASPECTS OF AK SUMMARY REPORT: AERHDM

Overview:

Waste Stream AERHDM is remote handled (RH) mixed heterogeneous debris generated at Argonne National Laboratory (ANL) Alpha Gamma Hot Cell Facility (AGHCF). Founded in 1946 as the first national laboratory by the U.S. Atomic Energy Commission, ANL has been instrumental in the development of nuclear reactors and associated systems, materials, fuel elements, and components for use in both civilian and defense programs. This work included participation in the development of nuclear reactor systems for isotope production, power generation, and naval submarine propulsion, as well as experimental or proposed applications for weapons destruction, defense waste management, defense security and safeguards, and space propulsion. This waste stream consists of TRU mixed waste generated in support of ANL defense related activities, specifically naval reactor development.

This Summation of the AK Summary Report includes information to support Waste Stream Profile Form (WSPF) number AERHDM for RH TRU debris. The primary source of information for this Summation is CCP-AK-ANLE-500, *CCP Acceptable Knowledge Summary Report For Argonne Remote-Handled Debris Waste, Waste Stream: AERHDM*, Revision 2, December 18, 2006. CCP-AK-ANLE-500 includes information obtained from numerous sources, including facility safety basis documentation, historical document archives, generator and storage facility waste records and documents, procedures for waste packaging and generation activities, container-specific waste packaging and characterization documentation, and interviews with knowledgeable AGHCF personnel.

Waste Stream Identification Summary:

Site Where TRU Waste Was Generated:	Argonne National Laboratory
Waste Stream Name:	Remote Handled Heterogeneous Debris from the Argonne National Laboratory
Waste Stream Number:	AERHDM
Dates of Waste Generation:	1993 to present
Summary Category Group:	S5000 – Debris Waste
Waste Matrix Code Group:	Heterogeneous Waste
Waste Matrix Code:	S5400
Waste Stream TWBIR Identification:	AE-T009
Waste Stream Volume:	15 canisters (current)* 33 (projected)

* This waste stream consists of 44 30-gallon drums packaged, with a projection of up to100 additional 30-gallon drums. Three 30-gallon drums will be packaged into 1 canister.

RCRA EPA Hazardous Waste Numbers: D004, D005, D006, D007, D008, D009, D010, D011, D019, D028, D029, F002 and F005

TRUCON Content Numbers: AE 321 and AE 325 (RH 72-B Content Numbers)

Waste Stream Description and Physical Form:

Waste stream AERHDM consists of RH mixed heterogeneous debris that was generated by destructive and nondestructive examination of radiological materials such as fuel pins, reactor structural materials, and targets in the ANL AGHCF between 1993 to present. Waste from this stream was contaminated primarily with fissile materials and mixed fission products (MFP).

This waste stream consists predominantly of organic and inorganic debris. Examples of material in this waste stream are: paper, cardboard, cotton, and synthetic (nylon) rags, cloth, towels, grinding paper, boxes, liners, filter media, tissues, string, rope, swabs, mop heads, and gloves. Examples of waste items include brooms, mop handles and heads, rulers, brushes, wooden blocks, and Masonite® (an engineered wood product that does not contain glue), plywood, and chipboard items, polyethylene, polypropylene, polyvinyl chloride (PVC), phthalate, Koroseal® (high impact PVC), Tygon® tubing, styrene butadiene, polyurethane, Lucite® (methyl methacrylate polymer plastic), Teflon®, paint (dried), and epoxy (hardened), metallurgical (Bakelite- plastic made from synthetic components) sample mounts, bottles, tubing, funnels, pipe, bags, sheeting, tape, syringes, markers, Neoprene®, and silicone O-rings, gaskets, stoppers, hose, gloves, wire/cord insulation, glass, ceramic, alumina, Transite® (asbestos), porcelain, quartz, Vycor® (heat resistant silica glass), and boron nitrite bottles, jars, tubing, beakers, plates, insulation (fiberglass), firebrick, insulators, light bulbs, thermometers, lenses, carbon steel, stainless steel, and cast iron cans, buckets, equipment, tools, tubing, fittings, rods, rings, chain, saw blades, dustpans, motors, manipulator tape, capsules, aluminum, brass, bronze, copper, lead, tungsten, tantalum, and tin cans (including punctured aerosol cans), sheeting, foil, tools, wire, rods, cable, tubing, fittings, gauges, plates, motors, and light fixtures.

Waste Stream AERHDM contains lesser amounts (less than 50 percent in any container) of homogeneous organic and inorganic materials. Clay and vermiculite based absorbents were used during the neutralization and evaporation of acids, etchants, and alcohol solutions (Reference RCRA Determinations-Hazardous Waste Determinations Section of this Summation). Solidification agents such as Portland cement, or Aquaset™ (vermiculite based absorbent), Petroset™ (natural clay absorbent) were also used. Charcoal and ion exchange resin filter media was also included in this waste stream. No individual payload container consists of more than 50 percent homogenous solids.

This waste stream is assigned Waste Matrix Code S5400, Heterogeneous Debris. This category includes waste that is at least 50% by volume debris materials that do not meet the criteria for assignment as either an Inorganic Debris (S5100) or Organic Debris (S5300). The waste material that comprises waste stream AERHDM was generated from a single process or from an activity that is similar in material, physical form, and hazardous constituents and is therefore a single waste stream.

Point of Generation - Area and Building of Generation

This TRU mixed heterogeneous debris waste stream was generated at the AGHCF between 1993 to present during the examination of irradiated and non-irradiated fuel pins and other reactor materials from reactor programs at ANL and U.S. Department of Energy (DOE) reactors. The AGHCF is a hot cell complex that includes office space, shielded gloveboxes, a hot cell under nitrogen atmosphere with work stations (WS) for remote manipulation of materials, and a Decontamination and Repair Area (DRA).

Generating Process

The AGHCF conducted research programs for advance reactor technology, with an emphasis on the use of plutonium as fuel. The AGHCF was a hot cell facility that was used for the characterization and testing of irradiated reactor materials. The primary AGHCF capabilities consist of the following nondestructive and destructive examination activities:

Nondestructive Examinations
- Visual inspection and examination
- Capsule disassembly
- Macrophotography
- Bow, length, and weight measurement
- Diametral profilometry
- Diameter measurements with micrometers
- Eddy current inspection
- Fuel element length measurement
- Irradiated fuel element balance point
- Weight determination
- Irradiated fuel element helium leak test
- Autoradiography
- X-ray analysis and gamma scanning
- Irradiated material transfer, management, and storage

Destructive Examinations
- Fuel element fission gas sampling and tritium gas collection
- Plenum volume determination and gas analysis
- Fuel element sectioning
- Metallographic specimen mounting
- Microphotography
- Microhardness
- Immersion density testing
- Optical microscopy and photography
- Scanning electron microscopy
- Scanning auger microscopy
- Electron microprobe
- Mechanical testing
- Specimen preparation (e.g. creep, charpy, bend, and tensile)
- Mock fuel pin fabrication (e.g. defueling, annealing, hydriding, welding and pressurization)

The AGHCF was designed to examine plutonium-bearing fuel elements from the ANL-W Experimental Breeder Reactor, although over the years, the sources of specimens examined expanded to include other national laboratories, commercial nuclear power plants, international clients, and universities. Numerous fuel and specimen types were examined over the years of operation but the waste generating activities remained unchanged and the RH TRU waste generated consists of the same materials in the same approximate percentages.

The AGHCF consisted of operations areas, rooms, and remote work stations (WSs). Fuel elements were moved from one WS to another depending upon the examination operation. The AGHCF contained electro-mechanical devices, including master-slave manipulators at each WS, a robot, remote operated manipulators,

and radio controlled carts. These pieces of equipment allowed for remote handling at a specific WS and between WSs.

The Electron Beam Laboratory consisted of an unshielded glovebox, two additional gloveboxes and a Scanning Electron Microscope (SEM), an Electron Microprobe (EMP), and a scanning auger microscope (SAM) and its associated glovebox. The EMP, SEM, and the SAM were used for electron beam analysis of samples. The gloveboxes in the Shielded Glovebox Facility (SGF) were used to prepare small specimens for electron microscopy or other tests.

Fuel elements or other specimens were received at the AGHCF in a shielded cask and assigned an identification number. The cask was moved to the Clean Transfer Area (CTA) and the fuel element was unloaded. The elements were then moved into interim storage or long-term storage. Smaller casks were moved into the CTA for specimen removal.

Initial capsule examination and disassembly was then performed. Nondestructive testing was conducted and included bow measurement, diametral profilometry, weight and length measurements, determination of balance point, diameter measurements, visual examination (VE), macrophotography, gamma spectrometry and gamma profiling of the fuel elements.

If a fuel element was received unpunctured and the fission gas had not been released, the element was punctured. The gas was collected and analyzed to quantify the amounts of fission and other gases present. Excess fission-gas was exhausted by the cell ventilation system.

Fuel element fission gas sampling, tritium gas collection, plenum volume determinations and gas analysis, in addition to helium leak testing, X-ray examination, and gamma scanning were conducted during gas testing and density measurements. Profilometry equipment was used to determine the amount of radial strain due to irradiation growth.

After the nondestructive examinations were completed, the fuel element was sent for destructive examinations. The fuel element was sectioned, each section was numbered and was placed in an aluminum pipe; the aluminum pipe had the number stamped on the side. Samples requiring metallographic examination were mounted using epoxy resin {e.g. phenol, 4,4-(1-methylethylidene)bis, polymer with (chloromethyl) oxirane}. Grinding and polishing of the element was conducted. The sample was then moved to the metallograph. Specimens could also be prepared for examination on the EMP and quantitative chemical analysis of the specimens then performed.

Lower level radioactive samples were taken to the SEM or the SAM glovebox. The SEM and the energy dispersive X-ray system were used for microstructural and microchemical examination of small segments. The SAM was used for surface or grain boundary analysis of irradiated (low level) or contaminated specimens.

Other experimental systems were set up on a temporary basis such as the furnace (used for elevated temperature testing of fuel segments), controllers, data collection equipment, and gas collection apparatus. Post-test examinations included mounting of the test sample and optical or electron beam examination. Post-test examinations included both nondestructive and destructive examinations, similar to the typical examinations described above for a fuel element.

After the examinations were completed, the samples were placed into storage pending future evaluation or shipment to a designated storage facility. If the samples were stored, they were placed in a storage can (1-gal or smaller) and sealed.

Equipment maintenance and repair also generated RH TRU waste. Maintenance ranged from routine replacement of saw blades, air-system filters, broken glassware, and light bulbs, to non-routine replacement or repair of experimental apparatus, furnaces, glove rings, HEPA filters, cell windows and broken electrical motors. Non-routine repairs of manipulator arms or other in-cell equipment were conducted. In 1983, a manipulator DRA was constructed to better handle higher level contamination associated with the manipulators. The DRA utilized a shower stall to decontaminate the manipulators prior to repair. Because the WSs were designed to handle multiple examinations, the specific locations of the examinations and other activities varied. Waste was either placed in cans at WSs or moved to the waste packaging area for temporary storage. Miscellaneous items generated in the hot cell included sample containers, plastic bags, plastic bottles, and sphincter cans. Waste cans were used to collect waste materials at WSs and then moved for temporary storage. Sorting and packaging activities were performed and videotaped after February 1993. After the waste cans were surveyed, they were packaged into 30-gallon drums.

Table 1 identifies toxicity characteristic and F-listed chemicals in this waste stream. These chemicals and constituents were used in processes and contaminate the debris waste, but the chemical itself was not discarded in this waste stream as commercial chemical product, an off specification commercial chemical product, or a container residue or spill residue thereof (40 CFR 261.33).

Table 1 – Metals or organic TC and F-Listed Contaminants

Waste Stream AERHDM

Chemical	CAS Number	EPA HWNs
Arsenic	7440-38-2	D004
Barium	7440-39-3	D005
Benzene	71-43-2	F005
Cadmium	7440-43-9	D006
Carbon tetrachloride	56-23-5	D019
Chromium	7440-47-3	D007
Isobutanol	78-83-1	F005
Lead	7439-92-1	D008
Mercury	7439-97-6	D009
Selenium	7782-49-2	D010
Silver	7440-22-4	D011
Tetrachloroethylene	127-18-4	F002
Toluene	108-88-3	F005
1,1,1-trichloroethane	71-55-6	F002
1,1-dichloroethylene	75-35-4	D029
1,2-dichloroethane	107-06-2	D028

RCRA Determinations - Hazardous Waste Determinations

Ignitability, Corrosivity, Reactivity

Waste generated in this waste stream does not qualify for any of the exclusions outlined in 40 CFR 260 or 261. Review of historical VE video tapes is used to verify that the waste stream is not a liquid waste and does not contain explosives, non radioactive pyrophoric materials, compressed gasses or reactive waste. Therefore,

this waste stream does not exhibit the characteristic for ignitability (D001), corrosivity (D002), or reactivity (D003).

Ignitability

This waste does not meet the definition of ignitability as defined in 40 CFR 261.21. The waste is not a liquid or compressed gas, nor does the waste contain ignitable materials or compressed gases. AGHCF operations used small amounts of ignitable solvents including acetone, xylene, ethyl ether, ethanol, n-butyl alcohol, and methanol. These chemicals were used primarily during cleaning operations in the hot cell. Solvents were also used during sample preparation to clean the surfaces of the metallographic specimens. The AGHCF evaporated all organic liquids to dryness, therefore no solvent liquids are expected in the waste stream. The waste is not capable of causing fire through friction or absorption of moisture. The waste does not meet the definition of a Department of Transportation (DOT) oxidizer as defined in 49 CFR 173.151. The waste does not exhibit the characteristic of ignitability. Therefore, the hazardous waste number for ignitability (D001) does not apply to this waste stream. (References C029, C066, C097, C106, C115, C118, C130, C137, C147, P472, P025, P032 and U332)

Corrosivity

This waste does not meet the definition of corrosivity as defined in 40 CFR 261.22. Small amounts of etchant solutions were prepared in the AGHFC with hydrofluoric, sulfuric, hydrochloric, chromic, phosphoric, nitric, citric, acetic, and oxalic acids. A silver nitrate solution was used for etching the surface of (zirconium-tin alloy) specimens. Waste etchant solutions were neutralized using either sodium carbonate or sodium hydroxide to a pH between 5 and 10, absorbed into pelletized clay (Oil-Dri®), then heated to dryness. The waste is not liquid, and review of historical VE video tapes is performed to ensure the absence of liquids. Therefore the characteristic of corrosivity (D002) does not apply to this waste stream. (References C066, C077, C147, P032, P062, P578, U006 and U332).

Reactivity

This waste stream does not meet the definition of reactivity as defined in 40 CFR 261.23. The waste is stable and will not undergo violent chemical change. The waste will not react violently with water, form potentially explosive mixtures with water, or generate toxic gases, vapors, or fumes when mixed with water. Potentially reactive metals were prohibited from disposal in the RH TRU waste. Wastes containing sodium (Na), sodium-potassium (NaK) alloy, and lithium metals, found in some fuel pins were generated during disassembly and sectioning activities during preparation of metallurgical specimens. Na and NaK were reacted with alcohol (ethanol) and lithium was reacted with an ammonia solution. The resulting solutions were absorbed into pelletized clay and heated to dryness. The characteristic of reactivity does not apply to this waste stream. Therefore, the EPA hazardous waste number for reactivity (D003) is not assigned. (References C009, C029, C066, C099, C118, C130, C137, C147, C333, P372, P412, P540 and U332)

Toxicity Characteristic

This waste stream exhibits the characteristic of toxicity per 40 CFR 261.24. The toxicity characteristic contaminants fall into two categories; metals and organics.

The following toxicity characteristic metals have been identified as contaminants in this debris waste stream: arsenic (D004), barium (D005), cadmium (D006), chromium (D007), lead (D008), mercury (D009), selenium (D010) and silver (D011). (Reference DR014)

Examples of sources of these contaminants are as follows:

- D004- hydrogen charging solution (sodium arsenite)
- D005- contaminant of HEPA filters, clay absorbent, fluorescent bulbs
- D006- neutron shielding, Ni-Cd batteries, contaminant of HEPA filters
- D007- chromic acid, chromic oxide polishing abrasive, pelletized clay
- D008- leaded glass, aprons, gloves
- D009- mercury vapor lamps, batteries, thermometers
- D010- irradiation experiment reagent, contaminant of HEPA filter media
- D011- silver nitrate etchant, mounting epoxy, silver solder

Review of the AK source documents identified the use of organic toxicity characteristic compounds including carbon tetrachloride (D019), 1,2-dichloroethane (D028) and 1,1-dichloroethylene (D029). Sources of these compounds include, but are not limited to metallurgy reagents, preparation of metallography samples, cell cleaning and immersion density measurements. (Reference DR014)

Because the more specific F-listed EPA HWNs have been assigned for benzene and tetrachloroethylene, assignment of the corresponding toxicity characteristic HWNs (D018 and D039) are not applied. (Reference DR014)

Where a constituent has been identified and there is no quantitative data available to demonstrate that the concentration is below regulatory threshold, the applicable EPA HWN is conservatively applied to the waste stream. EPA HWNs D004, D005, D006, D007, D008, D009, D010, D011, D019, D028 and D029 are assigned to waste stream AERHDM.

Listed Waste

Waste stream AERHDM was mixed with or derived from F-listed hazardous wastes from non-specific sources as listed in Title 40 *Code of Federal Regulations* (CFR) 261.31. F002 and F005 listed solvents were used in the AGHCF and potentially contaminate the waste. The following F-listed constituents may contaminate the waste and are conservatively applied:

(F002)
Tetrachloroethylene, 1, 1, 1-trichloroethane

(F005)
Benzene, isobutanol, toluene

F003 constituents, including acetone, n-butyl alcohol, ethyl ether, methanol, and xylene were also used in the AGHCF. These solvents are listed solely for ignitability. The waste stream does not exhibit the characteristic of ignitability because it is not liquid; therefore, F003 is not assigned. Although several F001-listed solvents were identified in the AK record (i.e., 1,1,1- trichloroethane, carbon tetrachloride, and tetrachloroethylene), these listed solvents were not used in "large-scale" degreasing operations such as cold cleaning or vapor degreasing. The AGHCF did not conduct large-scale degreasing operations, and therefore, EPA HWN F001 is not assigned to this waste stream. Waste stream AERHDM is assigned EPA HWNs F002 and F005 for 1,1,1-trichloroethane, benzene, isobutanol, tetrachloroethylene, and toluene (Reference DR014, C012, C066, C137, C147, U065, and U072).

U, K, and P-Listed Chemicals

Waste stream AERHDM was not mixed with or contaminated with a discarded commercial chemical product, an off-specification commercial chemical product, or a container residue or spill residue thereof (40 CFR 261.33). Waste stream AERHDM was not mixed with or contaminated with any of the sources specified in 40 CFR 261.32.

Production scale activities involving beryllium were not performed at the AGHCF. The only source of beryllium identified was special nuclear material samples that were analyzed for beryllium. Based on the form of beryllium in the waste generating processes (not Be powder), the waste stream will not meet the definition of P015 waste and beryllium will not exceed 1 percent in any payload container.

Hydrofluoric acid was used in the AGHCF as a metallurgical etchant, however no unused acid or materials from spills of the acid were disposed of in this waste stream. Additionally, as described above, corrosive liquids were neutralized, evaporated and immobilized prior to disposal (References C066, C077, C147, P032, P062, P578, U006, and U332). Waste stream AERHDM is therefore not assigned a U-, K- or P-listed HWN.

Headspace Gas/Volatile Organic Compound Information

Lot 1 representative sampling from waste stream AERHDM consisted of 10 randomly selected 30-gallon drums. The UCL_{90} calculated values for all of the target analytes in lot 1, using either the transformed or untransformed value, are below the program required quantitation limits (PRQLs). No tentatively identified compounds were detected in headspace gas analysis of Lot 1.

Specific information regarding the maximum, mean, standard deviation and UCL_{90} are contained in the Characterization Information Summary.

Conclusion

The following EPA hazardous waste numbers are assigned to this waste stream: D004, D005, D006, D007, D008, D009, D010, D011, D019, D028, D029, F002, and F005.

Polychlorinated Biphenyls (PCBs)

No PCBs are anticipated to be present in this waste stream. PCB waste not authorized under an EPA PCB waste disposal authorization is not in this TRU waste stream.

Prohibited Items

The absence of prohibited items is determined and documented through acceptable knowledge and characterization activities. Review of historical VE tapes and/or radiography is performed to verify the absence of prohibited items. The following items have been determined as not present in the waste:

- Liquids
- Non-radioactive pyrophoric materials
- Waste incompatible with backfill, seal and panel closure materials, container and packaging materials, or other wastes
- Explosives or compressed gases
- Waste with PCBs not authorized under an EPA PCB waste disposal authorization
- Waste exhibiting the characteristics of ignitability, corrosivity, or reactivity

- Non-mixed hazardous wastes
- Waste that has ever been managed as high-level waste and waste from tanks specified in Table B-8 of the WIPP HWFP, unless specifically approved through a Class 3 permit modification.
- Any waste container from a waste stream (or waste stream lot) which has not undergone either radiographic or visual examination of a statistically representative subpopulation of the waste stream in each shipment, as described in WIPP HWFP Attachment B7.

Each container of waste is certified and shipped only after radiography and/or VE either:

- Did not identify any prohibited items in the waste container, or
- All prohibited items found in a waste container by radiography or VE are identified and corrected (i.e., eliminated or removed) through the site non-conformance reporting system.

Method for Determining Waste Material Parameter Weights per Unit of Waste

List of AK Sufficiency Determinations

No AK Sufficiency Determinations were required for this waste stream.

Transportation

This waste stream and its chemical constituents have been reviewed for consistency with the listed TRUCON codes and they are consistent. The only sources of beryllium identified in the AK record were samples and actinide/beryllium sources. The level of beryllium contamination in individual drums will be less than one weight percent. RH-TRU 72-B canisters will contain less than 25 kg of beryllium. The waste is not machine-compacted.

Radionuclide Information

Containers in this waste stream have surface dose rates equal to or exceeding 200 mrem/hr, but less than 1000 rem/h, and contain more than 100 nanocuries per gram (nCi/g) of waste of alpha-emitting TRU isotopes with half lives greater than 20 years. The waste is contaminated primarily with fissile materials and MFPs.

Radiological characterization of this waste stream is performed using a dose-to-curie (DTC) evaluation. In this evaluation, the gamma dose (exposure) rate is measured for an individual drum, and from the measured dose rate, the concentration of a gamma radionuclide such as Cs-137 is determined. The dose rate used in the calculation of the Cs-137 concentration is the average of several gamma dose rate measurements at specific locations around the drum in conformance with the geometric modeling used to derive the DTC relationship. The weight of the drum is measured and the tare weight of the container is subtracted to yield a net weight of the waste that is used in the density determination and, ultimately, in the DTC determination. Once the Cs-137 concentration has been determined, scaling factors are used to derive the concentrations of the remainder of the radionuclides that are required to be reported.

The 10 WIPP tracked radionuclides are presented in Table 3 in addition to other radionuclides that, in aggregate, constitute 95% of the total radiological hazard.

Table 3. Summary of AERHDM Radionuclides

WIPP Tracked Radionuclides	Additional Reported Radionuclides
Am-241	Ba-137m
Pu-238	U-235
Pu-239	Pu-241
Pu-240	Y-90
Pu-242	
U-233	
U-234	
U-238	
Cs-137	
Sr-90	

No payload management will be conducted for this waste stream.

Attachment 1 AK SOURCE DOCUMENTS

Source Document Tracking Number	AK #	Title	Author	Document Number	Rev.	Date
C006	S7	Interview with Larry Neimark re: AGHCF samples, applicable programs, defense relationship to materials, and commingling of waste	Cheryl Schultz	Record of Communicatio n:ROC-C6	NA	7/17/2001
C009	N/A	Intra-Laboratory Memo to W. D. Jackson, MCT/ANL-E, re: Fissile Scrap and Irradiated Structural Materials Waste Shipments from ANL-E to ANL-W for retrievable Storage in the RSWF	L.C. Witbeck	L-W-SSS-(LCW)-88-146An-184-66	NA	11/17/1988
C011	S2, S5	Intra-Laboratory Memo to D. A. Donahue, MCT, re: Work Plan for the Examination of LILY-1 and LILY-1A Speciments	L. A. Neimark, MCT	NA	NA	11/28/1988
C012	S2	Intra-Laboratory Memo to Operations Personnel re: Facility Nitrogen Purge Change and Storage of Flammable Liquids	D. A. Donahue	NA	NA	4/9/1990
C016	S8, S13	Intra-Laboratory Memo to C. E. Crouthamel, CMT, and M. J. Steindler, CMT re: LWR Hot-Cell Capability at ANL-E: The D-200 M-Wing Situation	L. A. Neimark, MST	NA	NA	5/3/1985
C017	S8	Intra-Laboratory Memo to L. A. Neimark, MCT re: TRU-RH Waste Payload Meeting Summary	J. R. Thuot, Acting Manager, PFS-WM	NA	NA	8/14/1990
C029	NA	Letter re: Survey of Waste Streams in Building 212	Noreen Kevin, Summer Intern WMP and W. H. Livernash, Environmental Compliance Rep. Material and Components Technology Materials Science Division	NA	NA	5/31/1988
C030	S8	Westinghouse Hanford TRU Disposal Requirements	J. R. Thuot	NA	NA	NA
C031	S2	Intra-Laboratory Memo to Distribution re: New Movement Slip for SNM and Other Programmatically Valuable Materials in the AGHCF	L. A. Neimark, Manager, AGHCF	32	2	10/5/1993

C032	S2	Intra-Laboratory Memo to Distribution re: New Sectioning SLIP for SNM and Other Programmatically Valuable Materials in the AGHCF	L. A. Neimark, Manager, AGHCF	34	NA	4/5/1994
C035	S9	Intra-Laboratory Memo to Distribution re: Management of Broken Fluorescent Lamps	J. Herman, PFS-WMO	NA	NA	2/02/1999
C038	S5	Intra-Laboratory Memo to L. A. Neimark re: Self-ignition Material from "Operation Clean Sweep"	W. D. Jackson	NA	NA	4/13/1983
C039	S5	Intra-Laboratory Memo to L. A. Neimark re: Procedure for Disposal of "Clean Sweep" Pyrophoric Waste	W. D. Jackson	NA	NA	9/6/1983
C041	S12	Intra-Laboratory Memo to Distribution re: Solid Radioactive Waste Drum Failure	B. R. T. Frost, Director, MSD	NA	NA	1/7/1977
C045	S5	Intra-Laboratory Memo to G. R. Imel, Mgr., Reactor Physics & Experiments re: Disposal of Irradiated Stainless Steel	D. C. Cutforth, Mgr., Reactor Physics	NA	NA	7/13/1994
C050	S7	Intra-Laboratory Memo to L. A. Neimark and F. Pausche re: AGHCF Fissile Material Items to be Submitted for Scrappage from Area IV and Areas I and II	A. G. Hins	NA	NA	11/20/1990
C066	S7	Record of Communication with Bill Kettman and Dennis Donahue, AGHCF re: AGHCF Operations and Waste Packaging	J. Whitworth, M. Wyco	NA	NA	8/7/2001
C067	S7	Record of Communication with Fred Pausche and Terry Bray, AGHCF	J. Whitworth, M. Wyco	NA	NA	8/8/2001
C077	N/A	Letter to Mr. Mahlon Heileson, Lockheed Idaho Technologies Company re: Liquids absorbed on pelletized clay are non hazardous	Daniel Pancake	NA	NA	10/16/1995
C080	S5	Intra-Laboratory Memo to L. A. Neimark re: Work Plan for the Postirradiation Examination of Six Mixed-oxide Fuel Pins from X470 at the AGHCF	R. V. Strain	NA	NA	11/01/1990
C083	S15	Correspondance to James E. Solecki, Acting Assitant Manager for Environmental Restoration and Waste Management, Idaho Operations Office re: Resumption of Shipments of TRU Waste to INEL, enclosure: Traceability of Hot Cell Waste	Jay O. Hunze, Director Technology Management Division	NA	NA	4/11/1990
C084	S2	Intra-Laboratory Memo to Building 212 Personnel re: Disposal of Solid Radioactive Waste (SRW)	F. P. Marchetti, OHS/HP	NA	NA	2/4/1986
C089	S2	Intra-Laboratory Memo to Dennis Donahue, Supervisor/AGHCF re: Waste Management Quality Assurance Surveillance Report No. 93-MCT-03a	Georgia Anast, Acting QAR, EWM/WM	NA	NA	3/16/1993

C095	S4	Email to Cheryl Schulz re: ANL All-Drum Information	Douglas W. Parker	NA	NA	5/21/2002
C097	S2	Correspondance to AGHCF, Operational Personnel re: Work Station III Fissile Grinding Waste	Dennis Donahue, AGHCF Operations Chief	NA	NA	NA
C098	S7	Interview with Cindy Rock (WMO) re: hazardous waste procedures, etc.	Cheryl Schulz	NA	NA	8/28/2001
C099	NA	Correspondance to Mr. Dennis Wilkinson, RWMC/SWEP re: TRU Waste at Argonne National Laboratory-East	J. R. Thuot, Manager, Waste Management	NA	NA	5/17/1990
C101	S2	Memorandum to J. O. Hunze, Director, Technology Management Division, Chicago Operations Office re: WACCC Comments on ANL-E Audit Response	E. K. Hunter, Chairman, WIPP Waste Acceptance Criteria Certification Committee	WACCC: LPT 89-9050	NA	8/16/1989
C103	S3	Intra-Laboratory Memo to C. A. DeLorenzo, OOS re: Safety Analysis for Handling Tritium-containing Compounds in the AGHCF	L. A. Neimark, MST	NA	NA	5/30/1984
C106	N/A	Email to Whitworth, Julia re: Exploding Drum at ANL	Terri S Bray	NA	NA	8/30/2001
C114	S2	Intra-Laboratory Memo to Distribution re: Procedure for Installation of Gaskets on 30 Gallon DOT 17-H Drums Used for Remote Handled Transuranic Waste (RH-TRU)	W. D. Jackson	NA	NA	6/9/1983
C115	NA	Intra-Laboratory Memo to W. H. Kline, Waste Management Coordinator re: Waste Packaging Criteria, Transuranic Waste, Idaho National Engineering Laboratory, Revision 1, IDO-10074	W. D. Jackson, Alpha-Gamma Hot Cell Facility, Supervisor	IDO-10074	NA	11/1/1979
C116	S9, S12	Fax to M. Heileson re: Pelletized Clay	Judd Johnson	NA	NA	11/20/1995
C118	N/A	Intra-Laboratory Memo to A. C. Smith, PFS re: Chemical Forms in AGHCF Transuranic Wastes	L. A. Neimark	NA	NA	4/12/1989
C121	S7	Record of Communication with L. Neimark, A. Cohen, and F. Pausche (former AGHCF Section and Facility Manager and Records Chief Technician) re: AGHCF Radiological Characterization of RH-TRU Waste Shipped to INEEL	J. Whitworth and J. Biedscheid of IT Corporation; P. Kuan, R. Bhatt, and S. Kheriche of INEEL	NA	NA	12/18/2001 ,12/19/200 1
C124	S7	Fax to Mark Wyco and Larry Neimark, ANL-E re: Request for ANL-E to Identify Items of ANL-W Origin	Julia Whitworth, IT Corporation	NA	NA	2/21/2002
C127	S8	Fax to C. Schulz re: Radiological Health Handbook	Raj Bhatt	NA	NA	7/9/2003

C128	S2	Intra-Laboratory Memo to Distribution re: Revised Procedure for Determining Specimen Density by Immersion, Operations Manual Section 7.21	L. A. Neimark, Manager, IPS	00 No. 41	NA	March 13, 1995
C130	S2	Intra-Laboratory Memo to Waste Handling Procedures Manual Holders re: Packaging of Intermediate Level* Radioactive Waste for Disposal (Liquids)	C. L. Cheever, Acting Waste Management Coordinator	NA	NA	09/12/1979
C131	S7	Record of Communication with Larry Neimark, AGHCF re: Apparent discrepancies in the batch codes assigned to various elements as reported in different databases	M. Wyco	NA	NA	02/21/2002
C132	S2	Intra-Laboratory Memo to L. A. Neimark Section Manager, Irradiation Performance Section, MCT re: WMO Quality Assurance Audit (draft) dated May 26, 1988 - Finding #4	W. D. Jackson, Alpha-Gamma Hot Cell Facility Supervisor, MCT	ANL-26 (11-68)?	NA	07/11/1988
C137	S7	Email to Douglas W. Parker re: RH TRU Waste	Julia Whitworth	NA	NA	03/06/2002
C138	S1	Intra-Laboratory Memo to Distribution re: Hot-cell Survey	L. A. Neimark, MSD	ANL-26 (11-68)	NA	08/20/1973
C140	S7	Fax to Julia Whitworth, IT Corporation re: Attached Letter and 99 Questions	D. Parker, Waste Management, TSA	NA	NA	05/14/2002
C142	S7	Fax to Cheryl Schulz re: New C132 and Larry N. Comments	Julia Whitworth, Shaw	NA	NA	06/18/2002
C143	S10, S12	FAX to Cheryl Schulz re: Information on AGHCF Mercury Vapor Lamps and Lighting Fixtures	Geneine Staymates	NA	NA	03/10/2003
C144	S7, S8, S10	Record of Communication with Curtis Merks re: Specifications for filter vents used on ANL-E drums and bags	Cheryl Schulz	NA	NA	03/10/2003
C147	NA	Letter to Mr. John M. Schaffer, Project Director, RWMC Completion Project, Bechtel BWXT Idaho, LLC re: Additional Information to Complete Actions Associated with Preexisting Condition (PEC) 316 - Argonne National Laboratory-East (ANL-E) Transuranic Waste	Edward J. Ziemianski, Director, Waste Management Division, Department of Energy, Idaho Operations Office	EM-WM-03-055	NA	NA
C152	S9	Intra-Laboratory Memo to D.A. Donahue, MCT/IPS re: Work Plan for the Examination of LILAC Target No.19 for Battelle Pacific Northwest Laboratories	L. A. Neimark, MCT/IPS	IPS-46-00-00	NA	5/3/1991
C153	S9	Intra-Laboratory Memo to D. A. Donahue AGHCF Supervisor re: Work Plan for WPF Tests	Yung Y. Liu, MCT and John W. Holland, RAS	IPS-18-00-00	NA	5/3/1990

C160	S9, S12	Fax Memo to Mahlon Heileson, LITCO/RWMC re: Underlying Hazardous Constituents Waste Stream ANL212951004T	Judd Johnson, ANL/Waste Management	NA	NA	11/20/1995
C161	S2	Intra-Laboratory Memo to Waste Handling Procedures Manual Holders re: Packaging of Intermediate Level* Radioactive Waste for Disposal (Liquids)	C. L. Cheever, Acting Waste Management Coordinator	ANL-26 (11-68)	NA	9/12/1979
C162	S2	Intra-Laboratory Memo to Distribution re: Procedure for the AGHCF Remote-Handled Waste Documentation	Ralph Ditch, PFS/WMO QA Coordinator	NA	NA	10/30/1986
C302	S7	Memo from L. A. Neimark to Distrubution. Subject: Revision 1 to the Work Plan for the Preparation of Fuel Rods for Return Shipment to Idaho, HFS-015-00-00, December 8, 2004.	L. A. Neimark	HFS-015-00-01	Rev. 1	12/09/2004
C310	S11	Memo from D. A. Donahue to AGHCF Operations Personnel. Subject: New Operations Log Book	D. A. Donahue	OO No. 9	NA	01/14/1991
C311	S2	Memo from L. A. Neimark to AGHCF Operations Personnel and IPS Staff. Subject: Operations Order No. 17: Metallography Size Limitations	L. A. Neimark	OO No. 17	NA	08/15/1991
C312	S11	Memo from D. A. Donahue to Distribution. Subject: Record Log Books	D. A. Donahue	OO No. 15	NA	05/30/1991
C314	S2	Memo from M. C. Billone to Irradiation Performance Section. Subject: Deletions for the AGHCF Operations Manual (EBL Documents)	M. C. Billone	IPS-435-00-00	NA	10/28/2003
C315	S2	Memo from M. C. Billone to Irradiation Performance Section. Subject: Deletions for the AGHCF Operations Manual (PROG documents)	M. C. Billone	IPS-436-00-00	NA	10/28/2003
C316	S2	Memo from Omesh Chopra to Distribution. Subject: Laboratory ALARA Committee Review of the Work Plan for Unloading and Transferring Irradiated Stainless Steel Mechanical Test Specimens	Chopra, Omesh	NA	NA	05/15/2000
C317	S2	Memo from Hanchung Tsai to JNC Program File. Subject: Data Report No. 1 - Phase II Tensile Specimen Preparation	Tsai, Hanchung	NA	NA	01/29/2002
C320	S2	Memo from A. B. Cohen to Distribution. Subject: Criticality Rules for Sealed Cans	A. B. Cohen	OO No. 29	NA	10/27/1992

C322	S2	Memo from T. Bray to OO Holders. Subject: New Procedures for Supplemental Instructions for the AGHCF Operations	T. Bray	OO No. 57	NA	01/06/2000
C324	S2	Memo from T. Bray to OO Manual Holders. Subject: Documentation of Procedure Review and Approval Form	T. Bray	OO-70	NA	06/11/2002
C325	S2	Memo from T. S. Bray to OO Manual Holders. Subject: Use of Movement Slips for Sample Transfers Between HFS Facilities	T. S. Bray	OO-84	NA	01/05/2004
C332	S4	Memorandum to CCP Central Records: Assessment of Waste Material Parameters for Waste Stream ID-ANLE-S5000	B. Becker	NA	NA	01/03/2006
C332	S9	Memorandum to CCP Central Records: Assessment of Waste Material Parameters for Waste Stream ID-ANLE-S5000	B. Becker	NA	NA	01/03/2006
C333	S4, S9	Memo to CCP Central Records: Assessmentof Waste material Parameters (WMPs) for Waste Stream AERHDM	D. B. Becker	NA	NA	01/2006
C348	S4, S7, S9S	Evaluation of Generator Reported Radionuclides for Waste Stream ID-ANLE-S5000	S. Schafer	NA	NA	6/30/2006
C349	S4, S7, S9	Radiological Evaluation for Waste Stream AERHDM	S. Schafer	NA	NA	08/03/2006
C377	S8	Final Report of SAREF Support Facilities Requirements Task Group	J.R. Honekamp	NA	NA	7/29/1977
C380	S7	Interview with Bill Kettman	K. Peters	NA	NA	07/16/2007
C801	S5, S9	Memo to J. McDade from T. S. Bray Subject: Misidentified Fuel Elements in 1982 Fuel Shipment to the AGHCF ANL ID 17881	T. S. Bray	ANL ID 17881	NA	01/21/2004
C802	S5, S9	Memo from A. B. Cohen to J. R. McDade Subject: Shipment of RERTR Samples to PNNL ANL ID 27342	A. B. Cohen	ANL ID 27342	NA	07/31/1997
C803	S5, S9	Memo from A. B. Cohen to SRL Characterization FileSubject: Optical metallography and SEM Analysis of RERTR Irradiated Specimens (Task 2) ANL ID 27348	A. B. Cohen	ANL ID 27348	NA	03/26/1997
C804	S5, S9	Memo from A. B. Cohen to SRL Characterization File Subject: SRTC Fission-Product Collection Test 96-1 ANL ID 27352	A. B. Cohen	ANL ID 27352	NA	12/04/1996
C805	S5, S9	Memo from T. Bray to M. Goldberg Subject: Availability of Al-Clad UAlx Plate Fuel ANL ID 27294	T. Bray	ANL ID 27294	NA	05/25/1999

C806	S5, S9	Memo from D. E. Rasmussen to J. L. Welker, A. Boltax, J. H. Bottcher, and M. J. D. B. Lambert Subject: Fuel Pin Certification Data for Forty-Nine (49) SPA Fuel Pins for the DOE/PNC Phase II ORT Program ANL ID 41068	D. E. Rasmussen	ANL ID 41068 Letter ID 8952185	NA	04/07/1989
C807	S5, S9	Memo from Richard McKnight to George Fenske regarding A/G 505A, 504B, 460A, 498A, 498B, 497C ANL ID 41180	R. D. McKnight	ANL ID 41180	NA	02/19/1996
C808	S5, S9	Memo from Kou Hira to L. A. Neimark Subject: Progress of OTT Program During the Term of the Eighth Assignee	L. A. Neimark	ANL ID 2890	NA	02/12/1993
C809	S5, S9	Memo from L. A. Neimark to M. H. Derbidge Subject: SNF Inventory in the AGHCF ANL ID 41181	L. A. Neimark	ANL ID 19024	NA	05/06/1996
C810	S5, S9	Logbook for receipt & verification; GE's loading; GE's manifest; GE's instructions to carrier; GE transmittal to ANL-SPM; ANL-ESH/HP documentation; ANL-SPM receipt documentation of cask contents; AGHCF Transfer Slip	L. A. Neimark	ANL ID 17811	NA	11/12/1997
C811	S5	Memo from Terri Bray from A. B. Cohen Subject: Information on AGHCF Materials Irradiated in the State of Idaho ANL ID 17222	T. S. Bray	ANL ID 17222	NA	01/06/2003
C812	S2	Memo from T. S. Bray & R. V. Strain to M. Goldberg re: Characterization of N-Reactor Fuel Samples ANL ID 3983	T. S. Bray; R. V. Strain	NA	NA	10/4/2000
C813	S7	Email from Mike Billone to George Fenske (ANL) responding to Limerick Fuel Discharge date request.	Mike Billone	ANL ID 41167	NA	06/24/2002
C816	S7	Email from Wade Bickford to George Fenske re: Request from ANL to Characterize Mk-22 Scrap ANL DOC ID 41204	Wade Bickford	ANL ID 41204	NA	03/27/06
DR014	N/A	Discrepancy Report for the RCRA Assignment of EPA HWNs to Waste Stream AERHDM	K. Peters	NA	NA	11/16/2006
DR019	S7	Sealed Waste Cans	K. Peters	NA	NA	09/20/2007
DR020	S4	Aerosol Cans	K. Peters	NA	NA	09/20/2007
P001	S2	AGHCF Operations Manual	Argonne National Laboratory	IPS-2-00-00	2	9/10/1990
P003	S2	Procedure for Solidification of Liquid Radioactive Waste MCT Alpha-Gamma Hot Cell Facility (AGHCF)	D. A. Donahue	NA	NA	6/10/1987
P004	S2, S3, S8, S12	Safety Analysis Report for the Alpha-Gamma Hot Cell Facility (BLDG. 212)	W. D. Jackson, Materials Science and Technology Division, Argonne National	M4000-0025-SA-01	0	12/6/1982

			Laboratory			
P023	S12	Argonne National Laboratory-East Remote Handled Waste	W. Mahlon Heilseson	EDF-RWMC-759	NA	8/29/1994
P025	NA	Argonne National Laboratory-East, Transuranic Waste Acceptable Knowledge Report	WMO-AK/WIPP-001.0	Benchmark Environmental Corporation	NA	9/29/2000
P031	S3	Alpha-Gamma Hot Cell Facility (AGHCF) Safety Analysis Report	A. B. Cohen, Manager, AGHCF	IPS-221-00-00	NA	1/1/1998
P032	NA	Procedure for Sorting Remote-Handled TRU Waste (30-Gallon Intermediate-Level Waste)	Argonne National Laboratory	NA	NA	1/7/1987
P033	S2	AGHCF Operations Manual: 15.3 Procedure for Operation of the Fuel Behavior Test Apparatus (FBTA)	Argonne National Laboratory	IPS-2-03-01	1	3/11/1992
P034	S2	AGHCF Operations Manual: 15.6 Procedure for Acid Cleaning a Zinc-Bromide Shielding Window	W. C. Kettman	IPS-2-06-00	1	4/16/1996
P036	S2	AGHCF Operations Manual: 15.10 Procedure for Repackaging 30-gal. TRU Waste Drums	Argonne National Laboratory	IPS-2-10-00	0	9/14/1990
P037	S2	AGHCF Operations Manual: 15.12 Procedure for preparing Window Cavity for Modified Window Tank Inspection	Daniel J. Evans	IPS-2-12-00	0	11/14/1990
P038	S2	AGHCF Operations Manual: 15.13 Procedure for Installing a Modified D-301 Window Tank in a Type A Window Cavity	Dennis A. Donahue, Supervisor, AGHCF	IPS-2-13-01	1	12/7/1990
P039	S2	AGHCF Operations Manual: 15.15 Procedure for Installing Lead Shielding Around a Tank Insert in an AGHCF Window Cavity	Argonne National Laboratory	PS-2-15-00	0	2/1/1991
P040	S2	AGHCF Operations Manual: 15.17 Procedure for Changing an In-line Filter in a Radioactive Gas Collective System	Argonne National Laboratory	IPS-2-17-00	0	11/8/1991
P042	S2	AGHCF Operations Manual: 15.20 Procedure for Conducting Plenum-Unplugging Tests on ORT Mixed-Oxide Fuel Pins in the Whole-Pin Furnace System	G. R. Fenske, Cognizant Engineer	IPS-2-20-00	0	1/11/1994
P043	S2	AGHCF Operations Manual: 15.22 Procedure for Conducting Tests on ORT Mixed-oxide Fuel Pins in the Whole-Pin Furnace System	G. R. Fenske, Cognizant Engineer	IPS-2-22-01	1	3/16/1994
P044	S2	AGHCF Operations Manual: 15.24 Procedure for Testing the AGHCF Peripheral High-Gamma Alarm System	Argonne National Laboratory	IPS-2-24-00	0	3/24/1995

P045	S2	AGHCF Operations Manual: 15.26 Procedure for Loading Fuel Element Segments for Return to ANL-W	W. C. Kettman	IPS-2-24-00	0	1/8/1996
P046	S2	AGHCF Operations Manual: 15.27 Removal of Outer Glass from a Type B or C Shielding Window	W. C. Kettman	IPS-2-24-00	0	4/16/1996
P047	S2	AGHCF Operations Manual: 15.28 Painting a Drained Shielding Window Tank Cavity	W. C. Kettman	IPS-2-24-00	0	4/16/1996
P048	S2	AGHCF Operations Manual: 15.29 Procedure for Installation of Cold-side Gaskets	W. C. Kettman	IPS-2-24-00	0	4/16/1996
P054	S2	Procedure for Remote Outloading of RH-TRU Waste at the AGHCF	W. D. Jackson, Materials Science and Technology Division, Argonne National Laboratory	M4000-00320SA-00	0	8/1/1983
P055	S2	Waste Handling Procedures	C. L. Cheever, Manager, Waste Management Operations	NA	NA	9/18/1986
P057	S2	AGHCF Operations Manual: 15.4 Procedures for Conducting Tests in the Whole-Pin Furnace System	Yung. Y. Liu, Engineer	IPS-2-04-01	1	5/10/1990
P062	NA	AGHCF Operations Manual: 7.15 Preparation of Metallographic Specimens	Argonne National Laboratory	IPS-2-00-00	NA	6/20/1989
P063	S2	SPM Procedure for High Gamma Transuranic Waste Handling from Alpha Gamma Hot Cell Facility (AGHCF) Bldg. 212, MSD, ANL-E	N/A	NA	NA	1/20/1975
P067	S2	Procedure for High Gamma Level Transuranic Waste Handling At the AGHCF, MSD, ANL-E	N/A	M1002-0047-SP-00	0	12/30/1974
P068	S2	AGHCF Operations Manual: 7.14 Mounting Metallographic Specimens	N/A	IPS-2-00-00	1	3/29/1990
P069	S2	AGHCF Operations Manual: 7.13 Fuel Element Sectioning	N/A	IPS-2-00-00	1	3/29/1990
P070	S2	AGHCF Operations Manual: 7.21 Specimen Density by Immersion	N/A	IPS-2-00-00	0	6/20/1989
P073	S2	AGHCF Operations Manual: 8.0 Administrative Controls	N/A	IPS-2-00-00	3	12/20/1995
P230	S6	EG&G Internal Technical Report, Inventory Analysis of Stored Transuranic (TRU) waste at the Radioactive Waste Management Complex (RWMC)	C.J. Barnard	WM-PD-90-003	Rev. 1	8/31/1993
P306	S2	Procedures for Testing of SS-3-size Tensile Spcimens with the 1122 Instron Machine in the Irradiated Materials Laboratory (IML) Memo to IPS Document File	Hanchung Tsai, ET-IPS	IPS-380-00-00	NA	05/17/2001

P307	S2	Standard Operating Procedure - Analysis and Calculation of Gamma Radioactivity	Vivian S. Sullivan, Analytical Chemistry Laboratory, ANL	SOP: ACL-084	Rev. 01	03/25/2003
P308	S2	Standard Operating Procedure - Procedure for the Determination of Trace Elements in Solution by Inductively Coupled Plasma Mass Spectrometry	Waste Materials Research Department	WMRD-SOP-034	Rev. 3	08/13/2003
P309	S2	Standard Operating Procedure: Alpha Scan for Actinides Utilizing Extraction Chromotography	Vivian S. Sullivan, Analytical Chemistry Laboratory, ANL	SOP: ACL-258	00	08/08/2002
P310	S1, S5, S9	Design, Operation, and Performance Data for High Burnup PWR Fuel from the H. B. Robinson Plant for Use in the NRC Experimental Program at ANL (EPRI document)	E. J. Ruzauskas, Acting Manager, KWU Projects	EMF-2528	0	04/2001
P311	S2	Procedures for conducting LOCA Integral Tests - Phase B Memo to Distribution	Y. Yan, ET	IPS-409-01-03 and IPS-409-01-02	Revs 2 and 3	08/14/2002 and 09/11/2002
P312	S2	Procedures for conducting LOCA Integral Tests with Quench Memo to distribution	Y. Yan, ET	IPS-409-01-04	Rev. 4	12/16/2003
P314	S2	Standard Operating Procedure - Obtaining Gamma Spectra for Samples in a Calibrated Geometry Using the Ortec Gamma Vision Program	Vivian S. Sullivan, Analytical Chemistry Laboratory, ANL	SOP: ACL-259	Rev. 00	03/25/2003
P316	S1	Functional Requirements and Design Review Information for a Glovebox in the Irradiated Material Laboratory Memo to Ralph Fabian, ET, Design Review Committee Chair and Committee Members	Rob Daum, ET-IPS	IPS-413-00-00	NA	09/17/2002
P317	S2	Window Installation Procedure for IML Glovebox System	R.S. Daum	IPS-413-02-00	Rev. 0	3/19/2003
P318	S2	Update to the Design of the IML Glovebox Gas Inlet, Exhaust and Atmospheric Monitoring Systems Memo to Ralph Fabian, ET, Design Review Committee Chair	Rob Daum, ET-IPS	IPS-413-03-00	NA	04/29/2003
P319	S2	Procedure for Leak Testing of IML Instron Glovebox System Memo to IPS Documentation File	Robert, Daum, ET-IPS	IPS-416-00-00	NA	05/07/2003
P320	S2	Management Plan for Irradiation Performance Section Facilities, Energy Technology Division Memo to H. Grunder, Director	H. Drucker, Associate Lab Director EEST	IPS-417-00-00	Rev. 0	10/14/2002
P321	S2	Work Plan for Replacing Water/Acid Solution in K-2 Cell Windows with Zinc Bromide Solution Memo to distribution	S. Baumann	IPS-419-00-00	NA	12/03/2002

P322	S1, S2	Design of Shielding Containers to Store Radioactive Samples within the K2 Hot Cell in Building 200 Memo to IPS Documentation File	Robert Daum, ET-IPS	IPS-420-00-00	NA	01/20/2003
P324	S2	Shielding of Wall Ports in K2 Hot Cell Memo to IPS Documentation File	Robert Daum, ET-IPS	IPS-422-00-00	NA	01/22/2003
P325	S10	Functional Requirements for Hydrogen-Charged Materials to be Used as Standards for Hydrogen Content Determination Memo to IPS Documentation file	Robert Daum, ET-IPS	IPS-424-00-00	NA	01/22/2003
P326	S5	Work Plan for Determining the Effectiveness of Defueling a Short Cladding Segment from High Burnup In-cell LOCA TestSample ICL#2 in Room-Temperature Nitric Acid Supplemental Instructions for Rod/Specimen A/G547C1A1D, 1"-long fuel sample	Y. Yan	IPS-428-00-00 and IPS-428-00-01	Revs 0 and 1	08/06/2003 and 09/16/2003
P327	S2	Procedure for Thinning Gauge Sections of Tensile Specimens after Tensile Tests Memo to IPS Document File	Hanchung Tsai, ET-IPS	IPS-429-00-00 and IPS-429-00-01	Revs 1 and 2	08/14/2003 and 08/26/2003
P329	S2	Feasibility Study for Defueling Irradiated Cladding Using Non-Volatile Methods Memo to IPS Documentation File	Robert Daum	IPS-432-00-00	NA	12/2/2003
P331	S2	Work Plan for Preparation of Samples for LECO Hydrogen or Oxygen Analysis Memo to distribution	T. Burtseva, ET	IPS-434-00-00	NA	10/16/2003
P336	S2	Operation Procedure for Rodlet Pressurization and Leak Checking - Part 1. Ex-cell Mockup Tests	Tatiana Burtseva	IPS-441-000-000	NA	04/12/2004
P338	S2	LW51 Laser Operating Procedure for Ex-cell Operation in the AGHCF	Z. Xu and H. Tsai	IPS-443-00-00	NA	3/11/2004
P339	S2	Work Plan for Annealing and Radial-Hydride Treatments of Non-Irradiated Zircaloy-4 Memo to Distribution	Robert Daum, ET-IPS	IPS-453-00-00	NA	01/11/2004
P340	S2	IPS-457-00-00 - Memo to Distribution. Subject: Work Plan for Sectioning HBR Rod No. R05 (A/G No. 609) and Preparing SNF Rodlets for NRC and DOE-RW Programs	Robert Daum, ET-IPS	IPS-457-00-00	0	09/08/2005
P341	S5	IPS-468-00-00 - Memo to M. C. Billone transmitting Procedure for the Two-sided In-cell Steam Oxidation Tests on Irradiated Advanced Alloys M5 and ZIRLO Cladding	Y. Yan, IPS	IPS-468-00-00	0	12/01/2005
P342	S2	International Conference on the Physics of Nuclear Science and Technology, Volume 2: Incorporation of Measurement Data from Irradiated Fuel Samples inot the MTG System at FCF	Richard D. McKnight	ANL/RA/CP-95623	NA	10/5-8/1998

P343	S5, S9	Proceedings of the International Conference on the Physicsof Nuclear Science and Technology, Volume 2: Comparison of Measured and Calculated Composition of Irradiated EBR-II Blanket Assemblies	Grimm, Hill, Khalil, McKnight, Stillman, Toppel	NA	NA	10/5-8/1998
P344	S5	Analysis of Spent Nuclear Fuel Sample A/G 574B2 (Limerick Reactor) to Determine Selected Isotopes and Estimate Fuel Burnup	D. G. Graczyk	NA	NA	04/2003
P346	S5, S9	An Underwater Instrument for Breeder Reactor Spent Fuel Assemblies	Lestone, Pecos, Rennie, Sprinkle, Staples, Grimm, Hill, Cherradi, Islam, Koulikov, Starovich	LA-UR-99-2000	NA	05/4-6/1999
P348	S3	Justification for Continued Operation	J. A. Morman	HFS-016-00-00	NA	08/18/2005
P349	S5, S9	ANL Calculational Methodologies for Determining Spent Nuclear Fuel Source Term	R. D. McKnight	ANL/RA/CP-101396	NA	04/06/2000
P350	S2, S5	Application of Control Charts and Isotope Correlations to Spent Fuel measurements at FCF	McKnight, Soltys, Yacout	ANL/RA/CP-99678	NA	10/12/1999
P351	S2, S5	Nuclear Material Estimation and Uncertainties for the Spent Fuel Treatment at FCF	Battisti, Krsul, Mariani, Vaden, Westphal	ANL/RA/CP-99677	NA	10/12/1999
P353	S5	Validation and Application of a Physics Database for Fast Reactor Fuel Cycle Analysis	Khalil, McKnight, Stillman, Toppel	ANL/RA/CP-80815	NA	04/11-15/1994
P354	S5	Measurement of Lanthanum and Technetium in Uranium Fuels by Inductively coupled Plasma Atomic Emission Spectroscopy	Cummings, Carney, Krsul, Crane	ANL/ED/CP-99189	NA	10/13/1999
P355	S5	Spent Fuel Fissile Mass Verification at the ANL-West Radioactive Scrap and Waste Facility	Smith, Mosby, Aumeier, Klann, Hill	NA	NA	2/25/2001
P358	S2	Procedure for Changing the Glove Rings in the Glove Niche: OO No. 42	A. B. Cohen, Manager AGHCF	OO No. 42	NA	03/15/1995
P359	S6	Tracking of Non-Accountable Samples in the AGHCF	T. Bray	OO-86	NA	10/15/2004
P362	S6	Tracking of Defueled Cladding Samples	T. Bray	OO No. 66	NA	06/06/2001
P363	S6	New Movement Slip - Revision 0 and 1	T. Bray	OO-65	0 and 1	10/31/2000 & 03/13/2001
P364	S6	Transfer Slip for SNM and Other Programmatically Valuable Materials in the AGHCF and Addendum 1	T. S. Bray	OO No. 49	Revs 0 and 1	04/18/1996 & 03/14/2001
P367	S2	Radioactive Gas Release Approval Form	Adam Cohen, Regulatory	OO No. 36	NA	06/03/1994

			Compliance Officer, AGHCF			
P369	S2	Chapeter 5, Section 5.1 of the Health Physics Procedures Manual - Unrestricted Release of Materials and Equipment	ANL-E	NA	NA	8/19/2005
P370	S2	Chapter 4, Section 4.4 of the Health Physics Procedures Manual Special Surveys - Leak Check Surveys of Accountable Sealed Sources	ANL	Chapter 4, Sect. 4.4	NA	08/19/2005
P371	S2	Chapter 3, Section 3.1 of the Health Physics Procedures Manual Trash Surveys	ANL	Chapter 3, Sect. 3.1	NA	08/19/2005
P372	S5	Review of Zirconium-Zircaloy Pyrophoricity	Thurman D. Cooper	RHO-RE-ST-31 P	NA	11/1984
P373	S5	Metallographic Analysis of irradiated RERTR-3 Fuel Test Specimens	Meyer, Hofman, Strain, Clark, and Stuart	ANL/NT/CP-103306	NA	10/1-6/2001
P375	S5	Progress of the RERTR Program in 1999`	A. Travelli	ANL/TD/CP-100128	NA	01/18/2000
P377	S8	Inventory of Power Plants in the United States as of January 1, 1998	Energy Information Administration	DOE/EIA-0095(98)	NA	12/1998
P378	NA	Argonne National Laboratory-East Building 212 Energy Technology Division Alpha-Gamma Hot Cell Facility Preliminary Decontamination and Decommissioning Plan	T. S. Bray	HFS-003	3	10/08/2003
P379	S3	Design Basis Threat Impact Assessment and Implementation Plan for the Argonne Illinois Site	ANL	NA	NA	12/19/2003
P380	S3	Alpha-Gamma Hot Cell Facilit (AGHCF) Safety Analysis Report	ANL	IPS-221-00-01	Rev. 1	10/2001
P381	S2	AGHCF Criticality Hazards Control Statement Use of a Safe Vac Vacuum Cleaner in Alpha-Gamma Hot Cell Facility Areas 1 and 3, Addendum 1 to IPS-6	Richard Lell	IPS-6-01-10	Rev. 10, Addendum 1	10/23/02
P383	S9, S12	Validation Results Based on the Spent Fuel Demonstration Program at FCF	R. D. McKnight	ANL/RA/CP-101397	NA	04/06/2000
P385	S2	Quality Assurance Plan for the Building 212 Irradiated Materials Laboratory (IML) Memo to Distribution	T. Bray, Manager, IML	IPS-312-00-00 and IPS-312-00-01	Revs. 0 and 1	08/11/1999 AND 08/09/2001
P386	S2	CRIEPI Posttensile SEM Fractography, Supplemental Instruction SI 197 for Rod/Specimen 583D1 (S1T4), 583E1 (S1T5) in accordance with IPS-311-00-00	H. Tsai	SI 197	NA	07/13/2001
P387	S2	Prep of Creep Samples, Supplemental Instruction 340 of Rod/Specimen A/G 611C16, A/G 611C17, A/G 592C in accordance with IPS-393-00-02	H. Tsai	SI 340	NA	02/25/2003

P389	S2	AGHCF Supplemental Instructions for IRIS-11, A/G 558 in accordance with IPS-295-00-00	L. A. Neimark	IPS-295-00-00	NA	12/01/1998
P390	S2	Tensile Testing of NEPO Specimens in K2, Supplemental Instruction 342 of Rod/Specimen 618D, 618E in accordance with IPS-294-00-02	R. Daum	SI 342	NA	3/11/2003
P391	S2	Adeendum to Work Plan for Task 1 SRTC Specimens: IPS-229-00-00, July 3, 1996	L. A. Neimark	IPS-220-03-00	NA	07/17/1996
P392	S2	Procedures for Conducting Tests in the Whole-Pin furnace System (IPS-2-04-00)	L. A. Neimark	IPS-2-04-00 and IPS-2-04-01	Revs. 0 and 1	01/22/1990 and 05/22/1990
P393	S2	Quality Assurance Plan for Irradiation Performance Section Activities	ANL	IPS-1-00-01	Rev. 1	06/1989
P394	S13	Work Plan for the Preparation of Fuel Rods for Return Shipment to Idaho	L. A. Neimark, ET-HFS	HFS-015-00-00	NA	12/08/2004
P395	S2	Work Plan for the Replacement of the Area 3 GM Manipulator Power Cord	K. Stoll, Asst. Manager, HFS	HFS-014-00-00	NA	10/12/2004
P398	S2, S11	Seal (TID) Application and Removal	ANL	AGHCF-OPS-100	Rev. 1	12/10/2002
P399	S2	Cask Handling at the AGHCF	ANL	HFS-OPS-101	Revs. 1 and 2	04/06/2001 and 12/14/2004
P401	S2	Movements and Transfers In or Out of Material Balance Area	ANL	AGHCF-OPS-103	Rev. 0	07/09/2001
P402	S2	Loading and Unloading of Shielded Casks	ANL	AGHCF-OPS-104	Rev. 0	02/15/2001
P403	S2	Movement of Materials Through the Alpha Barrier	ANL	AGHCF-OPS-105	Rev. 0	02/09/2001
P404	S2	Movement of Material In-Cell	ANL	AGHCF-OPS-106	Rev. 0	02/15/2001
P405	S2	Nuclear Materials Management	ANL	AGHCF-OPS-107	Rev. 0	07/16/2001
P406	S2	Nuclear Materials Accountability	ANL	AGHCF-OPS-108	Rev. 0	02/09/2001
P407	S2	Criticality Control	ANL	AGHCF-OPS-109	Rev. 1	04/05/2002
P409	S2	Nuclear Materials Management Safeguards	ANL	AGHCF-OPS-111	Rev. 0	04/06/2001
P411	S2	High Gamma Level Transuranic Material	ANL	AGHCF-OPS-301	Rev. 0	01/31/2001
P412	NA	Remote Handled Transuranic Waste Sorting and Packaging	ANL	AGHCF-OPS-302, NOD-AGHCF-OPS-302	Revs. 0, 2, and 3	07/09/2001 ; 03/29/2005 ; 5/9/2007
P413	S2, S4	30 gallon Remotely Handled Transuranic Waste Drum Assembly	ANL	AGHCF-OPS-303	Rev. 0 and Draft	01/19/2001 and 07/09/2001

P415	S2, S4	RH-TRU 30-gal Waste Drum Outloading	ANL	AGHCF-OPS-305	2	06/07/02
P425	S2	AGHCF Quality Assurance Plan	T. S. Bray	HFS-POLICY-200	Revs. 2 and 3	07/2001 and 07/2003
P426	S2	Problem Resolution System	ANL	HFS-POLICY-201	Rev. 1	11/11/2003
P427	S2	Corrective Action Tracking System	ANL	AGHCF-POLICY-202	0	11/3/2000
P428	S2	Procedure Guidelines	ANL	AGHCF-POLICY-203	Revs. 1 and 2	12/03/01 and 10/27/03
P429	S2	Quality Assurance Levels	ANL	HFS-POLICY-204	Rev. 1	10/27/2003
P430	S2	HFS Document Control System	ANL	HFS-POLICY-205	Revs. 0 and 1	11/3/00 and 10/27/03
P431	S2	Training and Qualification of Personnel	ANL	AGHCF-POLICY-300	Revs. 1 and 2	111/26/01 and 3/25/05
P433	S10	Industrial Hydiene and Environmental Health	ANL	HFS-POLICY-401	Rev. 3	03/29/2005
P437	S2	Operational Responsibilities	ANL	HFS-POLICY-500	Rev. 2	03/29/2005
P446	S2	Movement of Materials Through the Alpha Barrier	ANL	AGHCF-POLICY-605	Rev. 0	02/09/2001
P447	S2	Operations Order	ANL	AGHCF-POLICY-607	Rev. 0	11/10/2000
P448	S2, S8	Configuration Control	ANL	AGHCF-POLICY-610	Rev. 1	12/04/2002
P450	S2	Operations Log Book	ANL	AGHCF-POLICY-612	Rev. 0	11/10/2000
P451	S2	Record Log Books	ANL	AGHCF-POLICY-613	Rev. 0	02/09/2001
P453	S2	AGHCF Seal (TID) Program	ANL	AGHCF-POLICY-617	Rev. 1	12/10/2002
P455	S2	Unreviewed Safety Question	ANL	HFS-POLICY-619	Rev. 3	03/14/2005
P456	S2	Electron Beam Laboratory User's Guide	ANL	AGHCF-EBL-100	Rev. 0	06/11/2001
P457	S2	Oxygen Analyzer Calibration, Area 4	ANL	AGHCF-EBL-101	Rev. 0	06/15/2001
P458	S2	Waste Disposal	ANL	AGHCF-EBL-102	Rev. 0	06/15/2001
P459	S2	Training for Non-irradiated Performance Section, Electron Beam Laboratory, and Scanning Electron Microscope Users	ANL	AGHCF-EBL-103	NA	NA

P461	S2	Safety and Glovebox Procedures	ANL	AGHCF-EBL-401	Rev. 0	08/16/2001
P463	S2	Emergency Response to an In-cell Fire	ANL	HFS-EMER-200	Rev. 1	10/02/2003
P466	S2	Procedure for Positioning the AGHCF Movable Gamma Shield	ANL	HFS-EMER-300	Rev. 1	10/02/2003
P468	S2	Switching the AGHCF Nitrogen Supply from the Main Tank (Tank #30) to an Alternate Supply	ANL	HFS-EMER-400	Rev. 0	09/26/2005
P469	S2	Changing an In-line Filter in a Radioactive Gas Collective System	ANL	AGHCF-MAINT-100	Rev. 0	01/31/2001
P470	S2	Alpha-Gamma Hot Cell Facility Operations Manual. ANL-E Energy Technology, Irradiation Performance Section. Removing Master Manipulator at Work Station 5.	NA	AGHCF-MAINT-200	0	01/31/01
P471	S2	Removal and Installation of Model A Slave Manipulators	ANL	AGHCF-MAINT-201	Rev. 0	01/19/2001
P472	S2	Manipulator Movement, Cleaning and Repair	ANL	AGHCF-MAINT-202	Rev. 1	11/26/2002
P473	S2	Changing Glove Rings in AGHCF Glove Niche	ANL	AGHCF-MAINT-300	Rev. 0	01/31/2001
P474	S2	Semi-annual HFS Facilities Glove and Pouch Inspection	ANL	HFS-MAINT-301	Rev. 1	08/19/2003
P475	S2	Acid-Clean Windows	ANL	HFS-MAINT-501	Rev. 2	08/20/2003
P476	S2	Zinc-Bromide ShieldingWindows Argon Gas Blanket Maintenance	ANL	HFS-MAINT-502	Rev. 1	09/26/2005
P477	S2	Removing Window Glass Type A	ANL	HFS-MAINT-503	Rev. 3	11/20/2003
P478	S2	Preparation of a Type A Tank-in-a-Tank Replacement Window Assembly	ANL	HFS-MAINT-505	Rev. 1	08/20/2003
P479	S2	Removal of Outer Glass From a Type B or C Shielding Window	ANL	AGHCF-MAINT-508	Rev. 0	01/31/2001
P480	S2	Painting a Drained Shielding Window Cavity	ANL	AGHCF-MAINT-509	Rev. 0	12/15/2000
P481	S2	Installation of Coldside Gaskets	ANL	AGHCF-MAINT-510	Rev. 0	12/15/2000
P482	S2	Installation of Outer Glass Type B or C Shielding Window Tank	ANL	AGHCF-MAINT-511	Rev. 0	01/31/2001
P483	S2	Preparing Window Cavity for Modified Window Tank Insert	ANL	HFS-MAINT-512	Rev. 2	08/20/2003
P484	S2	Installing a Type A "Tank-in-a-Tank" Window Assembly	ANL	HFS-MAINT-513	Rev. 3	08/20/2003
P485	S2	Procedure for Installing Lead Shielding Around a Tank Insert in an AGHCF Window Cavity	ANL	HFS-MAINT-514	Rev. 1	08/20/2003

P486	S2	Hydroxylamine Hydrochloride Addition to Zinc Bromide Solution	ANL	HFS-MAINT-515	Rev. 1	03/14/2005
P487	S2	Installation of Lead-Glass Glovebox Window Panes	ANL	HFS-MAINT-516	Rev. 0	09/05/2003
P489	S2	Work Plan for Decontaminating the CTA after the Completion of the ANL/JNC Tensile Testing Memo to IPS Document File	H. Tsai	IPS-313-00-00 and IPS-313-00-01	Revs. 0 and 1	07/06/1999
P490	S2	Work Plan for Diameter Measurements of Irradiated V-alloy Creep Specimens from the HFIR-2J Experiment	H. Tsai	IPS-314-00-00	Rev. 0	07/16/1999
P491	S2	Revised Work Plan for Diameter Measurements of Irradiated V-alloy Creep Specimens from the HFIR RB-12J Experiment	Hanchung Tsai	IPS-314-00-01	Rev. 1	09/13/1999
P492	S2	Procedure for Cutting Uranium Metal or Uranium Alloys on the South Bay Diamond Bandsaw in the South Hood, Room F-206 Memo to IPS Document File	R. V. Strain	IPS-315-00-00	NA	07/20/1999
P493	S8	Specification for Plastic Tunnel Suit, Alpha-Gamma Hot Cell Facility	Terri Bray	IPS-316-00-00	NA	08/12/1999
P494	S2	Procedure for Preparation of Uranium Alloy Consumable electrodes for RERTR Fuel Powder Production Memo to IPS Document File	I. G. Prokofiev	IPS-317-00-00	NA	08/04/1999
P495	S2	Baseline HBR Cladding Microhardness, Supplemental Instruction 318 for Rod/Specimen A/G628 in accordance with IPS-379-00-00	H. Tsai	SI 318	NA	07/23/2002
P496	S2	Work Plan for Cutting ART-A1 Pressurized Creep Specimen with the EDM in Cell 4 of the IML Memo to IPS Document File	Allan Hins	IPS-319-00-00	NA	08/18/1999
P497	S2	Procedure for Tensile Testing SSJ Specimens with the 1122 Instron Machine in the Irradiated Materials Laboratory (IML), and Work Plan for TensileTesting HFIR-11J SSJ Specimens with the 1122 Instron Machine in the Irradiated Materials Laboratory (IML)	Hanchung Tsai	IPS-320-00-00 and IPS-320-00-01	Revs. 0 and 1	09/15/1999 and 01/24/2000
P498	S2	Work Plan for In-cell Oxidation Mockup Tests Memo to IPS Document File	Hanchung Tsai, IPS-ET	IPS-321-00-00	NA	10/20/1999
P499	S5	Plan for Establishing In-cell Capability for Spot-welding Thermocouples to LOCA Test Specimens Memo to H. Tsai, Manager, IPS	L. A. Neimark, ET/IPS	IPS-322-00-00 and IPS-322-01-00	Revs. 0 and 1	10/27/1999 ; 02/03/2000

P500	S5	Plan for Establishing Capability for Spot-welding Thermocouples to LOCA Test Specimens: Addendum No. 2 - Functional Requirements for In-cell Test Assembly Fixture (TAF) Memo to T. S. Bray, Manager, IPS	L. A. Neimark, ET/IPS	IPS-322-02-00	NA	02/14/2001
P501	S2, S8	Review of the Quality Assurance Program Plan for the Advanced Materials Fabrication Facility (a.k.a. Building 212 H-wing High Bay Fab Facility) Memo to Distribution	Hanchung Tsai, Manager IPS, ET	IPS-323-00-00	NA	11/1999
P502	S2	Shutdown Instructions for C3, Supplemental Instruction 324 for Rod/Specimen 591C3 in accordance with IPS-393-00-01	H. Tsai	SI 324	NA	08/22/2002
P503	S2	Work Plan for Microstructural Examination on V-4Cr-4Ti Rods for Making Creep Tube Supplemental Instruction 252 for Rod/Specimen A/G 625A 1 through 14 Memo to IPS Document File	Yong Yan	IPS-325-00-00	NA	11/4/99
P504	S5	Work Plan for Microstructural Examination on the Creep Tubes of V-4Cr-4Ti Memo to IPS Document File	Yong Yan	IPS-325-01-00	NA	11/18/1999
P505	S5	Work Plan for the Heat Treatment and Microstructural Examination on V-4Cr-4Ti Rods for Making Creep Tubing Memo to IPS Document File	Yong Yan	IPS-325-02-00	NA	01/22/2000
P506	S5	Surry Additional H Analyses, Supplemental Instruction 326 for Rod/Specimen Surry Rod H9, A/G 591A2, 591A4 in accordance with IPS-373-00-00 IPS-326-00-00, Procedure for Cutting Uranium Metal or Uranium Alloys on the Cut-off Machine in the Hood, Room H-141	H. Tsai	SI 326 and IPS-326-00-00	NA	09/03/2002 and 08/09/1999
P507	S2	Photography and Met of Weld Samples, Supplemental Instruction 252 for Rod/Specimen A/G 625A 1 through 14 in accordance with IPS-327-00-00	Bob Strain	SI 252	NA	12/13/2001
P508	S2	Work Plan for Cutting Ring Stretch Specimens from Big Rock Point Cladding with the EDM in Cell 4 of the IML Memo to IPS Documentation File	Robert Daum	IPS-327-00-00, -01, -02	Revs. 0, 1, 2	12/7/99; 3/22/00; 3/20/01
P509	S5	Work Plan for the LOCA Mock-up - Phase 1 Memo to NRC Program File	R. V. Strain	IPS-328-00-00	NA	11/23/1999
P510	S5	Work Plan for the Preparation of Unirradiated Al-clad Fuel Specimens for CMT	T. Bray	IPS-329-00-00	NA	12/02/1999

P511	S2	Design Review Update of Load Train Assembly for Ring Stretch Mechanical Property Testing	R. Daum, lori Prokofiev, ET-IPS	IPS-330-00-00, -01, -02, -03, -04	Revs. 1, 2, 3, and 4	13/3/99; 6/26/01; 12/12/01; 7/3/02; 4/11/03
P512	S2	Hydrogen Analysis of Hydrided Zr-4 Cladding, Supplemental Instruction 85 for Rod/Specimen 581E7 and 581E8 in accordance with IPS-331-00-01	R. Daum	SI 85	NA	10/30/2000
P513	S2	Preparation of TMI-1 RST Specimens, Supplemental Instruction 169 for Rod/Specimen 536B3H TMI-1 Cladding in accordance with IPS-330-00-01	R. Daum	SI 169	NA	05/29/2001
P515	S5	Work Plan for Determing Hydrogen Contents in TMI-1 Cladding Memo to IPS Document File	hanchung, Tsai, IPS-ET	IPS-331-00-00 and IPS-331-00-01	Revs. 0 and 1	10/20/1999 and 02/03/2000
P516	S2	Replacement of the WPF Furnace Memo to IPS Document File	Hanchung Tsai, IPS-ET	IPS-333-00-00	NA	10/20/1999
P517	S6	Functional Requirements for the AGHCF Fissile Inventory Management System (FIMS) 3.0 Including Validation and Verification Requirements Memo to IPS Document File	T. Bray	IPS-334-00-00	NA	01/07/2000
P518	S2	Work Plan for the Steam Oxidation Tests at 1200 degrees on Unirradiated Zry-4 and Irradiated TMI-1 Cladding Memo to NRC Program File Several Supplemental Instructions	Y. Yan	IPS-335-00-00 and IPS-335-01-00	Revs. 0 and 1	02/11/2000
P519	S5	Work Plan for cutting Limerick Rod Sections and Loading into Shipping Tubes Memo to IPS Document File	Hanchung Tsai, IPS-ET	IPS-336-00-00	NA	01/24/2000
P520	S2	Work Plan for the Examination of Fuel Nano-plates from the RERTR-3 Experiment in ATR; and Supplemental Instruction 305 for PIE of RERTR-3 on Rod/Specimen A/G 580AB, and Supplemental Instruction 286 Repolish Sample and Specimen Ring for EMPA	R. V. Strain, ET/IPS	IPS-338-00-00 and SI 305	NA	01/20/2000 and 04/05/2002
P521	S2	Workplan for Assessment of Auger Analyzer: Examinatino of NERI Stainless Steel Samples Memo to Distribution	R. V. Strain	IPS-339-00-00	NA	01/25/2000
P522	S5	Work Plan for Blister Tests of Micro-plates from the RERTR-2 Irradiation Memo to Distribution	R. V. Strain	IPS-341-00-00	NA	02/01/2000
P523	S5	Work Plan for CMT Samples from TMI Fuel Rod Segments Memo to Distribution	R. V. Strain	IPS-342-00-00	NA	01/31/2000

P524	S5	Work Plan for Conducting Charpy and Tensile Tests on Vanadium Alloy Specimens (Heat 832665) after Long-term Exposure in the DIII-D Experimental Tokamak (Experiment W2) Memo to IPS Document File	Hanchung Tsai, IPS-ET	IPS-343-00-00	NA	02/03/2000
P525	S5	Work Plan for Inspection and Storage of CRIEPI Tensile Coupons Memo to IPS Document File	Hanchung Tsai, IPS-ET	IPS-344-00-00	NA	02/07/2000
P526	S2	Procedure for Conducting the Impact Testing with Dynatup Impact Tester Memo to IPS Document file	Yong Yan	IPS-345-00-00	NA	02/11/2000
P527	S2	Testing of Cold-Worked 316SS Speciments Supplemental Instructions 258 for Rod/Specimen 620 (NEPO 316SS Specimens) in accordance with IPS-346-00-00	R. Daum	SI 258	NA	01/03/2001
P528	S5	Work Plan for the LOCA Mock-up - Phase II Supplemental Instruction 289 for Rod/Specimen A/G581C27, 28, and 29	R. V. Strain	IPS-347-00-00	NA	04/11/2000
P529	S5	Procedure for Performing LOCA Integral Tests in Out-of-Cell Mock-up Apparatus (Mock-up - Mark II) and Safety Analysis of the LOCA Criteria Test Mock-up, and Supplemental Instructions 297 for Zry-2, unirradiated	Y. Yan	IPS-348-03-00, IPS-348-00-00, IPS-349-00-00	NA	02/2002; 04/17/2000 ; 09/05/2000
P530	S5	Work Plan for Cleaning Depleted Uranium Rods for Mechanical Treatment Memo to IPS Document file	I. G. Prokofiev	IPS-350-00-00	NA	04/10/2000
P531	S2	Work Plan and Procedure for Cutting Tensile Specimens with the EDM for the CRIEPI Program and Supplemental Instruction for Rod/Specimen ID: 583A	Hanchung Tsai	IPS-351-00-00	NA	04/11/2000
P532	S2	Complete Axial Specimen Preparation for Rod/Specimen ID: 592C2C, 592C14C Surry According to IPS-382-00-00	R. Daum	SI 352	NA	07/31/2003
P533	S2	Oxidation Test for IPS-335-00-00	T. Bray	SI 103	NA	01/09/2001
P534	S2	Work Plan for Laser Weldment Impact Testing and Microstructural Characterization - Phase 1 Memo to IPS Document File	Yong Yan	IPS-353-00-00	NA	04/12/2000
P535	S5	Work Plan for Microstructural Examinations on the Laser Weld V-4Cr-4Ti from heat NIFS-1 and #832665 Memo to IPS Document file	Yong Yan	IPS-353-00-01	NA	03/19/2001
P536	S2	Decontamination and Transfer of A/G 587 Tensile Specimens to Clean Vials Memo to IPS Document File	T. Bray, Manager, AGHCF	IPS-354-00-00	Rev. 0	04/18/2000

P537	S2	Revised Work Plan for Unloading and Transferring Irradiated Stainless Steel Mechanical Test Specimens to Cell 2 of the IML	H. Chung, O Chopra	IPS-355-00-01	NA	05/15/2000
P538	S2	Work Plan for Axial Gamma Scanning of Limerick Rod F9 (A/G 574)	H. Tsai	IPS-356-00-00	NA	05/22/2000
P539	S2	Work Plan for Examination and Testing of Limerick Rod F9, Mid Segment, A/G 574C Memo to IPS Document File	H. Tsai	IPS-357-00-00	NA	06/15/2000
P540	S2	Work Plan for Preparation of Low-Oxygen Vanadium Alloy Test Specimens Memo to IPS Document File	H. Tsai	IPS-358-00-00	NA	06/26/2000
P541	S5	Work Plan for Fabrication of Full-sized Plated using U-10 w/o Mo Powder Memo to IPS Document File	T. C. Wiencek	IPS-359-00-00	NA	08/01/2000
P544	S5	Procedure for Welding End-fittings to tubes using the Astro Arc Welder	R. Daum	IPS-363-00-00; IPS-363-00-01	Rev. 0 and 1	10/17/2001
P545	S2	Work Plan for End-fitting to Cladding Welding for LWR Fuel Rod Segments and Supplemental Instruction 133 Memo to NRC Program file	R. V. Strain	IPS-364-00-00	NA	10/03/2000
P546	S2	Work Plan for Conducting Melt Dioolution Tests on Al-clad Fuels and Supplemental Instruction 184 Memo to SRTC Characterization File	T. S. Bray	IPS-366-00-00	NA	11/7/2000
P547	S2	Work Plan for Calcining Magnesium Trisilicate 9Mg-2Si-3O-8) and Calcium Oxide (CaO) Powders for CMT Memo to IPS Document File	H. Tsai	IPS-367-00-00	NA	10/20/2000
P548	S2	Work Plan for Conducting the Zn-Zircaloy Interaction Tests Memo to IPS Document File	H. Tsai	IPS-368-00-00	NA	11/30/2000
P549	S2	Modifications to the Oxidation Apparatus	Y. Yan	IPS-370-00-00	NA	02/06/2001
P550	S2	Work Plan for Tensile and Impact Testing of 832864 GA Heat of V-4Cr-4Ti Specimens after 1-Yesr DIII-D Exposure; Work Plan for the Initial Characterization and Sectioning of Surry Rod FA-434 (A/G 591); and Supplemental Instruction 349	H. Tsai	IPS-373-00-00 and IPS-374-00-00	NA	03/15/01 and 03/20/01
P552	S2	Oxygen Pickup by LECO Oxygen Determinator for the LOCA Zry-2 Test #6 and Work Plan for Preparing Samples for Oxygen Analyses from Zry Cladding after Steam Oxidation Test at High Temperature	Y. Yan	IPS-377-00-00 and IPS-377-01-00	NA	04/06/2001
P553	S2	Procedure for the Removal, Repair, and Replacement of Valves in the Vacuum System for the ETEC Scanning Electron Microscope	R. V. Strain	IPS-378-00-00	NA	04/13/2001

P554	S2	Work Plan for the Initial Characterization and Sectioning of H. B. Robinson Rod RA1 8235 (A/G 611) and Supplemental Instruction 328	Hanchung Tsai	IPS-379-00-00	NA	05/16/2001
P556	S2	Work Plan for Cutting Axial Tensile Specimens from Surry Cladding with the EDM in Cell 3 of the IML Memo to IPS Document File and Supplemental Instruction 260	R. Daum	IPS-381-00-00	NA	7/10/2001
P557	S2	Load Train Assembly and Testing Procedure for Axial Tensile Testing of Surry Cladding, and Supplemental Instruction 338, Rev. 1 Memo to IPS Document File	Rob Daum, ET-IPS	IPS-382-00-00, IPS-382-00-01	Revs. 0 and 1	11/29/01, 4/11/03
P558	S2	Procedure for Operating Instron Model 8511 Memo to IPS Documentation File	Robert Daum	IPS-383-00-00	NA	09/10/2003
P559	S5	Data Analyses for Oxidation Benchmarking Test OC#7 on Unirradiated Zircaloy 4 Memo to NRC Program	Y. Yan, ET	IPS-384-00-00	NA	07/05/2001
P560	S2	Work Plan for Unloading a Spent IPNS Target into the AGHCF Hot Cell Memo to IPS Document File	Allan Hins	IPS-385-00-00	NA	08/13/2001
P561	S2	Operation of the In-cell LOCA Test Assembly Apparatus (TAA) Memo to Distribution	L. A. Neimark	IPS-386-00-00	NA	08/13/2001
P562	S2	Work Plan for Disassembly of IPNS Spent Target REU-1 in the AGHCF Hot Cell Memo to IPS Document File	Allan Hins	IPS-387-00-00	NA	12/04/2001
P564	S2	Preparation and Examination of Cladding Tensile Specimens IPS Document File	Rob Daum	IPS-390-00-00	NA	09/10/2003
P565	S2	Thermal Creep Specimen Design and Initial Demonstration Memo to Dan McGann, ET	Hanchung, Tsai, ET	IPS-391-00-00	NA	02/28/2001
P566	S2	Work Plan for Characterization of Surry Rod G6 (A/G 592)	Hanchung Tsai, ET-IPS	IPS-392-00-00	NA	09/21/2001
P567	S2	Procedure for Zircaloy Thermal Creep Tests, and Supplemental Instruction 266	Hanchung Tsai, ET-IPS	IPS-393-00-00, -01, -02, -03	Revs. 0, 1, 2, and 3	09/26/01 - 02/25/03
P568	S2	Pre-oxidized Zry for TC Welding Practice, Supplemental Instruction 294 for Rod/Specimen Unirradiated 0.48" Zry cladding in accordance with IPS-395-00-00	Y. Yan	SI 294	NA	03/29/2002
P569	S2	Procedure for Calibration of Pressure Transducers (PTs) in the NRC Thermal Creep Systems Memo to IPS Document File	Hanchung Tsai, ET-IPS	IPS-394-00-00 and IPS-394-00-01	Revs. 0 and 1	10/30/2001 and 11/02/2001

P570	S5	Work Plan for Mockup Testing of the In-cell LOCA Apparatus Memo to NRC Program File	R. V. Strain	IPS-395-00-00	NA	10/25/2001
P571	S2	Procedure for Measuring Diameters and Lengths of Cladding Creep Specimens with the Zmike Laser Profilometer Memo to IPS Document File	Hanchung Tsai and Jakub Dobrzynski	IPS-396-00-00	NA	11/08/2001
P572	S5	Optical Metallography Test Weld, Supplemental Instruction 262 for Rod/Specimen A/G 625D5	Bob Strain	SI 262	NA	01/10/2002
P573	S2	Procedure for the Removal, Repair, and Replacement of Valve V2 in the Vacuum System for the ETEC Scanning Electron Microscope	Darold L. Perry	IPS-399-00-00	NA	11/29/2001
P574	S2	Procedure for the Repair of the Driver Screw Mechanism of AGHC Shield Door Number 2, Supplemental Instruction 354	D. Donahue	IPS-401-00-00 and IPS-401-00-01	Revs. 0 and 1	01/08/02 and 01/11/02
P575	S5	Work Plan for the Examination of Fuel Plates from the RERTR-4 Experiment in ATR, Revision 1	R. V. Strain	IPS-400-01-00	NA	02/22/2002
P576	S2	Work Plan and Procedure for Cutting Tensile Specimens with the EDM for the FY02 NEPO 3.13 Program and Supplemental Instruction 274	R. Daum	IPS-402-00-00	NA	01/24/2002
P577	S2	Work Plan for Cladding Annealing Tests for Dry Cask Storage and Supplemental Instruction 291	H. Tsai	IPS-404-00-00	NA	02/01/2002
P578	S2	General Work Plan for Preparing Segments of Fuel Cladding for Programmatic Investigations and Supplemental Instruction 303	R. Daum	IPS-405-00-00	NA	02/28/2002
P579	S2	Procedure for Inserting a High Pressure Line into the AGHC for the LOCA Apparatus at work Station 6 Memo to NRC Program File	H. Tsai and R. V. Strain	IPS-406-00-00	NA	04/01/2002
P580	S2	In-cell LOCA Integral Test with unirradiated Zry-2, Supplemental Instructions 357 for Rod/Specimen 12" long unirradiated Zry-2, A/G 581C41 in accordance with IPS-409-01-03	Y. Yan	SI 357	NA	09/03/2003
P581	S2	Standard Operating Procedure - Quality Assurance, Calibration and Counting Protocols for Gamma Spectra of Samples	Vivian S. Sullivan, Analytical Chemistry Laboratory, ANL	SOP: ACL-070	Rev. 01	03/25/2003
P582	S2	Met. Of Loi 9-11 after Oxidation Test at 1100C Supplemental Instructions 321 for Rod/Specimen Limerick, A/G574C1B, 574C1G in accordance with IPS-340-00-00	Y. Yan	SI 321	NA	07/30/2002

P600	S2	Standard Operating Procedure: Preparation of Samples for Gamma Spectrometry Analysis	W. Elane Streets	SOP: ACL-072	Rev. 2	03/25/2003
P601	S2	Standard Operating Procedure: Gross Alpha and Beta Radioactivity	Richard B. Holtzman and W. Elane Streets	SOP: ACL-095	Rev. 4	03/31/2003
P602	S5	Analysis of Three Mile Island and Quad Cities Spent Nuclear Fuel Samples	Stephen F. Wolf, Delbert L. Bowers, and James C. Cunnane	NA	NA	04/28/1999
P604	S2	Criticality Hazards Control Statement, Alpha-Gamma Hot Cell Facility, Special Facility FF12, and Addendum 1, Use of a Safe Vac Vacuum Cleaner in Alpha-Gamma Hot Cell Facility Areas 1 and 3	James A. Morman	IPS-6-00-09; IPS-6-00-10; IPS-6-01-10	Revs. 9 and 10	03/08/90; 07/01
P605	S2	Technical Safety Requirements for the Alpha-Gamma Hot Cell Facility, Energy Technology Division, Building 212	Terri Bray	IPS-221-01-00; AGHCF-POLICY-616	Rev. 0	10/2001
P607	S5	Initial Assessment of Radiation Behavior of Very-High-Density Low-Enriched-Uranium Fuels	G. L. Hofman, M. K. Meyer, J. L. Snelgrove, M. L. Dietz, r. V. Strain, and K. H. Kim	ANL/TD/CP-100148	NA	1999
P610	S2, S5	Baseline HBR Cladding Microhardness; Program: NRC hi BU DCS	H. Tsai	SI 318	NA	07/23/02
P611	S3	Waste Handling Procedures Manual - Appendix I Radioactive Waste Management Basis	ANL	RWMB-01	Rev. 1	April 6, 2004
P612	S6	ILTSF Drum Retrieval Completion Report	Fairfield Service Group for ICP	ICP/EXT-05-00886, Project No. 23048	Rev. 0	January 2006
P617	S3	Criticality Hazards Control Statement for Special Facility MF200-KW	W.D. Jackson	DOC-10146	NA	10/11/1978
P620	S2	Posttest Examination Plan for the L6 Experiment	W.F. Murphy	M4000-0012-SA-00	Rev. 0	1/5/1981
P621	S2	Posttest Examination Plan for the L7 Experiment	L.A. Neimark	M3203-008-SA-00	Rev. 0	2/19/1979
P801	S5, S9	Oxidation of Spent Fuel Between 250° and 360°C ANL ID 38909	R. E. Einziger; R. V. Strain	RP2062-10-1; TV-48296A	NA	01/1984
P802	S5, S9	Extended Burnup Demonstration, Reactor Fuel Program, Pre-Irradiation Characterization and Summary of Pre-Program Poolside Examinations, Big Rock Point Extended Burnup Fuel ANL ID 32218	C. A. Exarhos; L. F. Van Swam; F. P. Wahlquist	XN-NF-80-40; UC-78; DOE/ET/34006-3	NA	12/1981
P803	S5, S9	Extended Burnup Demonstration, Reactor Fuel Program, Poolside Fuel Examination, Big Rock Point Extended Burnup Fuel ANL ID 32205	C. A. Exarhos; L. F. Van Swam; G. A. Sofer	XN-NF-81-62; UC-78; DOE/ET-34006-10	NA	12/1983

P804	S5, S9	Summary Report on the HFED Miniplate Irradiations for the RERTR Program ANL ID 41175	R. L. Senn	ORNL-6539	NA	04/1989
P805	S5, S9	Summary Report on the HFED Miniplate Irradiations for the RERTR Program ANL ID 7137	R. L. Senn	ORNL-6539	NA	04/1989
P806	S5, S9	Evaluation of Existing Technology Base for Candidate Fuels for the HWR-NPR ANL ID 15063	J. L. Snelgrove; G. L. Hofman; R. L. Frontroth; W. R. McDonnell; H. B. Peacock; R. F. Whitacre; G. L. Copeland	ANL/NPR-93/002; UC-940	NA	02/1993
P807	S5, S9	Proceedings of the International Meeting on Reduced Enrichment for Research and Test Reactors, 24-27 October, 1983, Tokai, Japan ANL ID 41177	Keichiro Tsuchihashi	Jaeri-M 84-073	NA	05/1984
P808	S5, S9	Memo from Garkisch to Kazuya Yamamoto transmitting the SPA-1A Data Report. Data Report, SPA-1A Test Irradiation in EBR-II ANL ID 2857	H. D. Garkisch, K. Yamamoto	NDP-94-028 Doc ID: WCAP-14154, WAES-TR-94-001	NA	09/1994
P809	S5, S9	Review of Behavior of Mixed-Oxide Fuel Elements in Extended Overpower Transient Tests in EBR-II ANL ID 41182	H. Tsai; L. A. Neimark; s. Nagai; N. Nakae	ANL/ET/CP 83008; Conf-950426--5	NA	10/1994
P810	S5, S9	Memo from H. D. Garkisch to Seiichiro Maeda transmitting SPA-2 Data Report Data Report SPA-2 Test Assembly Irradiation in EBR-II ANL ID 41077	H. D. Garkisch, S. Maeda, G. W. Kuhns	Rpt: WCAP-14184, WAES-TR-95-001; NDP-95-032	NA	09/1995
P811	S2, S5, S9	IPS-166-00-00, Work Plan for the Examination of Tritium Breeding Ceramic materials from the FUBR Experiment in EBR-II (S/A X415A) ANL ID 41181	L. A. Neimark	IPS-166-00-00	NA	05/18/1995
P812	S5, S9	Fusion Materials, Semiannual Progress Report for Period Ending June 30, 1999	Unknown	DOE/ER-0313/26	NA	06/30/1999
P813	S2, S5	IPS-282-00-00, Work Plan for Conducting Melt Dilution Tests on Al-clad Fuels ANL ID 27329	A. B. Cohen	IPS-282-00-00	NA	05/18/1998
P814	S5	Paper: Postirradiation Examination of High-Density Alloy Dispersion Fuels ANL ID 29329	S. L. Hayes; M. K. Meyer; G. L. Hofman; R. V. Strain	ANL ID 29329	NA	10/01/1998
P815	S5	Paper: Initial Assessment of Radiation Behavior of Very-High-Density Low-Enriched-Uranium Fuels ANL ID 29330	G. L .Hofman, M. K. Meyer, J. L. Snelgrove, M. L. Dietz, R. V. Strain, K. H. Kim	ANL ID 29330	NA	10/1999
P816	S2, S5	IPS-269-04-01, Metallography on an Additional RERTR-1 Microplate, A/G 549V ANL ID 1210	R. V. Strain	IPS-269-04-01	NA	09/25/1998

P817	S2, S5	Miscellaneous IPS Work Instructions: IPS-292-00-00 through IPS-292-09-00	R. V. Strain	IPS-292-00-00 thru IPS-292-09-00	NA	08/98 - 11/99
P818	S2	IPS-292-02-00, Continuation of Metallography on RERTR-2 Microplates Transmitted by Memo from R. V. Strain to S. L. Hayes dated 10/31/98 ANL ID 6823	R. V. Strain	IPS-292-02-00	NA	11/10/98
P819	S2	IPS-306-00-00, Work Plan for the Characterization of N-Reactor Fuel Specimens (A/G 562) ANL ID 27297	T. Bray	IPS-306-00-00	NA	3/9/1999
P820	S2	IPS-329-00-00, Work Plan for the Preparation of Unirradiated Al-clad Fuel Specimens for CMT ANL ID 3986	T. S. Bray	IPS-329-00-00	NA	12/2/1999
P821	S5, S9	Metallographic Examination of Damaged N Reactor Spent Nuclear Fuel Element SFEC5,4378 ANL ID 41179	S. C. Marschman, T. D. Pyecha, J. Abrefah	PNNL-11438; UC-602	NA	08/1997
P822	S2	IPS-338-00-00, Work Plan for the Examination of Fuel Nano-Plates from the RERTR-3 Experiment in ATR ANL ID 6811	R. V. Strain	IPS-338-00-00	NA	01/20/2000
P823	S2	Work Plan for Preparing the Surry Rod Sections for Shipment ANL DOC ID 18073	Hanchung Tsai	IPS-368-00-00	NA	11/27/00
P824	S5	Examination of Spent PWR Fuel Rods After 15 Years in Dry Storage ANL ID 29316	R. E. Einziger, H. Tsai, M. C. Billone, B. A. Hilton	NUREG/CR-6831 ANL-03/17	NA	09/2003
P825	S2	Work Plan for the Initial Characterization and Sectioning of Surry Rod FA-434 (A/G 591) ANL DOC ID 12374	Hanchung Tsai	IPS-373-00-00	NA	03/20/2001
P826	S2	Revised Work Plan for the Examination of Fuel Plates from the RERTR-5 Experiment in ATR ANL DOC ID 27225	R. V. Strain	IPS-375-01-00	1	04/12/2001
P827	S5	Recent Observations at the Postirradiation Examination of Low-Enriched U-Mo Miniplates Irradiated to High Burnup ANL DOC ID 29331	G. L. Hofman; Y. S. Kim; M. R. Finaly; J. L. Snelgrove; S. L. Hayes; M. K. Meyer; and C. R. Clark	ANL ID 29331	NA	10/5/2003
P828	S5	Design, Operation, and Peerformance Data for High Burnup PWR Fuel from the H. B. Robinson Plant for Use in the NRC Experimental Program at ANL ANL DOC ID 41174	E. J. Ruzauskas; K. N. Fardell	EPRI 1001558	0	04/2001
P829	S2	Revised Work Plan for the Examination of Fuel Plates from the RERTR-4 Experiment in ATR, Revision 1 ANL DOC ID 27220	R. V. Strain	IPS-400-01-00	NA	NA

P830	S5	Irradiation and Evaluation of Mixed Oxide Fuel Performance at the Big Rock Point Reactor AND DOC ID 13901	C. E. Johnson; R. R. Heinrich; L. A. Neimark; J. E. Sanecki; C. E. Crouthamel; M. H. Campbell	ANL ID 13901	NA	11/1987
P831	S5	Characterization of Irradiated Fuel From the Big Rock Point Reactor ANL DOC ID 13903	C. E. Crouthamel; M. H. Campbell	ANL ID 13093	NA	12/1982
U005	S6, S8	Data and Process Knowledge Assessment for Remote-Handled Transuranic Waste Stored at the Radioactive Waste Management Complex-Preliminary Draft	C. R. Tyler	NA	NA	9/1/1994
U006	N/A	Summary of Purchasing Requisitions Received from T. Bray: Heavy Metals Usage Identified by IT That May Be in the RH-TRU Waste Stream	N/A	N/A	NA	9/6/2001
U015	S4	RH-TRU 1995, Book 5, Drums 798 to 809.	N/A	NA	NA	1/1/1995
U017	S4	RH-TRU 1994, Book 8, Drums 778 to 797	N/A	NA	NA	NA
U018	S4	RH-TRU 1993, Book 7, Drums 748 to 777	N/A	NA	NA	NA
U019	S4	RH-TRU 1991-1992, Book 6, Drums 728 to 737	N/A	NA	NA	NA
U021	S4	RH-TRU 1990, Book 4, Drums 687 to 727	N/A	NA	NA	NA
U022	S4	RH-TRU 1985-1987, Book 3, Drums 617 to 686	N/A	NA	NA	NA
U027	S9	Report of Analytical Results	N/A	CMT-84 (10-84)	NA	8/1/1990
U036	S9	Acceptable Knowledge for ANL RH-TRU Waste	Klann, R.T. and K. N. Grimm and B. A. Brush	NA	NA	NA
U041	S4	Videotape Logs	Cheryl L. Schulz	NA	NA	9/15/01
U042	S4	RH-TRU 1976 to 1982, Book 1	N/A	NA	NA	NA
U043	S4	RH-TRU 1982 to 1985, Book 2	N/A	NA	NA	NA
U057	S2	General Data and Sectioning Information from AG Book for AG# 427B, F, G, H, J, K	Yung Y. Liu	NA	NA	NA
U060	S2	General Data and Sectioning Information from AG Book for AG# 429A, B, C, D	N/A	NA	NA	NA
U065	S2	Hand written Notes: One titled "Decon & Repair Procedures for Cleaning and Repairing a Manipulator"	N/A	NA	NA	3/24/87
U072	S10	Material Safety Data Sheets (MSDS)--various metal and chemical compounds	N/A	NA	NA	NA
U075	S6	LANMAS database	N/A	NA	NA	05/31/2001
U076	S6, S10	AGHCF Fissile Inventory Management System Database	N/A	NA	NA	7/16/2001

U085	S2	Procedure for Determining Fuel Pellet Density Using a Mercury Prinometer (handwritten)	N/A	NA	NA	NA
U302	S6	Fissile Inventory Management System User Manual (Excerpt)	NA	NA	NA	Unknown
U304	S9	Robinson Report	NA	NA	NA	Unknown
U307	S6	Report 105 - Custodian Batch Balance (Pure)	NA	Report 105	NA	12/01/2004
U315	S6	Reportable Mass Information	Unknown	NA	NA	~5/1989
U316	S6	Materials List	Unknown	NA	NA	Unknown
U317	S4, S11	Material Control Ledger	Various	NA	NA	Unknown
U325	S11	AGHCF Seal Logbook	Various	NA	NA	1992 - 2001
U326	S9	Report of Analytical Results (AGHCF Smear Data)	Terri Bray	NA	NA	12/7/2005
U327	S9	Preliminary Report of Analysis of Smear Data from Alpha Gamma Hot Cell Facility	Vivian Sullivan	06-0053	NA	~12/8/2005
U332	NA	Waste Requisitions - WMO-195, Radioactive and Mixed Waste	Various	ANL	NA	Various
U801	S5, S9	Disposal Requisitions	NA	ANL ID 46488	NA	Various
U802	S5, S9	SPM Logbook information for A/G 249 ANL ID 46232	NA	ANL ID 46232	NA	Various
U803	S5, S9	RERTR Miniplate Data Sheets ANL ID 328	R. F. Domagala	ANL ID 328	NA	03/1998
U805	S5, S9	SPM Logbook data for A/G 356 ANL ID 46339	NA	ANL ID 46339	NA	Various
U806	S5, S9	Documentation Providing Status of ANL Compatibility Plates ANL ID 327	NA	ANL ID 327	NA	Various
U807	S5, S11	Document providing links between AGSC can numbers, A/G numbers, and element numbers ANL ID 37788	NA	ANL ID 37788	NA	11/18/1994
U808	S11	Special Materials Information System Principal User Batch Balance Sheet (Report 105) ANL ID 27344	NA	ANL ID 45659	NA	09/05/1990
U809	S5, S9	Memo from L. A. Neimark to Walter Gray re: Fissile Contents of RERTR and SRL Specimens for Leaching Studies IPS-247-00-01, Work Plan for the Preparation of Al-clad Fuel Specimens for Pacific Northwest National Laboratory (PNNL) ANL ID 27344	NA	IPS-247-00-01	NA	05/1997; 04/1997
U810	S5, S9	Memo and Draft Report from R. V. Strain to M. M. Goldberg: Draft Report: Initial Results of Electron Microprobe Examination of a Section from Mixed-oxide Fuel Pin UW02010 ANL ID 3987	R. V. Strain	ANL ID 3987	NA	05/20/1999

U811	S5, S9	Special Materials (SPM) Logbook Data for A/G 558 ANL ID 46539	NA	ANL ID 46539	NA	NA
U812	S5, S9	Tables and Core Date for the ORR ANL ID 41197	NA	ANL ID 41197	NA	Unknown
U813	S5, S9	Appendix A, Core Configuration, Fuel Element Locations, and BOC 235U Fuel Element Masses Appendix F, Evaluation of Fuel Element Powers, U235 Masses, and Burnups of the Gamma-Scanning of Full-Sized Fuel Elements ANL ID 41198	NA	ANL ID 41198	NA	Unknown
U814	S5, S9	Lists of RERTR Samples Currently in AGHCF ANL ID 43971	NA	ANL ID 43971	NA	06/11/1992
U815	S5, S9	Documentation from AGHCF SPM Logbook for A/G 497 ANL ID 41183	NA	ANL ID 41183	NA	Various
U816	S5, S9	Proceedings of the Technical Review Meeting of DOE/PNC Operational Reliability Testing (ORT) program in EBR-II ANL ID 2076	John Lambert	ANL ID 2076	NA	NA
U817	S5, S9	Special Materials Logbook information for A/G 497 ANL ID 46480	NA	ANL ID 46480	NA	Various
U818	S5, S9	Record of Meeting: Final Technical Review of PNC/DOE Operational Reliability Testing Program in EBR-II ANL ID 39017	NA	ANL ID 39017	NA	03/1996
U819	S5, S9	Paper: Characterization of Mixed-Oxide Fuel Pins UW02010 and UW08036, DOE Spent Nuclear Fuels Program ANL ID 8745	NA	ANL ID 8745	NA	Unknown
U820	S2, S5, S9	Miscellaneous Gamma Scans and Work Plan: IPS-172-00-00, Work Plan for the Examination of Actinide-Burning Pin G562 (A/G 505) at the Alpha Gamma Hot Cell Facility ANL ID 39380	NA	IPS-172-00-00 ANL ID 39380	NA	Various
U822	S5	Final Report: Procurement and Characterization of Fuel Rod Segments from Quad Cities-2 Fuel Rods VW00101, ZB00113, AND ZS00102 ANL ID 7748	NA	ANL ID 7748	NA	Unknown
U823	S5	YMP Draft Annual Report, FY 1998 ANL ID 42099	NA	ANL ID 42099	NA	11/19/1998
U824	S5	As-Built Data Package, RERTR Microplate Irradiation in the Advanced Test Reactor (RERTR-1 and RERTR-2)	S. L. Hayes, C. L. Trybus, and M. K. Meyer	ANL ID 1212	NA	08/04/1997
U825	S5, S9	Special Materials Logbook information for A/G 460 ANL ID 46443	NA	ANL ID 46443	NA	Various
U826	S11	AGHCF Sectioning Slips Nos. 223 - 354 dating from 1/25/1999 through 3/5/2001 ANL ID 5249	Various	ANL ID 5249	NA	1/25/99 thru 3/5/2001

U830	S5	RERTR-3 Postirradiation Examination Plan at the Alpha-Gamma Hot Cell Facility; transmitted by memo from S. L. Hayes to R. V. Strain ANL ID 6808	S. L. Hayes and M. K. Meyer	ANL ID 6808	NA	01/13/2000
U832	S2	Miscellaneous AGHCF Supplemental Instructions	Various	SI 311; SI 308; SI 305; SI 293; SI 250; ETC.	NA	Various
U833	S5, S9	Excerpted pages from Report: Design, Operation, and Performance Data for High Burnup PWR Fuel from the H. B. robinson Plant for Use in the NRC Experimental Program at Argonne National Laboratory ANL DOC ID 8824	E. J. Ruzauskas; K. N. Fardell	1001558; ANL ID 8824	NA	05/2001
U835	S13	Special Materials (SPM) Logbook Information for A/G 608 ANL DOC ID 46588	NA	ANL ID 46588	NA	NA
U842	S5, S9	Fuel Pin Composition Calc.	Jene Vance	INL-RH-01	0	05/08/2006
U843	S5, S9	Scaling Factor Development	Jim Holderness	INL-RH-02	0	06/05/2006
U844	S5, S9	INL Cs-137 Dose-to-Curie Correlation	Jim Holderness	INL-RH-03	0	05/08/2006
U845	S5, S9	MCNP Sensitivity Studies	Jim Holderness	INL-RH-04	0	05/08/2006
U846	S5,S9	INL Cs-137 Dose-to-Curie Correlation Uncertainty	Jim Holderness	INL-RH-05	0	05/08/2006
U848	S5, S9	Uncertainty Analysis for Drums	Jim Holderness	INL-RH-07	0	06/05/2006
U849	S5, S9	Determination of Isotopes to be Reported Per WIPP WAC	Jene Vance	INL-RH-08	0	06/05/2006
U850	S5, S9	INL Shielded and Unshielded Dose-to-Curie Correlations	Jim Holderness	INL-RH-09	0	05/08/2006
U853	S5, S9	Disposition of Identified Items	Jene Vance	INL-RH-12	0	06/05/2006
U854	S5, S9	Modification of ORIGEN Input Files for Specific Pins	Jim Holderness	INL-RH-13	0	05/08/2006
U855	S5, S9	Co-60 Dose Rate Contribution	Jim Holderness	INL-RH-14	0	05/08/2006
U856	S5, S9	Derivation of Burnup and Composition for Thorium Pins	J. Vance	INL-RH-15	0	05/08/2006
U857	S5, S9	Scaling Factor Sensitivity Analysis	Jim Holderness	INL-RH-16	0	06/05/2006
U858	S5, S9	Demonstration of Commonality of INL and LANL Experimenters	Jene Vance	INL-RH-17	0	7/11/2006
U859	S5, S9	Pu and U Isotope Relationships in Fuel	Jene Vance	LANL-RH-03	0	2/22/2006
U860	S5, S9	Mass Spectroscopy Results Input Check	Jene Vance	LANL-RH-05	0	2/22/2006
U861	S5, S9	ORIGEN2.2 Code Verification Check	Jene Vance	LANL-RH-09	0	02/22/2006
U862	S5, S9	Fission Product Contribution to Total Dose Rate	Jene Vance	LANL-RH-10	0	2/22/2006
U863	S5, S9	Evaluation of Cs-137 Migration in Fuel Pin	J. Vance	LANL-RH-12	0	2/22/2006
U864	S5, S9	ORIGEN2.2 One Step Burnup Evaluation	J. Vance	LANL-RH-13	0	2/22/2006
U865	S2	ORIGEN 2.2 Input Generation	Jene Vance	LANL-RH-14	Draft	Unknown
U866	S5, S9	ORIGEN 2.2 Data Extraction	Jim Holderness	LANL-RH-15	0	02/22/2006
U867	S9	Mass Spectroscopy Comparison to ORIGEN	Jene Vance	LANL-RH-16	0	02/22/2006

U869	S5, S9	Fast Reactor Cross Section Library Sensitivity Study	Jim Holderness	LANL-RH-29	0	05/08/2006
U870	S5, S9	Evaluation of the Effects of Reactor Operating History	Jim Holderness	LANL-RH-30	0	05/08/2006
U872	S5, S9	Experimental Fuel Pins Irradiated in EBR-II Trhough December 8, 1980 ANL ID 35616	F. R. Shober, W. A. Briggs, H. M. Armstrong, J. N. Casale	TC-1117-3	NA	09/1981
U873	S5, S8	Argonne National Laboratory EBR-II Project, Run 89, Report of EBR-II Operations, June 15, 1977 through August 8, 1977 ANL ID 3137	D. J. Fluke	ANL ID 3137	NA	08/1977
U874	S5, S8	Performance of Commercially-Produced Mixed-Oxide Fuels in EBR-II (P-15 Test) ANL ID 33414	J. W. Hales, C. W. Hoth	HEDL TME 80-41; UC-79b	NA	08/1980
U875	S5, S8, S9	Engineering and Safety Analysis for AIR1 (R1) Fuel Rods	Atomics International	DP071270-001	B	04/05/1976
U876	S3, S8	Performance Evaluation of the WBA-20 Radial Blanket Irradiation Test ANL ID 2006	Umesh P. Nayak, Timothy S. Roth, Carl E. Schenone	WARD-RB-94000-4	NA	02/1981
U877	S5, S8, S9	Proposal to Irradiate Unencapsulated Fuel Pins in the EBR-88: Subassemblies PNL-6, PNL-7, and PNL-8	E. O Ballard and L. A. Pember	BNWL-1103	1	06/6/1969
U878	S8	EBR-II Quality Assurance Requirements; As-Built Description, Certification, and Data Transmittal Checklist for EBR-II Experiments	J. Barner	463-PP-E-44	2	12/1/1975
U879	S5, S8	Advanced Carbide/Nitride Fuels Program Irradiation Experiments ANL ID 39535	NA	ANL-AFP-25	NA	08/1976
U880	S5	Irradiation Behavior of the WBA-21 Oxide Blanket Test ANL ID 8482	Umesh P. Nayak, Thomas P. Soffa	WARD-RB-94000-5	NA	11/1982
U881	S5	The K6 Test: Helium-Bonded Uranium-Plutonium Carbide Fuel Pins Irradiated to 12-at.% Burnup in EBR-II ANL ID 9605	Trent W. Latimer, Roy L. Petty	LA-8688	NA	06/1981
U882	S5, S9	Fuel Information Input Check	Jene Vance	ANL-RH-01	1	09/13/2006
U883	S5, S9	Fuel Pin Composition Calculation	J. Vance	ANLE-RH-02	0, Change 1	9/13/2006
U884	S5, S9	Modification of ORIGEN Input Files for Specific Pins	Jim Holderness	ANLE-RH-03	0	06/22/2006
U885	S5, S9	Scaling Factor Development	Jim Holderness	ANLE-RH-04	0	06/22/2006
U886	S2	DTC and Related Calcs for Drum Characterization	Jim Holderness	ANLE-RH-05	Draft	UNK
U887	S5, S9	Uncertainty Analysis for Drums	Jim Holderness	ANLE-RH-06	0	06/22/06

U888	S5, S9	Determination of Isotopes to be Reported per WIPP WAC	Jene Vance	ANLE-RH-07	1	09/13/2006 and 10/16/2006
U892	S5, S9	Analysis of Cladding Co-60 Activity Level	Jim Holderness	LANL-RH-19	0	2/22/2006
U893	S5, S9	Activation Product Contribution to Total Dose Rate	Jene Vance	LANL-RH-27	0	05/08/2006

Alphanumeric Designations

C Correspondence
D Documents
DR Discrepancy Resolution
M Miscellaneous
P Procedures and Published Documents
U Unpublished Documents

AK Numbers

S1 Process Design Documents
S2 Standard Operating Procedure
S3 Safety Analysis Reports
S4 Waste Packaging Logs
S5 Test plans/research project reports
S6 Site databases
S7 Information from site personnel
S8 Standard industry documents
S9 Previous analytical data
S10 Material safety data sheets
S11 Laboratory Notebooks
S12 Comparable or surrogate sampling and analysis data
S13 Other

Walker, Rebecca

From: Quintana, Irene
Sent: Tuesday, July 22, 2008 8:04 AM
To: Walker, Rebecca
Subject: FW: NTS Acceptance Criteria for LLW

FYI

From: Biedscheid, Jennifer
Sent: Monday, July 21, 2008 9:29 AM
To: Porter, Larry; Doherty, Mark; Quintana, Irene; Greenwood, Trey
Cc: Devarakonda, Murthy; 'Lee, John'; Lillge, Robert E (GE Infra, Energy, US)
Subject: FW: NTS Acceptance Criteria for LLW

Please see NTS response below to our question regarding the acceptability of LLW characterized by the dose-to-curie methodology.

From: Disanza, Frank [mailto:disanza@nv.doe.gov]
Sent: Monday, July 21, 2008 9:17 AM
To: Biedscheid, Jennifer
Cc: Wrapp, John K (NSTec); Geisinger, Robert G (NSTec); Carilli, Jhon T.; Gordon, Sydney J (NSTec)
Subject: RE: NTS Acceptance Criteria for LLW

Jennifer,
Based on the information below, it appears that the proposed methodology is acceptable with the restrictions discussed below.
Thanks,
Frank

From: Geisinger, Robert [mailto:GEISINRG@nv.doe.gov]
Sent: Monday, July 21, 2008 8:10 AM
To: Disanza, Frank
Cc: Jennifer.Biedscheid@wipp.ws; Wrapp, John K (NSTec); Carilli, Jhon T.; Gordon, Sydney J (NSTec)
Subject: FW: NTS Acceptance Criteria for LLW

Frank,

Deron looked at the dose to curie methodology and with certain restrictions, this will be acceptable. See below.

R. Gregory Geisinger
National Security Technologies
Radioactive Waste Acceptance Program
Office Phone: 702-295-5196
Office Fax: 702-295-3112
Cell Phone 702-506-7644

From: Linkenheil, Deron
Sent: Friday, July 18, 2008 10:26 AM
To: Geisinger, Robert
Subject: RE: NTS Acceptance Criteria for LLW

The proposed method (Dose-to-Curie) is an acceptable method of characterization. Appendix E.3.B of the NTSWAC provides criteria for using scaling factors (Dose-to-Curie). Generators using gross radiation measurements shall ensure that measurements correlate with activity concentration on a consistent basis. Radionuclide distributions in the waste stream shall be initially determined and periodically verified through direct measurements or sampling and analysis. When developing scaling

factors, generators must consider the waste package and detector geometry, shielding and attenuation effects, self-absorption, and the energy spectra and decay schemes of radionuclides in the waste.

The uncertainty in the characterization method needs to be considered or accounted for unless a WIPP certified assay system or equivalent is used in estimating the activity of a waste package. RWAP should be contacted if further clarification is necessary on the uncertainty estimate.

From: Geisinger, Robert
Sent: Tuesday, July 15, 2008 12:22 PM
To: Linkenheil, Deron
Subject: FW: NTS Acceptance Criteria for LLW

Deron,

This looks reasonable, but give me your thoughts please.

R. Gregory Geisinger
National Security Technologies
Radioactive Waste Acceptance Program
Office Phone: 702-295-5196
Office Fax: 702-295-3112
Cell Phone 702-506-7644

From: Disanza, Frank [mailto:disanza@nv.doe.gov]
Sent: Tuesday, July 15, 2008 11:00 AM
To: Geisinger, Robert
Cc: Biedscheid, Jennifer; Wrapp, John; Carilli, Jhon
Subject: RE: NTS Acceptance Criteria for LLW

Gerg,
Please provide me a response to Jennifer's question below.
Thanks,
Frank

From: Biedscheid, Jennifer [mailto:Jennifer.Biedscheid@wipp.ws]
Sent: Tuesday, July 15, 2008 9:49 AM
To: Disanza, Frank
Subject: RE: NTS Acceptance Criteria for LLW

Frank:

I am wondering if you might be able to assist again (or direct me to the correct contact) with a question pertaining to possible shipment of LLW generated from the cleanup of the GE-Vallecitos Nuclear Center. We plan to characterize all waste (TRU and LLW) using a "dose-to-curie" (DTC) methodology. This DTC methodology is used to derive the curie content of waste containers based on a dose rate measurement taken with calibrated instrumentation. A brief description of the method is provided below:

The DTC method uses a standard profile of the waste to relate the quantity of gamma-emitting radionuclides to the activities in the waste. DTC conversions are based on a dose rate measurement taken with calibrated instrumentation. The measurement is associated with documented isotopic distributions within the waste through the use of empirically developed conversion factors. The external dose rate can be correlated to the activity in the container, such as 137Cs, by taking into account such factors as matrix and container geometry. The calculated 137Cs activity is then correlated to other radionuclides by scaling or conversion factors. The radionuclide conversion factor derivation shall be documented. For some RH TRU wastes, the distribution can be calculated based on fuel characteristics, sampling, and computer modeling (from a program such as ORIGEN). Sites will confirm AK information related to radionuclide distribution derived from modeling, by sampling and analysis.

Can waste with radiological properties characterized by this method be qualified for acceptance at NTS (provided other acceptance criteria is met)?

Thank you once again,

Jennifer

From: Disanza, Frank [mailto:disanza@nv.doe.gov]
Sent: Wednesday, February 13, 2008 10:19 AM
To: Biedscheid, Jennifer
Subject: RE: NTS Acceptance Criteria for LLW

Jennifer,

I will discuss your proposal with others here at the Nevada Site Office and provide you a response next week.

Thanks,

Frank

From: Biedscheid, Jennifer [mailto:Jennifer.Biedscheid@wipp.ws]
Sent: Wednesday, February 13, 2008 8:59 AM
To: Disanza, Frank
Cc: Stroble, J. R. - DOE
Subject: NTS Acceptance Criteria for LLW

Mr. Di Sanza:

I work for Washington TRU Solutions, which manages and operates the Waste Isolation Pilot Plant for the DOE. Mr. J.R. Stroble of DOE-Carlsbad Field Office provided me with your contact information. We are working with the General Electric Vallecitos Nuclear Company (GEVNC), which is a small site located in Sunol, California, approximately 40 miles east of San Francisco and approximately 7 miles southwest of Livermore, California. GEVNC plans to decontaminate an existing hot cell and anticipates the potential generation of a small amount of remote-handled low-level waste (estimated as <100 cubic meters). No mixed or RCRA wastes are expected to be generated. The DOE has agreed to accept the low-level waste for transportation to an approved, appropriate waste storage/disposal facility. We are wondering if the current NTS acceptance criteria and NEPA analysis would allow for the receipt of RH LLW from GEVNC. Please feel free to refer me to another contact if necessary. We appreciate your assistance in answering this question.

Kind regards,

Jennifer Biedscheid

Washington TRU Solutions, LLC

6100 Seagull Lane NE, Suite 202

Albuquerque, NM 87109 USA

Office: 505.878.1343

Mobile: 505.231.8228

Facsimile: 505.883.3754

GEN3

GEN3

NWP
Nuclear Waste Partnership LLC
A URS-led partnership with B&W and AREVA

CP:13:01016
UFC:5900.00

INTER-OFFICE CORRESPONDENCE

DATE: January 10, 2013

FROM: L. M. Nelson LMNelson LOCATION: CCP Certification

TO: F. W. Root ED LOCATION: CCP Operations
Argonne National Laboratory-East

SUBJECT: FOURTH QUARTER 2012 (OCTOBER 1, 2012 THROUGH DECEMBER 31, 2012) VISUAL EXAMINATION QUARTERLY REPEAT OF DATA GENERATION LEVEL REVIEW AT THE ARGONNE NATIONAL LABORATORY- REMOTE-HANDLED

Remote-Handled (RH) Visual Examination (VE) at the Argonne National Laboratory has completed 92 days of reporting from October 1, 2012 through December 31, 2012. Container number 1158, Batch Data Report (BDR) ANLRHVE12017, was randomly selected from among all the drums processed through Site Project Manger Project Level Review during this time frame. This container will be processed through the Quarterly Repeat of Data Generation Level (DGL) Review as described in CCP-TP-001, *CCP Project Level Data Validation and Verification*. The original letter will be retained in the letter correspondence file.

Please forward the mini-drum package provided to a qualified VE operator for the completion of an Independent Technical Review for the quarterly repeat. The mini-drum package has all the pertinent information to complete the review. Not all containers included in the original BDR will be included for this review. Only the selected drum noted above must be reviewed along with any Quality Control Information.

Please perform the VE quarterly repeat of DGL and return the mini-BDR with the naming convention "ANLRHVE12017_QTR0412" by February 11, 2013 to the Central Characterization Program Records Department.

If you have any questions, please call me at (303) 843-2269.

LMN:jmc

Attachment

cc: (without attachment) (with attachment)

I.S. Joo ED NTP Records Custodian GSA-212

CCP RECORDS ORIGINAL
DATE REC'D 1-22-13

Attachment 1 – Visual Examination Data Form

Site ID: BHANL			
Examination Date: 09-27-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☒N/A		Final Container ☐ N/A	
Container or Package ID Number:		Container or Package ID Number: 1158	
Container Type:		Container Type: 30 Gallon Container	
Waste Matrix Code:		Waste Matrix Code: S5400	
Waste Stream:		Waste Stream: AERHDM	
		Rigid Liner: ☒Y ☐N Type: 140 MIL	Rigid Liner Lid: ☐ Y ☒N
		Rigid Liner Vented or Hole Size: NA	
Percent Fill:	Percent Organic Waste:	Percent Fill 85%	Percent Organic Waste: 10%
Layers of Confinement:	Closure Method:	Layers of Confinement: 1	Closure Method: Heat SEALED FILTERED
Comments (e.g., filter information, NCRs): NA			

Waste Description:

Bottom Can: 1065

Top Can: 1034

09

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1158

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1: William H. Riley Print Name	Signature	09-27-12 Date
Visual Examination Operator 2: ERIC BOND Print Name	Signature	9-27-12 Date

Attachment 1 – Visual Examination Data Form

Site ID: RHAM			
Examination Date: 6-8-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 1065		Container or Package ID Number:	
Container Type: 7 GALLON CONTAINER		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: RERHAM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 70%	Percent Organic Waste: 10%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7 GALLON CONTAINER (IM) METAL CLIPS (IM)
DRY RAGS (C)
METAL CAN CRUSHER (IM) (AM)
PLASTIC WHEELS (P)
DOOR STOPPER (R)
EMPTY PIPES (IM)
PAPER (C)

11

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1065

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
Eric Banks (Print Name) — Eric [signature] (Signature) — 6-8-12 (Date)

Visual Examination Operator 2:
William H. Riley (Print Name) — [signature] (Signature) — 06-08-12 (Date)

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 8-16-12		Batch Number: NA	
Procedure #: CCP-TP500		Revision #: 11	Video Number NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒N/A	
Container or Package ID Number: 1034		Container or Package ID Number:	
Container Type: 7 Gallon Container		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 90	Percent Organic Waste: 20	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description: 7 Gallon Container (IM)

Hammers (IM)(P)(R)
Grinder (IM)(OM)(R)(P)
Wire cutters (IM)(P)
Plastic bags (P)
Drill bits (IM)
Allen wrenches (IM)
Ratchets (IM)
Mirror (OIM)
Alluminum pieces (AM)
Screw drivers (IM)(P)
Metal pieces (IM)
Wrenches (IM)
Electrical tape (R)(C)
Tweezer (IM)
C-clamps (AM)(IM)
Tape Measures (IM)(AM)(P)
Pipe cutter (IM)
Wire brush (P)(IM)
Razor knives (IM)(P)
Saws All blades (IM)
Socket (IM)
Solder (IM)(OM)(P)
Wood Ruler (C)(AM)
Dry Rags (C)
Plastic pieces (P)

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1034

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, *whichever is greater in an internal container?*	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match *Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC*)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
Monty Harris — Print Name
Monterry Harris — Signature
8-16-12 — Date

Visual Examination Operator 2:
GLORIA RUPPERT — Print Name
Gloria Ruppert — Signature
8-16-12 — Date

DIVIDER

PAGE

Attachment 3 – Visual Examination Site Project Manager Checklist

Batch Data Report No.: ANLRHVE12017-QTR0412

1. Has all the data received an independent technical review as evidenced by a completed checklist (Attachment 2) and the appropriate ITR signature?		☐ NO	☑ YES
2. Are BDR contents complete and match the Visual Examination Batch Data Report Table of Contents?		☐ NO	☑ YES
3. Is the BDR complete (appropriately filled in forms for each container)?		☐ NO	☑ YES
4. Have the RH Quality Assurance Objectives (QAOs) for VE been met?			
Precision – reconciled discrepancies between operators		☐ NO	☑ YES
Accuracy – trained operators		☐ NO	☑ YES
Representativeness – description of container contents		☐ NO	☑ YES
Completeness – completed data form and/or recording		☐ NO	☑ YES
Comparability – proper training and adequate AK for unopened containers		☐ NO	☑ YES
5. Were NCRs generated included in the BDR?	☐ NO	☐ YES	☑ N/A

Comments

No NCR's.

SPM:

Laura Nelson
Printed Name

Laura Nelson
Signature

2-19-13
Date

NTPC RECORDS ORIGINAL
DATE REC'D 8/21/13

Attachment 4 – Visual Examination Batch Data Report Cover Sheet

Batch Data Report No.: ANLRHVE12017_GTR0412 Date: 02-01-13

	Waste Container ID Number:
1	1158
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GR 02-01-13

NTPC RECORDS ORIGINAL
DATE REC'D 2-19-13

01

Attachment 5 – Visual Examination Batch Data Report Table of Contents

Batch Data Report No.: ANLRHVE12 OIT QTR0412 Date: 02-01-13

Item	Description	Page No.
1	Visual Examination Batch Data Report Cover Sheet (Attachment 4)	1
2	Visual Examination Batch Data Report Table of Contents (Attachment 5)	2
3	Visual Examination Data Forms (Attachment 1)	3
4	Visual Examination Independent Technical Reviewer Checklist (Attachment 2)	9
5	Copy of NCRs (N/A [If not applicable])	N/A

02

Attachment 1 – Visual Examination Data Form

Site ID BHANL	
Examination Date 09-27-12	Batch Number NA
Procedure # CCP-TP-500	Revision # 11 / Video Number NA
Recording Equipment Check ☐SAT ☐UNSAT ☒N/A	Recording Start NA / Recording Stop NA
Initial Container ☒N/A	Final Container ☐ N/A
Container or Package ID Number	Container or Package ID Number 1158
Container Type	Container Type 30 Gallon Container
Waste Matrix Code	Waste Matrix Code S5400
Waste Stream	Waste Stream AERHDM
	Rigid Liner ☒Y ☐N Type 140 MIL / Rigid Liner Lid ☐Y ☒N
	Rigid Liner Vented or Hole Size NA
Percent Fill / Percent Organic Waste	Percent Fill 85% / Percent Organic Waste 10%
Layers of Confinement / Closure Method	Layers of Confinement 1 / Closure Method Heat Sealed & Filled
Comments (e.g. filter information, NCRs) NA	

Waste Description

Bottom Can: 1065

Top Can: 1034

GR 03-01-13

09

03

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1158

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags NOT defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments NA

Visual Examination Operator 1
William H. Riley — Print Name
William H. Riley — Signature
09-27-12 — Date

Visual Examination Operator 2
ERIC BOND — Print Name
Eric Bond — Signature
9-27-12 — Date

GR 02-01-13
10
04

Attachment 1 – Visual Examination Data Form

Site ID RHANL			
Examination Date 6-8-12		Batch Number NA	
Procedure # CCP-TP-500		Revision # 11	Video Number NA
Recording Equipment Check ☐SAT ☐UNSAT ☒N/A		Recording Start NA	Recording Stop NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number 1065		Container or Package ID Number	
Container Type: 7GALLON CONTAINER		Container Type	
Waste Matrix Code S5400		Waste Matrix Code	
Waste Stream AERHDM		Waste Stream	
		Rigid Liner ☐Y IN Type	Rigid Liner Lid ☐Y ☐N
		Rigid Liner Vented or Hole Size	
Percent Fill 70%	Percent Organic Waste 10%	Percent Fill	Percent Organic Waste
Layers of Confinement 0	Closure Method NA	Layers of Confinement	Closure Method
Comments (e.g., filter information, NCRs) NA			

Waste Description

7 GALLON CONTAINER (IM) METAL CLIPS (IM)
DRY RAGS (C)
METAL CAN CRUSHER (IM) (AM)
PLASTIC WHEELS (P)
DOOR STOPPER (R)
EMPTY PIPES (IM)
PAPER (C)

GR 02-01-13
H
05

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1065

Prohibited Item(s) Summary	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill seal and panel closures materials container and packaging materials, shipping container materials or other wastes (i.e. waste does NOT match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability corrosivity or reactivity (EPA Hazardous Waste Numbers of D001 D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags NOT defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments NA

Visual Examination Operator 1

Print Name	Signature	Date
ERIC BOOKS	Eric Books	6-8-12

Visual Examination Operator 2

Print Name	Signature	Date
William H. Riley	William H. Riley	06-08-12

GR 02-01-13
12
04

Attachment 1 – Visual Examination Data Form

Site ID	RHANL		
Examination Date	8-16-12	Batch Number	NA
Procedure #	CCP-TP500	Revision # 11	Video Number NA
Recording Equipment Check	☐SAT ☐UNSAT ☒N/A	Recording Start NA	Recording Stop NA
Initial Container	☐ N/A	Final Container	☒N/A
Container or Package ID Number	1034	Container or Package ID Number	
Container Type	7 Gallon Container	Container Type	
Waste Matrix Code	S5400	Waste Matrix Code	
Waste Stream	AERHDM	Waste Stream	
		Rigid Liner ☐Y ☐N Type	Rigid Liner Lid ☐Y ☐N
		Rigid Liner Vented or Hole Size	
Percent Fill 90	Percent Organic Waste 20	Percent Fill	Percent Organic Waste
Layers of Confinement 0	Closure Method NA	Layers of Confinement	Closure Method
Comments (e.g. filter information, NCRs)	NA		

Waste Description

7 Gallon Container (IM)

Hammers (IM)(P)(R)
Grinder (IM)(OM)(R)(P)
Wire cutters (IM)(P)
Plastic bags (P)
Drill bits (IM)
Allen wrenches (IM)
Ratchets (IM)
Mirror (OIM)
Alluminum pieces (AM)
Screw drivers (IM)(P)
Metal pieces (IM)
Wrenches (IM)
Electrical tape (R)(C)

Tweezer (IM)
C-clamps (AM)(IM)
Tape Measures (IM)(AM)(P)
Pipe cutter (IM)
Wire brush (P)(IM)
Razor knives (IM)(P)
Saws All blades (IM)
Socket (IM)
Solder (IM)(OM)(P)
Wood Ruler (C)(AM)
Dry Rags (C)
Plastic pieces (P)

GR 02-01-13
13
07

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1034

Prohibited Item(s) Summary	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments NA

Visual Examination Operator 1
Monty Harris (Print Name) — Monterry Harris (Signature) — 8-16-12 (Date)

Visual Examination Operator 2
GLORIA RUPPERT (Print Name) — Gloria Ruppert (Signature) — 8-16-12 (Date)

GR 02-01-13
14
08

Attachment 2 – Visual Examination Independent Technical Reviewer Checklist

Batch Data Report No.: ANLRHVE12017_ QTR0412

1. Were data generation and reduction conducted in a technically correct manner in accordance with the methods (procedure) used?	☐ NO	☒ YES	☐ N/A
2. Was the correct revision of the operating procedure used?	☐ NO	☒ YES	☐ N/A
3. Were all the transcription errors corrected?	☐ NO	☐ YES	☒ N/A
4. Are BDR contents complete and match the Visual Examination Batch Data report Table of Contents?	☐ NO	☒ YES	☐ N/A
5. Does the BDR include VE for no more than 20 containers?	☐ NO	☒ YES	☐ N/A
6. Is all data recorded signed and dated in reproducible ink?	☐ NO	☒ YES	☐ N/A
7. Is all raw data recorded clearly, legibly, and accurately?	☐ NO	☒ YES	☐ N/A
8. Are all changes to original data lined out, initialed and dated by the individual making the changes or an individual authorized to make the change?	☐ NO	☒ YES	☐ N/A
9. Is there an adequate written description of the contents?	☐ NO	☒ YES	☐ N/A
10. Were the recording equipment checks satisfactory?	☐ NO	☐ YES	☒ N/A
11. Has each container in this BDR been evaluated for the presence of prohibited wastes?	☐ NO	☒ YES	☐ N/A
12. Has the physical waste form in each container in this BDR been evaluated against the Waste Stream Description and the Waste Matrix Code?	☐ NO	☒ YES	☐ N/A
13. Have the RH Quality Assurance Objectives (QAOs) for VE been met?	☐ NO	☒ YES	☐ N/A
Precision – reconciled discrepancies between operators or between the operator and ITR.	☐	☒	☐
Accuracy – trained operators	☐	☒	☐
Representativeness – description of container contents	☐	☒	☐
Completeness – completed data form and/or recording	☐	☒	☐
Comparability – proper training and adequate AK source documents are available for unopened containers.	☐	☒	☐
14. Were NCRs generated included in the BDR?	☐ NO	☐ YES	☒ N/A
Comments: None			

Independent Technical Reviewer:

F. Wesley Root	F. Wesley Root	02-15-13
Printed Name	Signature	Date

09

DIVIDER PAGE ONLY

Not part of page count

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523 or 575-234-7431

Fax Number: 575-234-7033

[X] Original Record [ ] Copy
[ ] Fax Record
[ ] Electronic Record

Attn:	Sheri Punchios	From:	Wes Root
Ship to:	S. M. Stoller WIPP Rec. Mgmt. Govt.	Site:	ANL-E
	CCP Records	Company:	Nuclear Waste Partnership LLC
	4021 National Parks Hwy	Telephone Number:	630-252-8306
	Carlsbad, NM 88220	Date Sent:	2-15-13
Telephone Number:	575-234-7095		

Document Number	Title / Description	Record Date	Total Pages
ANLRHVE12017 QTR0412	Batch Data Report – Waste Container ID Number: 1158.	02-01-13	9

Comments

ANL RH VE Fourth Quarter 2012 quarterly repeat of DGL review.

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

Records Accepted [✓]	Linda Martin	LINDA MARTIN	2.19.13
	Signature	Printed Name	Date
Records Rejected [ ]			
	Signature	Printed Name	Date

Reason for Rejection:

Re-submittal:

Signature	Printed Name	Date

```
*********************
***   TX REPORT   ***
*********************

TRANSMISSION OK

TX/RX NO                3109
DESTINATION TEL #       916302526706
DESTINATION ID          WES ROOT
ST. TIME                02/19 13:04
TIME USE                00'15
PAGES SENT                1
RESULT                  OK
```

Controlled Copy

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523 or 575-234-7431

Fax Number: 575-234-7033

[X] Original Record [ ] Copy
[ ] Fax Record
[ ] Electronic Record

Attn:	Sheri Punchios	From:	Wes Root
Ship to:	S. M. Stoller WIPP Rec. Mgmt. Govt.	Site:	ANL-E
	CCP Records	Company:	Nuclear Waste Partnership LLC
	4021 National Parks Hwy	Telephone Number:	630-252-8306
	Carlsbad, NM 88220	Date Sent:	2-15-13
Telephone Number:	575-234-7095		

Document Number	Title / Description	Record Date	Total Pages
ANLRHVE12017 QTR0412	Batch Data Report – Waste Container ID Number: 1158.	02-01-13	9

Comments

ANL RH VE Fourth Quarter 2012 quarterly repeat of DGL review.

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

Records Accepted [✓]	Linda Martin	LINDA MARTIN	2.19.13
	Signature	Printed Name	Date
Records Rejected [ ]			
	Signature	Printed Name	Date

Reason for Rejection:

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523 or 575-234-7431

Fax Number: 575-234-7033

- [ ] Original Record
- [ ] Fax Record
- [x] Electronic Record
- [ ] Copy

Attn:	Linda Martin	From:	Laura Nelson
Ship to:	CCP Records	Site:	Denver
	4021 National Parks Hwy	Company:	WTS
	MS:GSA:212	Telephone Number:	303-843-2269
	Carlsbad, NM 88220	Date Sent:	2/19/13
Telephone Number:	575-234-7523		

Document Number	Title / Description	Record Date	Total Pages
ANLRHVE12017_ QTR0412	SPM Checklist	2/19/13	1
	NA		

Comments

NA

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

	Signature	Printed Name	Date
Records Accepted [✓]	J. M. Patterson	Jeffrey Patterson	8/21/13
Records Rejected [ ]			

Reason for Rejection:

Re-submittal:

Signature	Printed Name	Date

```
*********************
***   TX REPORT   ***
*********************
```

TRANSMISSION OK

TX/RX NO	2180
DESTINATION TEL #	913038432208
DESTINATION ID	DENVER
ST. TIME	08/21 08:10
TIME USE	00'15
PAGES SENT	1
RESULT	OK

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523 or 575-234-7431

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Telephone Number:	575-234-7523		

Document Number	Title / Description	Record Date	Total Pages
ANLRHVE12017_QTR0412	SPM Checklist	2/18/13	1
	NA		

Comments

NA

(When the Record accepted line has been completed, the rest of the page below may be left blank.)

DIVIDER

PAGE

NWP
Nuclear Waste Partnership LLC

A URS-led partnership with B&W and AREVA

CP:13:01087
UFC:5900.00

INTER-OFFICE CORRESPONDENCE

DATE: February 19, 2013

FROM: L. M. Nelson L.Nelson LOCATION: CCP Certification

TO: NTP Records Custodian GSA-212 LOCATION: National TRU Program Certification

SUBJECT: RESULTS OF VISUAL EXAMINATION QUARTERLY REPEAT DATA GENERATION LEVEL DATA REVIEW: ARGONNE NATIONAL LABORATORY- REMOTE-HANDLED FOURTH CALENDER QUARTER 2012

Procedure CCP-TP-001, *CCP Project Level Data Validation and Verification*, requires that a repeat of Data Generation Level (DGL) review, validation and verification be performed on the data for a minimum of one randomly chosen waste container each quarter. The Site Project Manager (SPM) uses this information to document that the data generation level data review is being performed according to procedures.

Inter- Office Correspondence Number CP:13:01016 was issued on January 10, 2013. This memorandum identified waste container 1158 as the randomly selected container for DGL repeat of Visual Examination (VE) at the Argonne National Laboratories- Remote-Handled waste for the fourth calendar quarter of 2012.

The mini Batch Data Report containing 1158 was reviewed for the quarterly repeat on February 19, 2013. No deficiencies were identified during the review. A second VE SPM Checklist has been completed and authenticated.

If you have any questions, please call me at (303) 843-2269.

LMN:jmc

cc: I.S. Joo ED

NTPC RECORDS ORIGINAL
DATE REC'D 2-28-13

DIVIDER

PAGE

Nuclear Waste Partnership LLC

A URS-led partnership with B&W and AREVA

CP:13:01128
UFC:5900.00

INTER-OFFICE CORRESPONDENCE

DATE: April 9, 2013

FROM: L. M. Nelson LOCATION: CCP Certification

TO: F. W. Root ED LOCATION: CCP Operations
Argonne National Laboratory-East

SUBJECT: FIRST QUARTER 2013 (JANUARY 1, 2013 THROUGH MARCH 31, 2013) VISUAL EXAMINATION QUARTERLY REPEAT OF DATA GENERATION LEVEL REVIEW AT THE ARGONNE NATIONAL LABORATORY- REMOTE-HANDLED

Remote-Handled (RH) Visual Examination (VE) at the Argonne National Laboratory has completed 90 days of reporting from January 1, 2013 through March 31, 2013. Container number 1199, Batch Data Report (BDR) ANLRHVE13004, was randomly selected from among all the drums processed through Site Project Manger Project Level Review during this time frame. This container will be processed through the Quarterly Repeat of Data Generation Level (DGL) Review as described in CCP-TP-001, *CCP Project Level Data Validation and Verification*. The original letter will be retained in the letter correspondence file.

Please forward the attached mini-drum package provided to a qualified VE operator for the completion of an Independent Technical Review for the quarterly repeat. The mini-drum package has all the pertinent information to complete the review. Not all containers included in the original BDR will be included for this review. Only the selected drum noted above must be reviewed along with any Quality Control Information.

Please perform the VE quarterly repeat of DGL and return the mini-BDR with the naming convention "ANLRHVE13004_QTR0113" by May 13, 2013 to the Central Characterization Program Records Department.

If you have any questions, please call me at (303) 843-2269.

LMN:jmc

Attachment

cc: (without attachment) (with attachment)

I.S. Joo ED NTP Records Custodian GSA-212

NTPC RECORDS ORIGINAL
DATE REC'D 5-23-13

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 2-27-13		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☒ N/A		Final Container ☐ N/A	
Container or Package ID Number:		Container or Package ID Number: 1199	
Container Type:		Container Type: 30 GALLON CONTAINER	
Waste Matrix Code:		Waste Matrix Code: S5400	
Waste Stream:		Waste Stream: AERHANA	
		Rigid Liner: ☒Y ☐N Type: 140 MIL	Rigid Liner Lid: ☐Y ☒N
		Rigid Liner Vented or Hole Size: NA	
Percent Fill:	Percent Organic Waste:	Percent Fill: 85%	Percent Organic Waste: 40%
Layers of Confinement:	Closure Method:	Layers of Confinement: 1	Closure Method: HEAT SEALED FILTERS
Comments (e.g., filter information, NCRs): NA			

Waste Description:

BOTTOM CAN: 1116

TOP CAN: 928

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1199

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:

Print Name	Signature	Date
ERIC BOND	[signature]	2-27-13

Visual Examination Operator 2:

Print Name	Signature	Date
William H. Riley	[signature]	02-27-13

Attachment 1 – Visual Examination Data Form

Site ID: BHANL			
Examination Date: 01-10-13		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒N/A	
Container or Package ID Number: 1116		Container or Package ID Number:	
Container Type: 7-Gallon Container		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 90%	Percent Organic Waste: 70%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7-Gallon Container-(IM)
Tape-(C)
Metal Hardware-(IM)(AM)
Metal Can-empty-(AM)
Dry Rags-(C)
Plastic Labware-(P)
Electrical Cords-(R)(OM)(IM)
Empty Plastic Bags-(P)
Glass Labware-(OIM)
Paper-(C)
Glove Box Glove-(R)
Dry Rags-(C)
Saw blade-(IM)
O-Ring-(R)

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1116

	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH-TRU Check			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
William H. Riley — Print Name
William H. Riley — Signature
01-10-13 — Date

Visual Examination Operator 2:
Earl Bond — Print Name
Earl Bond — Signature
1-10-13 — Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 11-8-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 928		Container or Package ID Number:	
Container Type: 7 GALLON CONTAINER		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 90%	Percent Organic Waste: 20%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7 GALLON CONTAINER (IM) DRY RAGS (C)
BATTERY CHARGER (P) (IM) (OM) FIRE BRICK PIECES (C IM)
WIRE (IM)
O-RINGS (R)
METAL LIGHT COVER (IM)
ELECTRICAL CORDS (R) (OM)
METAL LABWARE (IM) (AM)
EMPTY BOTTLES (P)
PAPER (C)

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 928

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
ERIC BOND — Print Name
Eric Bond — Signature
11-8-12 — Date

Visual Examination Operator 2:
William H. Riley — Print Name
William H. Riley — Signature
11-08-12 — Date

DIVIDER

PAGE

Attachment 3 – Visual Examination Site Project Manager Checklist

Batch Data Report No.: ANLRHVE13004 _QTR0113

1. Has all the data received an independent technical review as evidenced by a completed checklist (Attachment 2) and the appropriate ITR signature?		☐ NO	☑ YES
2. Are BDR contents complete and match the Visual Examination Batch Data Report Table of Contents?		☐ NO	☑ YES
3. Is the BDR complete (appropriately filled in forms for each container)?		☐ NO	☑ YES
4. Have the RH Quality Assurance Objectives (QAOs) for VE been met?			
Precision – reconciled discrepancies between operators		☐ NO	☑ YES
Accuracy – trained operators		☐ NO	☑ YES
Representativeness – description of container contents		☐ NO	☑ YES
Completeness – completed data form and/or recording		☐ NO	☑ YES
Comparability – proper training and adequate AK for unopened containers		☐ NO	☑ YES
5. Were NCRs generated included in the BDR?	☐ NO	☐ YES	☑ N/A

Comments

The original BDR was completed using Rev.11 of CCP-TP-500, this quarterly was completed using Rev.12 of CCP-TP-500.

No NCR'S.

SPM:

Laura Nelson
Printed Name

Laura Nelson
Signature

8/12/13
Date

NTPC RECORDS ORIGINAL
DATE REC'D 8/13/13

Attachment 4 – Visual Examination Batch Data Report Cover Sheet

Batch Data Report No.: ANL RHVE13004_QTR0113 Date: 07-22-13

	Waste Container ID Number:
1	1199
2	
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20	

G.A.R. 07-22-13

NTPC RECORDS ORIGINAL
DATE REC'D 8/1/13

01

Attachment 5 – Visual Examination Batch Data Report Table of Contents

Batch Data Report No.: ANLRHVE13004QTR0113 Date: 07-22-13

Item	Description	Page No.
1	Visual Examination Batch Data Report Cover Sheet (Attachment 4)	1
2	Visual Examination Batch Data Report Table of Contents (Attachment 5)	2
3	Visual Examination Data Forms (Attachment 1)	3
4	Visual Examination Independent Technical Reviewer Checklist (Attachment 2)	9
5	Copy of NCRs (N/A [If not applicable])	NA

Attachment 1 – Visual Examination Data Form

Site ID: RHANC	
Examination Date: 2-27-13	Batch Number: NA
Procedure #: CCP-TP-500	Revision #: 11 / Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A	Recording Start: NA / Recording Stop: NA
Initial Container ☒ N/A	Final Container ☐ N/A
Container or Package ID Number:	Container or Package ID Number: 1199
Container Type:	Container Type: 30 GALLON CONTAINER
Waste Matrix Code:	Waste Matrix Code: S5400
Waste Stream:	Waste Stream: AEKHA NA
	Rigid Liner: ☒Y ☐N Type: 140 MIL / Rigid Liner Lid: ☐Y ☒N
	Rigid Liner Vented or Hole Size: NA
Percent Fill: / Percent Organic Waste:	Percent Fill: 85% / Percent Organic Waste: 40%
Layers of Confinement: / Closure Method:	Layers of Confinement: 1 / Closure Method: HEAT SEALED HDPE
Comments (e.g., filter information, NCRs): NA	

Waste Description:

BOTTOM CAN: 1116

TOP CAN: 928

SI
CAR
07-22-13

03

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1199

Prohibited Item(s) Summary	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	X	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	X	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	X	
Does the container have observable liquid containing PCBs?	☐	X	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	X	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	X	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	X	
Is there an indication of wastes containing explosives or compressed gases?	☐	X	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	X	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	X	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	X	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	X	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	X	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	X	
Is the waste consistent with the TRUCON Code?	X	☐	

Comments: NA

Visual Examination Operator 1: ERIC BOND (Print Name) — Signature — 2-27-13 (Date)

Visual Examination Operator 2: William H. Biley (Print Name) — Signature — 02-27-13 (Date)

GAR 07-22-13

04

Attachment 1 – Visual Examination Data Form

Site ID: BHANL			
Examination Date: 01-10-13		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒N/A	
Container or Package ID Number: 1116		Container or Package ID Number:	
Container Type: 7-Gallon Container		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 90%	Percent Organic Waste: 70%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7-Gallon Container-(IM)
Tape-(C)
Metal Hardware-(IM)(AM)
Metal Can-empty-(AM)
Dry Rags-(C)
Plastic Labware-(P)
Electrical Cords-(R)(OM)(IM)
Empty Plastic Bags-(P)
Glass Labware-(OIM)
Paper-(C)
Glove Box Glove-(R)
Dry Rags-(C)
Saw blade-(IM)
O-Ring-(R)

53 G.A.R 07-22-13

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1116

	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
[illegible]			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags NOT defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
William H Riley — Print Name
William H. Riley — Signature
01-10-13 — Date

Visual Examination Operator 2:
Earl Bond — Print Name
Earl Bond — Signature
1-10-13 — Date

54 GAR 07-22-13

06

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 11-8-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 928		Container or Package ID Number:	
Container Type: 7 GALLON CONTAINER		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 90%	Percent Organic Waste: 20%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7 GALLON CONTAINER (IM) DRY RAGS (C)
BATTERY CHARGER (P) (IM) (OM) FIRE BRICK PIECES (C) (IM)
WIRE (IM)
O-RINGS (R)
METAL LIGHT COVER (IM)
ELECTRICAL CORDS (R) (OM)
METAL LABWARE (IM) (AM)
EMPTY BOTTLES (P)
PAPER (C)

SS GAR 07-22-13

07

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 928

Prohibited Item(s) Summary	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
ERIC BOWO — Print Name
[signature] — Signature
11-8-12 — Date

Visual Examination Operator 2:
William H. Riley — Print Name
[signature] — Signature
11-08-12 — Date

5/6 C.A.R 07-22-13

08

Attachment 2 – Visual Examination Independent Technical Reviewer Checklist

Batch Data Report No.: ANL RHVE13004_QTR0113

1. Were data generation and reduction conducted in a technically correct manner in accordance with the methods (procedure) used?	☐ NO	☒ YES	☐ N/A
2. Was the correct revision of the operating procedure used?	☐ NO	☒ YES	☐ N/A
3. Were all the transcription errors corrected?	☐ NO	☐ YES	☒ N/A
4. Are BDR contents complete and match the Visual Examination Batch Data report Table of Contents?	☐ NO	☒ YES	☐ N/A
5. Does the BDR include VE for no more than 20 containers?	☐ NO	☒ YES	☐ N/A
6. Is all data recorded signed and dated in reproducible ink?	☐ NO	☒ YES	☐ N/A
7. Is all raw data recorded clearly, legibly, and accurately?	☐ NO	☒ YES	☐ N/A
8. Are all changes to original data lined out, initialed and dated by the individual making the changes or an individual authorized to make the change?	☐ NO	☒ YES	☐ N/A
9. Is there an adequate written description of the contents?	☐ NO	☒ YES	☐ N/A
10. Were the recording equipment checks satisfactory?	☐ NO	☐ YES	☒ N/A
11. Has each container in this BDR been evaluated for the presence of prohibited wastes?	☐ NO	☒ YES	☐ N/A
12. Has the physical waste form in each container in this BDR been evaluated against the Waste Stream Description and the Waste Matrix Code?	☐ NO	☒ YES	☐ N/A
13. Have the RH Quality Assurance Objectives (QAOs) for VE been met?	☐ NO	☒ YES	☐ N/A
Precision – reconciled discrepancies between operators or between the operator and ITR.	☐	☒	☐
Accuracy – trained operators	☐	☒	☐
Representativeness – description of container contents	☐	☒	☐
Completeness – completed data form and/or recording	☐	☒	☐
Comparability – proper training and adequate AK source documents are available for unopened containers.	☐	☒	☐
14. Were NCRs generated included in the BDR?	☐ NO	☐ YES	☒ N/A

Comments: NA

Independent Technical Reviewer:

GLORIA RUPPERT — Printed Name

Gloria Ruppert — Signature

07-24-13 — Date

Attachment 2 – Visual Examination Independent Technical Reviewer Checklist

Batch Data Report No.: ANL RHVE13004_QTR0113

1. Were data generation and reduction conducted in a technically correct manner in accordance with the methods (procedure) used?	☐ NO	☒ YES	☐ N/A
2. Was the correct revision of the operating procedure used?	☐ NO	☒ YES	☐ N/A
3. Were all the transcription errors corrected?	☐ NO	☐ YES	☒ N/A
4. Are BDR contents complete and match the Visual Examination Batch Data report Table of Contents?	☐ NO	☒ YES	☐ N/A
5. Does the BDR include VE for no more than 20 containers?	☐ NO	☒ YES	☐ N/A
6. Is all data recorded signed and dated in reproducible ink?	☐ NO	☒ YES	☐ N/A
7. Is all raw data recorded clearly, legibly, and accurately?	☐ NO	☒ YES	☐ N/A
8. Are all changes to original data lined out, initialed and dated by the individual making the changes or an individual authorized to make the change?	☐ NO	☒ YES	☐ N/A
9. Is there an adequate written description of the contents?	☐ NO	☒ YES	☐ N/A
10. Were the recording equipment checks satisfactory?	☐ NO	☐ YES	☒ N/A
11. Has each container in this BDR been evaluated for the presence of prohibited wastes?	☐ NO	☒ YES	☐ N/A
12. Has the physical waste form in each container in this BDR been evaluated against the Waste Stream Description and the Waste Matrix Code?	☐ NO	☒ YES	☐ N/A
13. Have the RH Quality Assurance Objectives (QAOs) for VE been met?	☐ NO	☒ YES	☐ N/A
Precision – reconciled discrepancies between operators or between the operator and ITR.	☐	☒	☐
Accuracy – trained operators	☐	☒	☐
Representativeness – description of container contents	☐	☒	☐
Completeness – completed data form and/or recording	☐	☒	☐
Comparability – proper training and adequate AK source documents are available for unopened containers.	☐	☒	☐
14. Were NCRs generated included in the BDR?	☐ NO	☐ YES	☒ N/A

Comments: NA

Independent Technical Reviewer:

GLORIA RUPPERT — Printed Name

Gloria Ruppert — Signature

07-24-13 — Date

DIVIDER PAGE ONLY

Not part of page count

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523, 575-234-7431, or 575-234-7095

Fax Number: 575-234-7033

[X] Original Record
[ ] Fax Record
[ ] Electronic Record
[ ] Copy

Attn:	Sheila Pearcy	From:	Wes Root
Ship to:	S.M. Stoller Rec. Mgmt. Govt.	Site:	ANL-E
	CCP Records	Company:	Nuclear Waste Partnership LLC
	4021 National Parks Hwy	Telephone Number:	630-252-8306
	Carlsbad, NM 88220	Date Sent:	7-29-13
Telephone Number:	575-234-7523		

Document Number	Title / Description	Record Date	Total Pages
ANLRHVE13004 QTR0113	Batch Data Report – Waste Container ID Number: 1199	7-22-13	9
	WR 7-29-13		

Comments

First Quarter 2013 RH VE Quarterly Repeat of DGL review at ANL.

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

	Signature	Printed Name	Date
Records Accepted [✓]	[signature]	Jeffrey Patterson	8/1/13
Records Rejected [ ]			

Reason for Rejection:

	Signature	Printed Name	Date
Re-submittal:			

```
*********************
***   TX REPORT   ***
*********************
```

TRANSMISSION OK

TX/RX NO	4993
DESTINATION TEL #	916302526706
DESTINATION ID	WES ROOT
ST. TIME	08/01 15:29
TIME USE	00'19
PAGES SENT	1
RESULT	OK

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CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523, 575-234-7431, or 575-234-7095

Fax Number: 575-234-7033

[X] Original Record [ ] Copy
[ ] Fax Record
[ ] Electronic Record

Attn:	Sheila Pearcy	From:	Wes Root
Ship to:	S.M. Stoller Rec. Mgmt. Govt.	Site:	ANL-E
	CCP Records	Company:	Nuclear Waste Partnership LLC
	4021 National Parks Hwy	Telephone Number:	630-252-8306
	Carlsbad, NM 88220	Date Sent:	7-29-13
Telephone Number:	575-234-7523		

Attachment Number	Record Description	Record Date	Total Pages
ANLRHVE13004 QTR0113	Batch Data Report – Waste Container ID Number: 1199	7-22-13	9
	WR 7-29-13		

Comments

First Quarter 2013 RH VE Quarterly Repeat of DGL review at ANL.

(When the Record accepted line has been completed, the rest of the page below may be left blank.)

Acceptance/Rejection Signature and Date

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Telephone Number: 575-234-7523, 575-234-7431, or 575-234-7095

Fax Number: 575-234-7033

[ ] Original Record
[ ] Fax Record
[X] Electronic Record
[ ] Copy

Attn:	Jeff Patterson	From:	Laura Nelson
Ship to:	CCP Records	Site:	Denver
	4021 National Parks Highway	Company:	NWP
	MS:GSA:212	Telephone Number:	303-843-2269
	Carlsbad, NM 88220	Date Sent:	8/13/13
Telephone Number:	575-234-7523		

Document Number	Title / Description	Record Date	Total Pages
ANLRHVE13004_QTR0113	SPM Checklist	8/12/13	1
	NA		

Comments

NA

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

	Signature	Printed Name	Date
Records Accepted [✓]	Jeff Patterson	JEFF PATTERSON	8/13/13
Records Rejected [ ]			

Reason for Rejection:

Re-submittal:

Signature	Printed Name	Date

```
**********************
***   TX REPORT   ***
**********************

TRANSMISSION OK

TX/RX NO                1793
DESTINATION TEL #       913038432208
DESTINATION ID          DENVER
ST. TIME                08/13 08:42
TIME USE                00'16
PAGES SENT                1
RESULT                  OK
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Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523, 575-234-7431, or 575-234-7095

Fax Number: 575-234-7033

- [ ] Original Record
- [ ] Fax Record
- [x] Electronic Record
- [ ] Copy

Attn:	Jeff Patterson	From:	Laura Nelson
Ship to:	CCP Records	Site:	Denver
	4021 National Parks Highway	Company:	NWP
	MS:GSA:212	Telephone Number:	303-843-2269
	Carlsbad, NM 88220	Date Sent:	8/13/13
Telephone Number:	575-234-7523		

Document Number	Title / Description	Record Date	Total Pages
ANLRHVE13004_QTR0113	SPM Checklist	8/12/13	1
	NA		

Comments

NA

(When the Record accepted line has been completed, the rest of the page below may be left blank.)

DIVIDER PAGE ONLY

Not part of page count

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[X] Original Record
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[ ] Copy

Attn:	Sheila Pearcy	From:	Wes Root
Ship to:	S.M. Stoller Rec. Mgmt. Govt.	Site:	ANL-E
	CCP Records	Company:	Nuclear Waste Partnership LLC
	4021 National Parks Hwy	Telephone Number:	630-252-8306
	Carlsbad, NM 88220	Date Sent:	7-29-13
Telephone Number:	575-234-7523		

Document Number	Title / Description	Record Date	Total Pages
ANLRHVE13004 QTR0113	Batch Data Report – Waste Container ID Number: 1199	7-22-13	9
	WR 7-29-13		

Comments

First Quarter 2013 RH VE Quarterly Repeat of DGL review at ANL.

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

	Signature	Printed Name	Date
Records Accepted [✓]	[signature]	Jeffrey Patterson	8/1/13
Records Rejected [ ]			

Reason for Rejection:

Re-submittal:

Signature	Printed Name	Date

```
*********************
***   TX REPORT   ***
*********************
```

TRANSMISSION OK

TX/RX NO	4993
DESTINATION TEL #	916302526706
DESTINATION ID	WES ROOT
ST. TIME	08/01 15:29
TIME USE	00'19
PAGES SENT	1
RESULT	OK

Attachment 2 – CCP Records Transmittal/Receiving Form

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Fax Number: 575-234-7033

[X] Original Record [ ] Copy
[ ] Fax Record
[ ] Electronic Record

Attn:	Sheila Pearcy	From:	Wes Root
Ship to:	S.M. Stoller Rec. Mgmt. Govt.	Site:	ANL-E
	CCP Records	Company:	Nuclear Waste Partnership LLC
	4021 National Parks Hwy	Telephone Number:	630-252-8306
	Carlsbad, NM 88220	Date Sent:	7-29-13
Telephone Number:	575-234-7523		

Document Number	Title/Description	Record Date	Total Pages
ANLRHVE13004 QTR0113	Batch Data Report – Waste Container ID Number: 1190	7-22-13	9
	WR 7-29-13		

Comments

First Quarter 2013 RH VE Quarterly Repeat of DGL review at ANL.

(When the Record accepted line has been completed, the rest of the page below may be left blank.)

Acceptance/Rejection Signature and Date

Attachment 2 – CCP Records Transmittal/Receiving Form

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- [ ] Original Record
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- [ ] Copy

Attn:	Jeff Patterson	From:	Laura Nelson
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	Carlsbad, NM 88220	Date Sent:	8/13/13
Telephone Number:	575-234-7523		

Document Number	Title / Description	Record Date	Total Pages
ANLRHVE13004_QTR0113	SPM Checklist	8/12/13	1
	NA		

Comments

NA

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

	Signature	Printed Name	Date
Records Accepted [✓]	Jeff Patterson	JEFF PATTERSON	8/13/13
Records Rejected [ ]			

Reason for Rejection:

Re-submittal:

Signature	Printed Name	Date

```
**********************
***   TX REPORT   ***
**********************

TRANSMISSION OK

TX/RX NO                1793
DESTINATION TEL #       913038432208
DESTINATION ID          DENVER
ST. TIME                08/13 08:42
TIME USE                00'16
PAGES SENT                1
RESULT                  OK
```


Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523, 575-234-7431, or 575-234-7095

Fax Number: 575-234-7033

- [ ] Original Record
- [ ] Fax Record
- [X] Electronic Record
- [ ] Copy

Attn:	Jeff Patterson	From:	Laura Nelson
Ship to:	CCP Records	Site:	Denver
	4021 National Parks Highway	Company:	NWP
	MS:GSA:212	Telephone Number:	303-843-2269
	Carlsbad, NM 88220	Date Sent:	8/13/13
Telephone Number:	575-234-7523		

Document Number	Title / Description	Record Date	Total Pages
ANLRHVE13004_QTR0113	SPM Checklist	8/12/13	1
	NA		

Comments

NA

(When the Record accepted line has been completed, the rest of the page below may be left blank.)

DIVIDER

PAGE

Nuclear Waste Partnership LLC

A URS-led partnership with B&W and AREVA

CP:13:01373
UFC:5900.00

INTER-OFFICE CORRESPONDENCE

DATE: August 13, 2013

FROM: L. M. Nelson LOCATION: CCP Certification

TO: NTPC Records Custodian GSA-212 LOCATION: National TRU Certification Program

SUBJECT: RESULTS OF VISUAL EXAMINATION QUARTERLY REPEAT DATA GENERATION LEVEL DATA REVIEW: ARGONNE NATIONAL LABORATORY- REMOTE-HANDLED FIRST CALENDER QUARTER 2013

Procedure CCP-TP-001, *CCP Project Level Data Validation and Verification*, requires that a repeat of Data Generation Level (DGL) review, validation and verification be performed on the data for a minimum of one randomly chosen waste container each quarter. The Site Project Manager (SPM) uses this information to document that the data generation level data review is being performed according to procedures.

Inter- Office Correspondence Number CP:13:01128 was issued on April 9, 2013. This memorandum identified waste container 1199 as the randomly selected container for DGL repeat of Visual Examination (VE) at the Argonne National Laboratory Remote-Handled waste for the first calendar quarter of 2013.

The mini Batch Data Report containing 1199 was reviewed for the quarterly repeat on August 12, 2013. No deficiencies were identified during the review. A second VE SPM Checklist has been completed and authenticated.

If you have any questions, please call me at (303) 843-2269.

LMN:jmc

cc: I.S. Joo ED

NTPC RECORDS ORIGINAL
DATE REC'D 8/14/13

DIVIDER

PAGE

Nuclear Waste Partnership LLC

A URS-led partnership with B&W and AREVA

CP:13:01287
UFC:5900.00

INTER-OFFICE CORRESPONDENCE

DATE: July 9, 2013

FROM: L. M. Nelson LMN LOCATION: CCP Certification

TO: F. W. Root ED LOCATION: CCP Operations
Argonne National Laboratory

SUBJECT: SECOND QUARTER 2013 (APRIL 1, 2013 THROUGH JUNE 30, 2013) VISUAL EXAMINATION QUARTERLY REPEAT OF DATA GENERATION LEVEL REVIEW AT THE ARGONNE NATIONAL LABORATORY- REMOTE-HANDLED

Remote-Handled (RH) Visual Examination (VE) at the Argonne National Laboratory has completed 91 days of reporting from April 1, 2013 through June 30, 2013. Container number 1216, Batch Data Report (BDR) ANLRHVE13006, was randomly selected from among all the drums processed through Site Project Manger Project Level Review during this time frame. This container will be processed through the Quarterly Repeat of Data Generation Level (DGL) Review as described in CCP-TP-001, *CCP Project Level Data Validation and Verification*. The original letter will be retained in the letter correspondence file.

Please forward the attached mini-drum package to a qualified VE operator for the completion of an Independent Technical Review for the quarterly repeat. The mini-drum package has all the pertinent information to complete the review. Not all containers included in the original BDR will be included for this review. Only the selected drum noted above must be reviewed along with any Quality Control Information.

Please perform the VE quarterly repeat of DGL and return the mini-BDR with the naming convention "ANLRHVE13006_QTR0213" by August 12, 2013 to the National TRU Program Certification Records Department.

If you have any questions, please call me at (303) 843-2269.

LMN:jmc

Attachment

cc: (without attachment) (with attachment)

I.S. Joo ED NTPC Records Custodian GSA-212

NTPC RECORDS ORIGINAL
DATE REC'D 7/17/13

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 04-03-13		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☒N/A		Final Container ☐ N/A	
Container or Package ID Number:		Container or Package ID Number: 1216	
Container Type:		Container Type: 30-Gallon Container	
Waste Matrix Code:		Waste Matrix Code: S5400	
Waste Stream:		Waste Stream: AERHDM	
		Rigid Liner: ☒Y ☐N Type: 140 MiL	Rigid Liner Lid: ☐Y ☒N
		Rigid Liner Vented or Hole Size: NA	
Percent Fill:	Percent Organic Waste:	Percent Fill: 85%	Percent Organic Waste: 10%
Layers of Confinement:	Closure Method:	Layers of Confinement: 1	Closure Method: Heat Sealed filtered
Comments (e.g., filter information, NCRs): NA			

Waste Description:

Bottom Can: 1130

Top Can: 1085

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1216

Prohibited Item(s) Summary	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags NOT defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
William H. Biley — Print Name
Will H. Biley — Signature
04-03-13 — Date

Visual Examination Operator 2:
ERIC BOND — Print Name
Eric Bond — Signature
4-3-13 — Date

114

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 03-06-13	Batch Number: NA		
Procedure #: CCP-TP-500	Revision #: 11	Video Number: NA	
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A	Recording Start: NA	Recording Stop: NA	
Initial Container ☐ N/A	Final Container ☒ N/A		
Container or Package ID Number: 1130	Container or Package ID Number:		
Container Type: 7 Gallon Container	Container Type:		
Waste Matrix Code: S 5400	Waste Matrix Code:		
Waste Stream: AERHDM	Waste Stream:		
	Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N	
	Rigid Liner Vented or Hole Size:		
Percent Fill: 85	Percent Organic Waste: 10	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7 gallon Container (Im)
Shield Pot Centering Ring (Im)
Shield Pot # 8279

115

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1130

Prohibited Item(s) Summary	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
Packaging			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags NOT defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1: Gary Redman (Print Name)	Gary Redman (Signature)	03-06-13 (Date)
Visual Examination Operator 2: ERIC BOND (Print Name)	Eric Bond (Signature)	3-6-13 (Date)

116

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 1-24-13		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒N/A	
Container or Package ID Number: 8279		Container or Package ID Number:	
Container Type: 1 Gallon Shield PoT		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHOM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 85	Percent Organic Waste: 20	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

Vented 1 Gallon 3/4 inch Thick Lead Lined Shield PoT (om)(Im)

Metmounts (om)(Im)(P)

Fuel and Cladding (om)(Im)

117

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 8279

	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags NOT defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
Monty Harris — Print Name
Monty Harris — Signature
1-24-13 — Date

Visual Examination Operator 2:
Gary Redman — Print Name
Gary Redman — Signature
1-24-13 — Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 3-12-13		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 1085		Container or Package ID Number:	
Container Type: 7 GALLON CONTAINER		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AE RHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 85%	Percent Organic Waste: 10%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 6	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7 GALLON CONTAINER (IM)

SHIELD POT CENTERING RING (IM)

SHIELD POT # 8281

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1085

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	X	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	X	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	X	
Does the container have observable liquid containing PCBs?	☐	X	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	X	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	X	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	X	
Is there an indication of wastes containing explosives or compressed gases?	☐	X	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	X	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	X	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	X	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	X	
Are there sealed containers GREATER than 4 liters or heat sealed bags NOT defined in the applicable TRUCON Code?	☐	X	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	X	
Is the waste consistent with the TRUCON Code?	X	☐	

Comments: NA

Visual Examination Operator 1: ERIC BOND — Print Name; Eric Bond — Signature; 3-12-13 — Date

Visual Examination Operator 2: GLORIA RUPPERT — Print Name; Gloria Ruppert — Signature; 3-12-13 — Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 1-24-13		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒N/A	
Container or Package ID Number: 8281		Container or Package ID Number:	
Container Type: 1 Gallon Shield Pot		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 85	Percent Organic Waste: 20	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

Vented 1 Gallon 3/4 inch Thick Lead Lined Shield Pot (om)(Im)

Fuel and Cladding (om)(Im)

Metmounts (om)(Im)(P)

Rubble (om)(Im)(P)

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 8281

	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags NOT defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
Monty Harris — Print Name
Monterry Harris — Signature
1-24-13 — Date

Visual Examination Operator 2:
Gary Redman — Print Name
Gary Redman — Signature
1-24-13 — Date

DIVIDER

PAGE

Attachment 3 – Visual Examination Site Project Manager Checklist

Batch Data Report No.: ANLRHVE13006_QTR0213

1. Has all the data received an independent technical review as evidenced by a completed checklist (Attachment 2) and the appropriate ITR signature?		☐ NO	☑ YES
2. Are BDR contents complete and match the Visual Examination Batch Data Report Table of Contents?		☐ NO	☑ YES
3. Is the BDR complete (appropriately filled in forms for each container)?		☐ NO	☑ YES
4. Have the RH Quality Assurance Objectives (QAOs) for VE been met?			
Precision – reconciled discrepancies between operators		☐ NO	☑ YES
Accuracy – trained operators		☐ NO	☑ YES
Representativeness – description of container contents		☐ NO	☑ YES
Completeness – completed data form and/or recording		☐ NO	☑ YES
Comparability – proper training and adequate AK for unopened containers		☐ NO	☑ YES
5. Were NCRs generated included in the BDR?	☐ NO	☐ YES	☑ N/A

Comments

The original BDR was completed using Rev. 11 of CCP-TP-500, This Quarterly was completed using Rev. 12 of CCP-TP-500.

No NCR's.

SPM:

Laura Nelson — Printed Name

Laura Nelson — Signature

8/12/13 — Date

NTPC RECORDS ORIGINAL
DATE REC'D 8/13/13

Attachment 4 – Visual Examination Batch Data Report Cover Sheet

Batch Data Report No.: ANLRHVE13006_QTR0213 Date: 07-23-13

	Waste Container ID Number:
1	1216
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7-23-13

01

Attachment 5 – Visual Examination Batch Data Report Table of Contents

Batch Data Report No.: ANLRHVE13006_QTR0213 Date: 07-23-13

Item	Description	Page No.
1	Visual Examination Batch Data Report Cover Sheet (Attachment 4)	01
2	Visual Examination Batch Data Report Table of Contents (Attachment 5)	02
3	Visual Examination Data Forms (Attachment 1)	03
4	Visual Examination Independent Technical Reviewer Checklist (Attachment 2)	13
5	Copy of NCRs (N/A [If not applicable])	N/A

Attachment 1 – Visual Examination Data Form

Site ID: RHANL	
Examination Date: 04-03-13	Batch Number: NA
Procedure #: CCP-TP-500	Revision #: 11 / Video Number NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A	Recording Start: NA / Recording Stop: NA
Initial Container ☒ N/A	Final Container ☐ N/A
Container or Package ID Number:	Container or Package ID Number: 1216
Container Type:	Container Type: 30-Gallon Container
Waste Matrix Code:	Waste Matrix Code: S5400
Waste Stream:	Waste Stream: AERHDM
	Rigid Liner: ☒Y ☐N Type: 140 MiL / Rigid Liner Lid: ☐Y ☒N
	Rigid Liner Vented or Hole Size: NA
Percent Fill: / Percent Organic Waste:	Percent Fill: 85% / Percent Organic Waste: 10%
Layers of Confinement: / Closure Method:	Layers of Confinement: 1 / Closure Method: Heat Sealed filtered
Comments (e.g., filter information, NCRs): NA	

Waste Description:

Bottom Can: 1130

Top Can: 1085

113 PB 07-23-13
03

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1216

Prohibited Item(s) Summary	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH-72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags NOT defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
William H. Biley — Print Name
Will H. B — Signature
04-03-13 — Date

Visual Examination Operator 2:
ERIC BOND — Print Name
Eric Bond — Signature
4-3-13 — Date

114 PB 7-23-13
04

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 03-06-13		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 1130		Container or Package ID Number:	
Container Type: 7 Gallon Container		Container Type:	
Waste Matrix Code: S 5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 85	Percent Organic Waste: 10	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7 gallon Container (Im)
Shield Pot Centering Ring (Im)
Shield Pot # 8279

PB 7-23-13
~~115~~
05

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1130

Prohibited Item(s) Summary	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
Bag Closure			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags NOT defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:

Print Name	Signature	Date
Gary Redman	Gary Redman	03-06-13

Visual Examination Operator 2:

Print Name	Signature	Date
ERIC BOND	Eric Bond	3-6-13

116 PB 7-23-13
06

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 1-24-13		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒N/A	
Container or Package ID Number: 8279		Container or Package ID Number:	
Container Type: 1 Gallon Shield PoT		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHOM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 85	Percent Organic Waste: 20	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

Vented 1 Gallon 3/4 inch Thick Lead Lined Shield PoT (om)(Im)

Metmounts (om)(Im)(P)

Fuel and Cladding (om)(Im)

HD PB 7-23-13
07

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 8279

	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags NOT defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
Monty Harris — Print Name
Monty Harris — Signature
1-24-13 — Date

Visual Examination Operator 2:
Gary Redman — Print Name
Gary Redman — Signature
1-24-13 — Date

HB PB 7-23-13
08

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 3-12-13		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 1085		Container or Package ID Number:	
Container Type: 7 GALLON CONTAINER		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AE RHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 85%	Percent Organic Waste: 10%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 6	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7 GALLON CONTAINER (IM)

SHIELD POT CENTERING RING (IM)

SHIELD POT # 8281

119 PB 7-23-13
09

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1085

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags NOT defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1: ERIC BOND — Print Name; Signature; 3-12-13 — Date

Visual Examination Operator 2: GLORIA RUPPERT — Print Name; Gloria Ruppert — Signature; 3-12-13 — Date

~~120~~ PB 7-23-13
10

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 1-24-13		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒N/A	
Container or Package ID Number: 8281		Container or Package ID Number:	
Container Type: 1 Gallon Shield Pot		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 85	Percent Organic Waste: 20	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

Vented 1 Gallon 3/4 inch Thick Lead Lined Shield Pot (om)(Im)

Fuel and cladding (om)(Im)

Metmounts (om)(Im)(P)

Rubble (om)(Im)(P)

~~121~~ 11 PB 1-23-13

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 8281

	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags NOT defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
Monty Harris — Print Name
Monterry Harris — Signature
1-24-13 — Date

Visual Examination Operator 2:
Gary Redman — Print Name
Gary Redman — Signature
1-24-13 — Date

122 PB 7-23-13
12

Attachment 2 – Visual Examination Independent Technical Reviewer Checklist

Batch Data Report No.: ANLRHVE13006-QTR0213

1. Were data generation and reduction conducted in a technically correct manner in accordance with the methods (procedure) used?	☐ NO	☒ YES	☐ N/A
2. Was the correct revision of the operating procedure used?	☐ NO	☒ YES	☐ N/A
3. Were all the transcription errors corrected?	☐ NO	☐ YES	☒ N/A
4. Are BDR contents complete and match the Visual Examination Batch Data report Table of Contents?	☐ NO	☒ YES	☐ N/A
5. Does the BDR include VE for no more than 20 containers?	☐ NO	☒ YES	☐ N/A
6. Is all data recorded signed and dated in reproducible ink?	☐ NO	☒ YES	☐ N/A
7. Is all raw data recorded clearly, legibly, and accurately?	☐ NO	☒ YES	☐ N/A
8. Are all changes to original data lined out, initialed and dated by the individual making the changes or an individual authorized to make the change?	☐ NO	☒ YES	☐ N/A
9. Is there an adequate written description of the contents?	☐ NO	☒ YES	☐ N/A
10. Were the recording equipment checks satisfactory?	☐ NO	☐ YES	☒ N/A
11. Has each container in this BDR been evaluated for the presence of prohibited wastes?	☐ NO	☒ YES	☐ N/A
12. Has the physical waste form in each container in this BDR been evaluated against the Waste Stream Description and the Waste Matrix Code?	☐ NO	☒ YES	☐ N/A
13. Have the RH Quality Assurance Objectives (QAOs) for VE been met?	☐ NO	☒ YES	☐ N/A
Precision – reconciled discrepancies between operators or between the operator and ITR.	☐	☒	☐
Accuracy – trained operators	☐	☒	☐
Representativeness – description of container contents	☐	☒	☐
Completeness – completed data form and/or recording	☐	☒	☐
Comparability – proper training and adequate AK source documents are available for unopened containers.	☐	☒	☐
14. Were NCRs generated included in the BDR?	☐ NO	☐ YES	☒ N/A

Comments: N/A

Independent Technical Reviewer:

Printed Name	Signature	Date
Pat Beallis	Pat Beallis	07-23-13

DIVIDER PAGE ONLY

Not part of page count

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523, 575-234-7431, or 575-234-7095

Fax Number: 575-234-7033

[X] Original Record
[ ] Fax Record
[ ] Electronic Record
[ ] Copy

Attn:	Sheila Pearcy	From:	Wes Root
Ship to:	S.M. Stoller Rec. Mgmt. Govt.	Site:	ANL-E
	CCP Records	Company:	Nuclear Waste Partnership LLC
	4021 National Parks Hwy	Telephone Number:	630-252-8306
	Carlsbad, NM 88220	Date Sent:	7-29-13
Telephone Number:	575-234-7523		

Document Number	Title / Description	Record Date	Total Pages
ANLRHVE13006 QTR0213	Batch Data Report – Waste Container ID Number: 1216	7-23-13	13
	WR 7-29-13		

Comments:

Second Quarter 2013 RH VE Quarterly Repeat of DGL review at ANL.

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

	Signature	Printed Name	Date
Records Accepted [✓]	Jeff Patterson	Jeffrey Patterson	8/1/13
Records Rejected [ ]			

Reason for Rejection:

Re-submittal:

Signature	Printed Name	Date

```
**********************
***   TX REPORT   ***
**********************

TRANSMISSION OK

TX/RX NO                 4994
DESTINATION TEL #        916302526706
DESTINATION ID           WES ROOT
ST. TIME                 08/01 15:30
TIME USE                 00'19
PAGES SENT                 1
RESULT                   OK
```


Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523, 575-234-7431, or 575-234-7095

Fax Number: 575-234-7033

[X] Original Record [ ] Copy
[ ] Fax Record
[ ] Electronic Record

Attn:	Sheila Pearcy	From:	Wes Root
Ship to:	S.M. Stoller Rec. Mgmt. Govt.	Site:	ANL-E
	CCP Records	Company:	Nuclear Waste Partnership LLC
	4021 National Parks Hwy	Telephone Number:	630-252-8306
	Carlsbad, NM 88220	Date Sent:	7-29-13
Telephone Number:	575-234-7523		

Document Number	Document Title	Record Date	Total Pages
ANLRHVE13006 QTR0213	Batch Data Report – Waste Container ID Number: 1216	7-23-13	13
	WR 7-29-13		

Comments

Second Quarter 2013 RH VE Quarterly Repeat of DGL review at ANL.

(When the Record accepted line has been completed, the rest of the page below may be left blank.)

Acceptance/Rejection Signature and Date

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523, 575-234-7431, or 575-234-7095

Fax Number: 575-234-7033

[ ] Original Record [ ] Copy
[ ] Fax Record
[X] Electronic Record

Attn:	Jeff Patterson	From:	Laura Nelson
Ship to:	CCP Records	Site:	Denver
	4021 National Parks Highway	Company:	NWP
	MS:GSA:212	Telephone Number:	303-843-2269
	Carlsbad, NM 88220	Date Sent:	8/13/13
Telephone Number:	575-234-7523		

Document Number	Title / Description	Record Date	Total Pages
ANLRHVE13006_QTR0213	SPM Checklist	8/12/13	1
	NA		

Comments

NA

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

	Signature	Printed Name	Date
Records Accepted [✓]	[signature]	JEFF PATTERSON	8/13/13
Records Rejected [ ]			

Reason for Rejection:

Re-submittal:

Signature	Printed Name	Date

```
**********************
***   TX REPORT   ***
**********************

TRANSMISSION OK

TX/RX NO                1794
DESTINATION TEL #       913038432208
DESTINATION ID          DENVER
ST. TIME                08/13 08:43
TIME USE                00'15
PAGES SENT                1
RESULT                  OK
```


Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523, 575-234-7431, or 575-234-7085

Fax Number: 575-234-7033

- [ ] Original Record
- [ ] Fax Record
- [x] Electronic Record
- [ ] Copy

Attn:	Jeff Patterson	From:	Laura Nelson
Ship to:	CCP Records	Site:	Denver
	4021 National Parks Highway	Company:	NWP
	MS:GSA:212	Telephone Number:	303-843-2269
	Carlsbad, NM 88220	Date Sent:	8/13/13
Telephone Number:	575-234-7523		

Document Number	Title / Description	Record Date	Total Pages
ANLRHVE13006_QTR0213	SPM Checklist	8/12/13	1
	NA		

Comments

NA

(When the Record accepted line has been completed, the rest of the page below may be left blank.)

DIVIDER

PAGE

Attachment 3 – Visual Examination Site Project Manager Checklist

Batch Data Report No.: ANLRHVE13006_QTR0213

1. Has all the data received an independent technical review as evidenced by a completed checklist (Attachment 2) and the appropriate ITR signature?		☐ NO	☑ YES
2. Are BDR contents complete and match the Visual Examination Batch Data Report Table of Contents?		☐ NO	☑ YES
3. Is the BDR complete (appropriately filled in forms for each container)?		☐ NO	☑ YES
4. Have the RH Quality Assurance Objectives (QAOs) for VE been met?			
Precision – reconciled discrepancies between operators		☐ NO	☑ YES
Accuracy – trained operators		☐ NO	☑ YES
Representativeness – description of container contents		☐ NO	☑ YES
Completeness – completed data form and/or recording		☐ NO	☑ YES
Comparability – proper training and adequate AK for unopened containers		☐ NO	☑ YES
5. Were NCRs generated included in the BDR?	☐ NO	☐ YES	☑ N/A

Comments

The original BDR was completed using Rev. 11 of CCP-TP-500, This Quarterly was completed using Rev. 12 of CCP-TP-500.

No NCR's.

SPM:

Laura Nelson — Printed Name

Laura Nelson — Signature

8/12/13 — Date

NTPC RECORDS ORIGINAL
DATE REC'D 8/13/13

Attachment 4 – Visual Examination Batch Data Report Cover Sheet

Batch Data Report No.: ANLRHVE13006_QTR0213 Date: 07-23-13

	Waste Container ID Number:
1	1216
2	
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19	
20	

TB 7-23-13

01

Attachment 5 – Visual Examination Batch Data Report Table of Contents

Batch Data Report No.: ANLRHVE13006_QTR0213 Date: 07-23-13

Item	Description	Page No.
1	Visual Examination Batch Data Report Cover Sheet (Attachment 4)	01
2	Visual Examination Batch Data Report Table of Contents (Attachment 5)	02
3	Visual Examination Data Forms (Attachment 1)	03
4	Visual Examination Independent Technical Reviewer Checklist (Attachment 2)	13
5	Copy of NCRs (N/A [If not applicable])	N/A

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 04-03-13		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☒N/A		Final Container ☐ N/A	
Container or Package ID Number:		Container or Package ID Number: 1216	
Container Type:		Container Type: 30-Gallon Container	
Waste Matrix Code:		Waste Matrix Code: S5400	
Waste Stream:		Waste Stream: AERHDM	
		Rigid Liner: ☒Y ☐N Type: 140 MiL	Rigid Liner Lid: ☐Y ☒N
		Rigid Liner Vented or Hole Size: NA	
Percent Fill:	Percent Organic Waste:	Percent Fill: 85%	Percent Organic Waste: 10%
Layers of Confinement:	Closure Method:	Layers of Confinement: 1	Closure Method: Heat Sealed filtered
Comments (e.g., filter information, NCRs): NA			

Waste Description:

Bottom Can: 1130

Top Can: 1085

113 PB 07-23-13
03

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1216

Prohibited Item(s) Summary	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH-72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags NOT defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
William H. Biley — Print Name
Will H. Biley — Signature
04-03-13 — Date

Visual Examination Operator 2:
ERIC BOND — Print Name
Eric Bond — Signature
4-3-13 — Date

114 PB 7-23-13
04

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 03-06-13		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 1130		Container or Package ID Number:	
Container Type: 7 Gallon Container		Container Type:	
Waste Matrix Code: S 5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 85	Percent Organic Waste: 10	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7 gallon Container (Im)
Shield Pot Centering Ring (Im)
Shield Pot # 8279

PB 7-23-13
~~115~~
05

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1130

Prohibited Item(s) Summary	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
Miscellaneous			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags NOT defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:		
Gary Redman	Gary Redman	03-06-13
Print Name	Signature	Date

Visual Examination Operator 2:		
ERIC BOND	Eric Bond	3-6-13
Print Name	Signature	Date

116 PB 7-23-13
06

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 1-24-13		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒N/A	
Container or Package ID Number: 8279		Container or Package ID Number:	
Container Type: 1 Gallon Shield POT		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHOM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 85	Percent Organic Waste: 20	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

VENTED 1 Gallon 3/4 INCH Thick Lead Lined SHield POT (om)(Im)

Metmounts (om)(Im)(P)

Fuel and Cladding (om)(Im)

PB 7-23-13

07

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 8279

	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	X	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	X	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	X	
Does the container have observable liquid containing PCBs?	☐	X	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	X	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	X	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	X	
Is there an indication of wastes containing explosives or compressed gases?	☐	X	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	X	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	X	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	X	
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	X	
Are there sealed containers GREATER than 4 liters or heat sealed bags NOT defined in the applicable TRUCON Code?	☐	X	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	X	
Is the waste consistent with the TRUCON Code?	X	☐	

Comments: NA

Visual Examination Operator 1:
Monty Harris — Print Name
Monty Harris — Signature
1-24-13 — Date

Visual Examination Operator 2:
Gary Redman — Print Name
Gary Redman — Signature
1-24-13 — Date

HB PB 7-23-13
08

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 3-12-13		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 1085		Container or Package ID Number:	
Container Type: 7 GALLON CONTAINER		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AE RHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 85%	Percent Organic Waste: 10%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7 GALLON CONTAINER (IM)

SHIELD POT CENTERING RING (IM)

SHIELD POT # 8281

119 PB 7-23-13
09

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1085

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags NOT defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1: ERIC BOND — Print Name; Eric Bond — Signature; 3-12-13 — Date

Visual Examination Operator 2: GLORIA RUPPERT — Print Name; Gloria Ruppert — Signature; 3-12-13 — Date

120 PB 7-23-13
10

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 1-24-13		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: N/A
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒N/A	
Container or Package ID Number: 8281		Container or Package ID Number:	
Container Type: 1 Gallon Shield Pot		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 85	Percent Organic Waste: 20	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

Vented 1 Gallon 3/4 inch Thick Lead Lined Shield Pot (om)(Im)

Fuel and cladding (om)(Im)

Metmounts (om)(Im)(P)

Rubble (om)(Im)(P)

~~121~~ 11 PB 1-23-13

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 8281

	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags NOT defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1: Monty Harris (Print Name) Monterry Harris (Signature) 1-24-13 (Date)

Visual Examination Operator 2: Gary Redman (Print Name) Gary Redman (Signature) 1-24-13 (Date)

~~122~~ PB 7-23-13
12

Attachment 2 – Visual Examination Independent Technical Reviewer Checklist

Batch Data Report No.: ANLRHVE13006-QTR0213

1. Were data generation and reduction conducted in a technically correct manner in accordance with the methods (procedure) used?	☐ NO	☒ YES	☐ N/A
2. Was the correct revision of the operating procedure used?	☐ NO	☒ YES	☐ N/A
3. Were all the transcription errors corrected?	☐ NO	☐ YES	☒ N/A
4. Are BDR contents complete and match the Visual Examination Batch Data report Table of Contents?	☐ NO	☒ YES	☐ N/A
5. Does the BDR include VE for no more than 20 containers?	☐ NO	☒ YES	☐ N/A
6. Is all data recorded signed and dated in reproducible ink?	☐ NO	☒ YES	☐ N/A
7. Is all raw data recorded clearly, legibly, and accurately?	☐ NO	☒ YES	☐ N/A
8. Are all changes to original data lined out, initialed and dated by the individual making the changes or an individual authorized to make the change?	☐ NO	☒ YES	☐ N/A
9. Is there an adequate written description of the contents?	☐ NO	☒ YES	☐ N/A
10. Were the recording equipment checks satisfactory?	☐ NO	☐ YES	☒ N/A
11. Has each container in this BDR been evaluated for the presence of prohibited wastes?	☐ NO	☒ YES	☐ N/A
12. Has the physical waste form in each container in this BDR been evaluated against the Waste Stream Description and the Waste Matrix Code?	☐ NO	☒ YES	☐ N/A
13. Have the RH Quality Assurance Objectives (QAOs) for VE been met?	☐ NO	☒ YES	☐ N/A
Precision – reconciled discrepancies between operators or between the operator and ITR.	☐	☒	☐
Accuracy – trained operators	☐	☒	☐
Representativeness – description of container contents	☐	☒	☐
Completeness – completed data form and/or recording	☐	☒	☐
Comparability – proper training and adequate AK source documents are available for unopened containers.	☐	☒	☐
14. Were NCRs generated included in the BDR?	☐ NO	☐ YES	☒ N/A
Comments: N/A			

Independent Technical Reviewer:

Printed Name	Signature	Date
Pat Beallis	Pat Beallis	07-23-13

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523, 575-234-7431, or 575-234-7095

Fax Number: 575-234-7033

[X] Original Record
[ ] Fax Record
[ ] Electronic Record
[ ] Copy

Attn:	Sheila Pearcy	From:	Wes Root
Ship to:	S.M. Stoller Rec. Mgmt. Govt.	Site:	ANL-E
	CCP Records	Company:	Nuclear Waste Partnership LLC
	4021 National Parks Hwy	Telephone Number:	630-252-8306
	Carlsbad, NM 88220	Date Sent:	7-29-13
Telephone Number:	575-234-7523		

Document Number	Title / Description	Record Date	Total Pages
ANLRHVE13006 QTR0213	Batch Data Report – Waste Container ID Number: 1216	7-23-13	13
	WR 7-29-13		

Comments

Second Quarter 2013 RH VE Quarterly Repeat of DGL review at ANL.

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

	Signature	Printed Name	Date
Records Accepted [✓]	Jeff Patterson	Jeffrey Patterson	8/1/13
Records Rejected [ ]			

Reason for Rejection:

Re-submittal:

Signature	Printed Name	Date

```
*********************
***   TX REPORT   ***
*********************

TRANSMISSION OK

TX/RX NO                4994
DESTINATION TEL #       916302526706
DESTINATION ID          WES ROOT
ST. TIME                08/01 15:30
TIME USE                00'19
PAGES SENT                1
RESULT                  OK
```

Controlled Copy

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523, 575-234-7431, or 575-234-7095

Fax Number: 575-234-7033

[X] Original Record [ ] Copy
[ ] Fax Record
[ ] Electronic Record

Attn:	Sheila Pearcy	From:	Wes Root
Ship to:	S.M. Stoller Rec. Mgmt. Govt.	Site:	ANL-E
	CCP Records	Company:	Nuclear Waste Partnership LLC
	4021 National Parks Hwy	Telephone Number:	630-252-8306
	Carlsbad, NM 88220	Date Sent:	7-29-13
Telephone Number:	575-234-7523		

Document Number	Title/Description	Record Date	Total Pages
ANLRHVE13006 QTR0213	Batch Data Report – Waste Container ID Number: 1216	7-23-13	13
	WR 7-29-13		

Comments

Second Quarter 2013 RH VE Quarterly Repeat of DGL review at ANL.

(When the Record accepted line has been completed, the rest of the page below may be left blank.)

Acceptance/Rejection Signature and Date

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523, 575-234-7431, or 575-234-7095

Fax Number: 575-234-7033

[ ] Original Record [ ] Copy
[ ] Fax Record
[X] Electronic Record

Attn:	Jeff Patterson	From:	Laura Nelson
Ship to:	CCP Records	Site:	Denver
	4021 National Parks Highway	Company:	NWP
	MS:GSA:212	Telephone Number:	303-843-2269
	Carlsbad, NM 88220	Date Sent:	8/13/13
Telephone Number:	575-234-7523		

Document Number	Title / Description	Record Date	Total Pages
ANLRHVE13006_QTR0213	SPM Checklist	8/12/13	1
	NA		

Comments

NA

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

	Signature	Printed Name	Date
Records Accepted [✓]	[signature]	JEFF PATTERSON	8/13/13
Records Rejected [ ]			

Reason for Rejection:

Re-submittal:

Signature	Printed Name	Date

```
**********************
***   TX REPORT   ***
**********************

TRANSMISSION OK

TX/RX NO                1794
DESTINATION TEL #       913038432208
DESTINATION ID          DENVER
ST. TIME                08/13 08:43
TIME USE                00'15
PAGES SENT                1
RESULT                  OK
```

Controlled Copy

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523, 575-234-7431, or 575-234-7085

Fax Number: 575-234-7033

[ ] Original Record [ ] Copy
[ ] Fax Record
[X] Electronic Record

Attn:	Jeff Patterson	From:	Laura Nelson
Ship to:	CCP Records	Site:	Denver
	4021 National Parks Highway	Company:	NWP
	MS:GSA:212	Telephone Number:	303-843-2269
	Carlsbad, NM 88220	Date Sent:	8/13/13
Telephone Number:	575-234-7523		

Document Number	Title / Description	Record Date	Total Pages
ANLRHVE13006_QTR0213	SPM Checklist	8/12/13	1
	NA		

Comments

NA

(When the Record accepted line has been completed, the rest of the page below may be left blank.)

DIVIDER

PAGE

Nuclear Waste Partnership LLC

A URS-led partnership with B&W and AREVA

CP:13:01374
UFC:5900.00

INTER-OFFICE CORRESPONDENCE

DATE: August 13, 2013

FROM: L. M. Nelson — LOCATION: CCP Certification

TO: NTP Records Custodian GSA-212 — LOCATION: National TRU Program Certification

SUBJECT: RESULTS OF VISUAL EXAMINATION QUARTERLY REPEAT DATA GENERATION LEVEL DATA REVIEW: ARGONNE NATIONAL LABORATORY- REMOTE-HANDLED SECOND CALENDAR QUARTER 2013

Procedure CCP-TP-001, *CCP Project Level Data Validation and Verification*, requires that a repeat of Data Generation Level (DGL) review, validation and verification be performed on the data for a minimum of one randomly chosen waste container each quarter. The Site Project Manager (SPM) uses this information to document that the data generation level data review is being performed according to procedures.

Inter- Office Correspondence Number CP:13:01287 was issued on July 9, 2013. This memorandum identified waste container 1216 as the randomly selected container for DGL repeat of Visual Examination (VE) at the Argonne National Laboratories- Remote-Handled waste for the second calendar quarter of 2013.

The mini Batch Data Report containing 1216 was reviewed for the quarterly repeat on August 12, 2013. No deficiencies were identified during the review. A second VE SPM Checklist has been completed and authenticated.

If you have any questions, please call me at (303) 843-2269.

LMN:jmc

cc: I.S. Joo ED

NTPC RECORDS ORIGINAL
DATE REC'D 8/14/13

GEN4

Attachment 1 – CCP Nonconformance Report (NCR)

CCP NONCONFORMANCE REPORT (NCR)

(Use NCR Continuation, Attachment 2, if necessary)

NCR No. NCR- RHANL-0509-13 **Revision:** 1

1. Lot No., Heat No., or Serial No. (if applicable):	2. Process (e.g., NDA, HSG, NDE, VE, Other):	3. Batch Data Report #(s):
NA	RH-DTC 04/9/13 LRJ	ANLRHDTC12008
4. Order/Work Order/Job Control Number (if applicable): NA	5. PO # (if applicable): NA	Container #(s): NA
	6. Supplier (if applicable): NA	

DESCRIPTION OF NONCONFORMANCE

7a. NCR Description: ☐ < 100 nCi/g ☐ Prohibited Item ☐ E-Flag ☐ Receipt Inspection ☐ Transportation ☐ WWIS/WDS ☒ Other

7b. Requirement(s) (Enter Implementing Procedure No., Revision, Section No., & Quoted Text):

CCP-TP-504 rev. 13 Section 4.4.1 states in part, "Assemble the BDR as follows...Attachment 4, Batch Data Report Cover Sheet, Attachment 5, Batch Data Report Table of Contents, Attachment 6 Batch Data Report Narrative Summary, Attachment 7 ITR Checklist...Submit to the ITR"

7c. Actual Condition:

The Attachment 5 Batch Data Report Table of Contents, Attachment 6 Batch Data Report Narrative Summary, and the Attachment 7 ITR checklist were all completed using the incorrect revision of CCP-TP-504.

Reason for Revision 1: Correct the Process in Block 2 from RH 512 Sampling to RH DTC. 04/9/13 LRJ

7d. Have the CCP HOLD TAGS associated with this NCR been applied? ☐ YES ☒ NO (If no is checked, explain:)

See Block 24B

8. NCR Originator:

Laura Nelson — Laura Nelson — 4-9-13
printed name — signature — date

9. Does the identified condition have the potential to impact AK? ☐ YES ☒ NO ☐ INDETERMINATE

If YES or INDETERMINATE, enter Trend Code L in Block 10.

10. Trend Code: A	11. Responsible Manager: Laura Nelson
12. Significant Condition? ☐ YES ☒ NO (If Yes, enter CAR No.:)	13. Recurring Condition? ☐ YES ☒ NO (If Yes, list NCRs and CARs:)

14. CCP QA Engineer or CCP QA Designee validation:

Laura R. Jones — V. K. Conner for Laura Jones — 8/28/13 — 04/9/2013
printed name — signature — date

NTPC RECORDS ORIGINAL
DATE REC'D 5-21-13

22 RK 8/28/13

Attachment 1 – CCP Nonconformance Report (NCR) (Continued)

NCR No. NCR-RHANL-0509-13 **Revision:** 1

INTERIM DISPOSITION

15a. Interim Disposition (Check Only One):

☒ N/A (See Final Disposition) ☐ Hold ☐ Conditionally Accept ☐ Conditionally Use

☐ Sort ☐ Reinspect or Retest ☐ Remediate

15b. Instructions for Completion of the Interim Disposition:

INTERIM DISPOSITION APPROVALS

16a. Responsible Manager or Individual:			16b. CCP QA Engineer or CCP QA Designee:		
printed name	signature	date	printed name	signature	date
Additional Approvals:			Additional Approvals:		
printed name	signature	date	printed name	signature	date

COMPLETION OF INTERIM DISPOSITION

17. Interim Disposition Complete – Responsible Manager or Individual:

printed name signature date

18. Interim Disposition Verified – CCP QA Engineer:

printed name signature date

Attachment 1 – CCP Nonconformance Report (NCR) (Continued)

NCR No. NCR-RHANL-0509-13 **Revision:** 1

FINAL DISPOSITION

19. Final Disposition (Check Only One):
☐ Use-As-Is ☐ Repair

19a. Technical Justification – Required for Use-As-Is or Repair dispositions. (Enter "N/A" for Reject, Rework, and Scrap:)

NA

LN 4-9-13

☐ Reject ☒ Rework ☐ Scrap

19b. Instructions for Completion – Required for Reject, Repair, Rework, or Scrap. (Enter "N/A" for Use-As-Is:)

1. Have a qualified operator re-assemble the BDR using the correct revision for the Attachment 5, 6, and 7 and supersede the attachments with the incorrect revision. Filling the attachments out as appropriate.
2. Have a qualified operator review the corrections and fill out the ITR checklist with the correct revision and sign the correct ITR checklist.
3. Have a qualified operator review the corrections and fill out and sign the Attachment 6 with the correct revision.
4. Turn in the corrected BDR to records for SPM review.

19c. Corrective Actions (Actions to Prevent Recurrence – For Repair or Rework, if applicable. Enter "N/A," if not applicable, and for Use-As-Is, Reject, and Scrap):

NA

FINAL DISPOSITION APPROVALS

20. Responsible Manager or Individual:	21. CCP QA Engineer or CCP QA Designee:
Laura Nelson / Laura Nelson / 4-9-13 (printed name / signature / date)	Laura R. Jones / Laura Rawson Jones / 04/9/13 (printed name / signature / date)
Additional Approvals:	Additional Approvals:
printed name / signature / date	printed name / signature / date

CLOSURE

22. Final Disposition Complete – Responsible Manager or Individual:

Laura Nelson / Laura Nelson / 5/9/2013 (printed name / signature / date)

23. Attachments: Attachment 1: Email Attachment 2: BDR data

24a. HOLD TAG removal has been verified and reconciled for all nonconforming items on the NCR. ☐

24b. Check if not applicable (N/A) and explain. ☒

Due to ALARA considerations NCR tagging will not be applied for this NCR. Administrative control will be applied through container entry in this CCP Data Center. In addition a listing of containers has been posted on the CCP sftp site identifying those containers where NCR tagging is not being applied due to ALARA. Container information for this NCR has been included in the listing which is to alert Mobile Loading Unit Personnel as a second control mechanism for non-tagged containers. The current listing has been uploaded to the sftp site.

25. Final Disposition Verified – NCR Closed CCP QA Engineer:

Laura R. Jones / Laura Rawson Jones / 05/14/2013 (printed name / signature / date)

Jones, Laura - NWP

From: Pearcy, Mark - NWP
Sent: Thursday, April 11, 2013 9:30 AM
To: Jones, Laura - NWP
Subject: RE: Revised NCR-RHANL-0509-13-1

not reportable

Mark Pearcy
Central Characterization Program
Nuclear Waste Partnership LLC
Contractor for the U.S. Department of Energy
575-234-7394 (W)
575-499-7339 (C)

Nuclear Waste Partnership LLC

A URS-led partnership with B&W and AREVA

From: Jones, Laura - NWP
Sent: Tuesday, April 09, 2013 12:57 PM
To: Nelson, Laura - NWP; Joo, Irene - NWP; Kantrowitz, Rich - NWP; Pearcy, Sheila - Stoller; Pearcy, Mark - NWP; Reeves, Ron - NWP; Henry, Paulette
Cc: Jones, Laura - NWP
Subject: Revised NCR-RHANL-0509-13-1

Laura/Irene/Ron – For your information
Mark – Please review for notification determination. Section 2-work process was corrected from 512 sampling to RH-DTC.
Sheila / Paulette – Please post this open revised NCR.

Thanks,

Laura R. Jones
Quality Assurance NCR Coordinator
Nuclear Waste Partnership LLC
Contractor for the U.S. Department of Energy
Office: (575) 234-7244
Email: laura.jones@wipp.ws
Fax: (575) 234-7071

NCR -RHANL- 0509-13 Rev. 1

Attachment 1 Page 1 of 2

Jones, Laura - NWP

From:	IDC [SQLMaster@wipp.ws]
Sent:	Thursday, April 11, 2013 9:30 AM
To:	Jones, Laura - NWP; Mueller, Terry - NWP; Walker, Mak (Maryann) - NWP; Morrison, Jim - NWP
Subject:	Project Office NCR [NCR-RHANL0509131] was just reviewed.

Certification Manager/Designee has just reviewed the project office NCR NCR-RHANL0509131 and has indicated that it [should NOT] be reported to CBFO. IDC has already updated the NCR for you.

NCR- RHANL-0509-13 Rev. 1

Attachment 1 Page 2 of 2

Attachment 5 – Batch Data Report Table of Contents

BDR Number: ANLRHDTC12008

Testing Facility: ANL 331 Shell

SECTION	PAGE NUMBER
Batch Data Report Cover Sheet, Attachment 4	1
Batch Data Report Table of Contents, Attachment 5	2
Batch Data Report Narrative Summary, Attachment 6	3
ITR Checklist, Attachment 7	4
Measurement Control Report(s), Attachment 1	6
Container Data Sheet(s), Attachment 2	8
Waste Container Dose-to-Curie Conversion Record(s)	14
Gamma Spectroscopy Daily Check List and Measurement Controls, Attachment 9 (if applicable)	N/A
Evaluation of Gamma Spectroscopy results (if applicable)	N/A
Duplicate Container Data Sheet(s), Attachment 10	20
Relative Percent Difference Spreadsheet(s) (if applicable)	21
Relative Percent Difference, Attachment 12 (if applicable)	N/A
Copies of NCR(s) (if applicable)	22

NCR-RHANL-0509-13 rev. 1
Attachment 2 pg 1 of 8

02

Attachment 5 – Batch Data Report Table of Contents

BDR Number: ANLRHDTC12008

Testing Facility: ANL 331 Shell

SECTION	PAGE NUMBER
Batch Data Report Cover Sheet, Attachment 4	1
Batch Data Report Table of Contents, Attachment 5	2
Batch Data Report Narrative Summary, Attachment 6	3
ITR Checklist, Attachment 7	4
Measurement Control Report(s), Attachment 1	6
Container Data Sheet(s), Attachment 2	8
Waste Container Dose-to-Curie Conversion Record(s)	14
Gamma Spectroscopy Daily Check List and Measurement Controls, Attachment 9 (if applicable)	N/A
Evaluation of Gamma Spectroscopy results (if applicable)	N/A
Duplicate Container Data Sheet(s), Attachment 10	20
Relative Percent Difference Spreadsheet(s) (if applicable)	21
Relative Percent Difference, Attachment 12 (if applicable)	N/A
Copies of NCR(s) (if applicable)	N/A

PB 3-27-13

NCR-RHANL-0509-13 rev.1
Attachment 2 pg. 2 of 8

02A
PB 3-27-13 ~~02~~

Attachment 6 – Batch Data Report Narrative Summary

BDR Number: ANL RH DTC 12008

BDR Date: 03-28-13

Quality Control Summary:

ALL quality control measurements are within Acceptable Limits.

Nonconformance:

NCR-RHANL-0509-13 Attached

Comments:

ANL RH DTC 12008 Reworked per NCR-RHANL-0509-13

Printed Name: F. Wesley Root

Signature and Date: F. Wesley Root, 03-28-13

NCR-RHANL-0509-13 rev. 1
Attachment 2 pg. 3 of 8

03

Attachment 6 – Batch Data Report Narrative Summary

BDR Number: ANL RHDTC 12 008

BDR Date: 2-25-13

Quality Control Summary:

ALL quality control measurements are within Acceptable Limits,

Nonconformance:

N/A

PB 3-27-13

Comments:

None

Printed Name: F. Wesley Root

Signature and Date: F. Wesley Root, 2-25-13

NCR-RHANL-0509-13 rev. 1
Attachment 2 pg 4 of 8

03A
PB 3-27-13 ~~03~~

Attachment 7 – ITR Checklist

BDR Number: ANLRHDTC12008

Description of Criteria Reviewed	Criteria Met (Check One)
ITR Checklist	
The BDR contains no more than 20 containers.	☑ YES ☐ NO
There is a container data sheet present for each of the containers listed on the BDR cover sheet and measurement control sheet(s) that covers the range of dates for each of the container data sheets.	☑ YES ☐ NO
The container data sheets and associated measurement control sheets are complete and contain:	
• Instrument calibration is satisfactory. (Accuracy)	☑ YES ☐ NO
• Instrument battery check is satisfactory.	☑ YES ☐ NO
• Instrument source check is satisfactory.	☑ YES ☐ NO
• The highest measured dose rate is at least three times greater than the measured background for each container not rejected by an NCR.	☑ YES ☐ NO
• The correct revision of the procedure was used.	☑ YES ☐ NO
• The Operator signed and dated each sheet, as applicable.	☑ YES ☐ NO
• Duplicate dose rate RPD ≤40%. (Precision)	☑ YES ☐ NO
The Quality Assurance Objectives have all been met.	☑ YES ☐ NO
Data generation and reduction were conducted in a technically correct manner in accordance with the methods used (procedure with revision).	☑ YES ☐ NO
Calculations have been verified by a valid calculation program, a spot check of verified calculation programs, and/or 100 percent check of all hand calculations.	☑ YES ☐ NO
The dose rates on the container data sheets are technically reasonable and reported in the proper units and correct number of significant figures.	☑ YES ☐ NO
The data has been checked for transcription errors between the container data sheets and the conversion records.	☑ YES ☐ NO
The conversion records are complete and show:	
• Total TRU activity concentration is greater than 100 nanoCuries per gram (nCi/g).	☑ YES ☐ NO
• Operator printed name, signature, and date.	☑ YES ☐ NO

NCR-RHANL-0509-13 rev. 1
Attachment 2 pg 5 of 8

04

Attachment 7 – ITR Checklist

BDR Number: ANLRHDTC12008

PB 3-27-13

Description of Criteria Reviewed	Criteria Met (Check One)
ITR Checklist	
The BDR contains no more than 20 containers.	☑ YES ☐ NO
There is a container data sheet present for each of the containers listed on the BDR cover sheet and measurement control sheet(s) that covers the range of dates for each of the container data sheets.	☑ YES ☐ NO
The container data sheets and associated measurement control sheets are complete and contain:	
• Instrument calibration is satisfactory. (Accuracy)	☑ YES ☐ NO
• Instrument battery check is satisfactory.	☑ YES ☐ NO
• Instrument source check is satisfactory.	☑ YES ☐ NO
• The highest measured dose rate is at least three times greater than the measured background for each container not rejected by an NCR.	☑ YES ☐ NO
• The correct revision of the procedure was used.	☑ YES ☐ NO
• The Operator signed and dated each sheet, as applicable.	☑ YES ☐ NO
• Duplicate dose rate RPD ≤40%. (Precision)	☑ YES ☐ NO
The Quality Assurance Objectives have all been met.	☑ YES ☐ NO
Data generation and reduction were conducted in a technically correct manner in accordance with the methods used (procedure with revision).	☑ YES ☐ NO
Calculations have been verified by a valid calculation program, a spot check of verified calculation programs, and/or 100 percent check of all hand calculations.	☑ YES ☐ NO
The dose rates on the container data sheets are technically reasonable and reported in the proper units and correct number of significant figures.	☑ YES ☐ NO
The data has been checked for transcription errors between the container data sheets and the conversion records.	☑ YES ☐ NO
The conversion records are complete and show:	
• Total TRU activity concentration is greater than 100 nanoCuries per gram (nCi/g).	☑ YES ☐ NO
• Operator printed name, signature, and date.	☑ YES ☐ NO

NQL-RHANL-0509-13 rev. 1
Attachment 2 pg 6 of 8

PB 3-27-13 ~~04~~ 04A

Attachment 7 – ITR Checklist (Continued)

BDR Number: ANLPHDTC12008

Description of Criteria Reviewed	Criteria Met (Check One)
The results shown on the conversion records are technically reasonable and reported in the proper units and correct number of significant figures.	☑YES ☐NO
The BDR is complete (i.e., contains the forms listed in the table of contents) for this point of generation.	☑YES ☐NO
Any NCRs generated are contained in the testing BDR.	☑YES ☐N/A
Comments: NCR-RHANL-0509-13 is ATTAched	
ITR Approval Kevin R. Klosowski — K R Kl — 3-28-13 Printed Name — Signature — Date	

NCR-RHANL-0509-13 rev.1
Attachment 2 pg. 7 of 8

05

Attachment 7 – ITR Checklist (Continued)

BDR Number: ANLRHTDC12008

Description of Criteria Reviewed	Criteria Met (Check One)
The results shown on the conversion records are technically reasonable and reported in the proper units and correct number of significant figures.	☑YES ☐NO
The BDR is complete (i.e., contains the forms listed in the table of contents) for this point of generation.	☑YES ☐NO
Any NCRs generated are contained in the testing BDR.	☐YES ☑N/A
Comments: N/A	
ITR Approval Kevin R. Klosowski — K. R. Kl — 2-25-13 Printed Name — Signature — Date	

PB 3-27-13

NCR-RHANL-0509-13 rev. 1
Attachment 2 pg 8 of 8

05A
PB 3-27-13 ~~05~~

DIVIDER

PAGE

Attachment 1 – CCP Nonconformance Report (NCR)

NCR No.NCR-RHANL-1521-12 Revision 0

1. Lot No./Heat No. or Serial No. (as applicable): NA	2. Process (e.g., NDA, HSG, NDE, VE, Other): OTHER	3. Batch Data Report #(s): NA
4. Order/Work Order/Job Control Number (as applicable): NA	4. PO # (as applicable): NA	Container #(s): 991, 997, 999, 1031, 1049, 1052, 1053, 1082, 1092 and 1120
	6. Supplier (as applicable): NA	

DESCRIPTION OF NONCONFORMANCE

7. (a) NCR Description: ☐ < 100 nCi/g ☐ Prohibited Item ☐ E-Flag ☐ Receipt Inspection ☐ Transportation ☐ WWIS/WDS ☒ Other

7. (b) Description of Nonconformance Required Condition (Implementing Procedure, Revision, Section, & Text):

CCP-TP-530, Section 4.3.5 states "If a 30-gallon container is packaged into a 55-gallon container, AND the Dose-to-Curie (DTC) was performed on the 30-gallon container, THEN add the tare weight of the 55-gallon container to the gross weight of the 30-gallon container to obtain the new gross weight.

7. (c) Actual Condition

Drums were certified as 30-gallon. The 30-gallon drums were overpacked into 55-gallon drums and therefore should be certified as 55-gallon drums. CCP-TP-530, Section 4.3.5 states that 30-gallon drums overpacked into 55-gallon drums must adjust the gross weight of the 30-gallon drum. This step was not performed, as it is not required for certifying 30-gallon drums.

8. NCR Originator (Print name, sign, and date) Creta Kirkes/ Creta Kirkes 8/16/2012	9. CCP QA Engineer or Designee Validation (Print name, sign, and date) Laura Jones/ Laura Ramero Jones 08/16/2012

9a. Does the identified condition have the potential to impact AK? ☐ YES ☒ NO ☐ INDETERMINATE
If YES or INDETERMINATE, then apply Trend Code L in Block 12.

9b. Have the CCP HOLD TAGS associated with the NCR been applied? ☐ YES ☒ NO If no is marked, provide an explanation.

Due to ALARA considerations, NCR tagging will not be applied for this NCR. Administrative controls will be applied through container management. In addition a listing of containers has been posted on the CCP sftp site identifying those containers where NCR tagging is not being applied due to ALARA. Container information for this NCR has been included in the listing which is to alert the Mobile Loading Unit personnel as a second control mechanism for non-tagged containers. The current listing has been posted to the sftp site.

10. Significant Condition? (If Yes, List CAR) ☐ YES ☒ NO	11. Recurring Condition? ☐ YES ☒ NO (If YES, List NCRs/CARs)
12. Trend Code: A	13. Responsible Manager: Irene Quintana

CCP RECORDS ORIGINAL
DATE REC'D 8-22-12

Attachment 1 – CCP Nonconformance Report (NCR) (Continued)

NCR No.NCR-RHANL-1521-12	Revision 0
INTERIM DISPOSITION	
14. Interim Disposition (Check One) ☒ N/A (See Final Disposition) ☐ Hold ☐ Conditional Accept ☐ Conditional Use ☐ Sort ☐Reinspect/Retest ☐ Remediate (a) Instructions for Completion of the Interim Disposition:	
INTERIM DISPOSITION APPROVALS	
15 .Responsible Manager/Individual (Print, sign, and date)	16. CCP QA Engineer or Designee (Print, sign and date)
Additional Approvals: (Print, sign and date)	Additional Approvals: (Print, sign and date)
COMPLETION OF INTERIM DISPOSITION	
17. Interim Disposition Complete Responsible Manager/Individual: (Print, sign and date)	
18. Interim Disposition Verified CCP QA Engineer: (Print, sign and date)	

Attachment 1 – CCP Nonconformance Report (Continued)

NCR No.NCR-RHANL-1521-12 Revision 0

FINAL DISPOSITION

19. Final Disposition (Check One)
☐ Use-As-Is ☐ Reject ☐ Repair ☒ Rework ☐ Scrap

(a) Technical Justification (Required for Use-As-Is and Repair dispositions, Enter N/A for Reject, Scrap, or Rework dispositions.) NA

(b) Instructions for Completion (Required for Reject, Repair, Rework and Scrap – Enter N/A for Use-As-Is).

1. Change drums to pre-sub Certification in WDS.
2. Make the necessary 55-gallon container type changes.
3. Make necessary changes on electronic and hard copy of the WDS Spreadsheet.
4. Resubmit drums to WDS.

(c) Corrective Actions (Actions to Prevent Recurrence – Required for Repair and Rework; Enter N/A for Use-As-Is-, Reject, and Scrap).

Brief the WCAs/WCOs on certifying 30-gallon drums as 55-gallon drums when overpacked into a 55-gallon drum; therefore performing Step 4.5.3 in CCP-TP-530. Also, instructing them to use the AK Tracking Spreadsheet to determine when a 30-gallon drum has been overpacked into a 55-gallon drum.

FINAL DISPOSITION APPROVALS

20. Responsible Manager/Individual: (Print, sign, and date)	21. CCP QA Engineer or Designee: (Print, sign, and date)
Mark Pearcy/ Mark Pearcy 8/16/12	Laura Jones/ Laura Ramos Jones 08/16/12
Additional Approvals: (Print, sign, and date)	Additional Approvals: (Print, sign, and date)

CLOSURE

22. Final Disposition Complete Responsible Manager/Individual: (Print, sign, and date)
Mark Pearcy Mark Pearcy 8/21/12

23. Attachments: 1- Email notification to CBFO. 2- Basis for closure
08/21/12 LRJ

24. (a) HOLD TAG removal has been validated and reconciled for all nonconforming items on the NCR. ☐
(b) Check if not applicable (N/A) and provide an explanation here or on a continuation sheet. ☒

Refer to Section 9b.
08/21/12 LRJ

25. Final Disposition Verified – NCR Closed	CCP QA Engineer: (Print, sign, and date)
Laura R. Jones	Laura Ramos Jones 08/21/2012

Jones, Laura - WTS

From: Pearcy, Mark - WTS
Sent: Thursday, August 16, 2012 9:46 AM
To: Jones, Laura - WTS
Subject: RE: New NCR-RHANL-1521-12

Not reportable

Mark Pearcy
Central Characterization Project
Washington TRU Solutions LLC
Contractor for the U.S. Department of Energy
575-234-7394 (W)
575-499-7339 (C)

From: Jones, Laura - WTS
Sent: Thursday, August 16, 2012 9:07 AM
To: Nelson, Laura - WTS; Quintana, Irene - WTS; Reeves, Ron - WTS; Pearcy, Sheila - Stoller; Pearcy, Mark - WTS; Kirkes, Creta - WTS; Kantrowitz, Rich - WTS; Punchios, Sheri - Stoller
Cc: Jones, Laura - WTS
Subject: New NCR-RHANL-1521-12

Irene / Laura / Ron – For your information
Mark – Please review for notification purposes.
Sheri – Please post this open NCR.

Thanks,

Laura R. Jones
Quality Assurance
Washington TRU Solutions, LLC
Contractor for the U.S. Department of Energy
Office: (575) 234-7244
Email: laura.jones@wipp.ws
Fax: (575) 234-7071

Jones, Laura - WTS

From: IDC [SQLMaster@wipp.ws]
Sent: Thursday, August 16, 2012 9:46 AM
To: Jones, Laura - WTS; Mueller, Terry - WTS; Walker, Mak (Maryann) - WTS
Subject: Project Office NCR [NCR-RHANL1521120] was just reviewed.

Certification Manager/Designee has just reviewed the project office NCR NCR-RHANL1521120 and has indicated that it [should NOT] be reported to CBFO. IDC has already updated the NCR for you.

NCR - RHANL-1521-121 Rev. 0

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ANL-RH

WCA/WCO BRIEFING FOR NCR-RHANL-1521-12, Rev. 0

OVERPACKING 30-GALLON DRUMS INTO 55-GALLON DRUMS

CCP-TP-530, SECTION 4.5.3

> *"If a 30-gallon container is packaged into a 55-gallon container, AND the Dose-to Curie (DTC) was performed on the 30-gallon container, THEN add tare weight of the 55-gallon container to the gross weight of the 30-gallon container to obtain the new gross weight."*

NCR-RHANL-1521-12

Written against 10 containers that were certified as 30-gallon containers which should have been certified as 55-gallon containers. Steps were taken to correct the drums and resubmit to WDS (i.e., container type change).

BACKGROUND

All characterization is done on the 30-gallon container except for HSG as there is no DAC set in the Permit for a 30-gallon container. RH HSG has not been done at ANL for at least a year, if not more. Therefore, most drums being certified for ANL RH are 30-gallon containers. There is no indication that these drums were 55-gallon drums other than the Comment field of the AKTS which, up until now, is not used by the WCO.

FUTURE WCA/WCO RH ANL RESPONSIBILITIES

Verify container type in the Comment Field of the AKTS.
If 30-gallon container with HSG and DTC is done on the 30-gallon, perform Step 4.5.3 in CCP-TP-530
Certify as 55-gallon container

CCP ATTENDANCE SHEET

COURSE NAME: NCR- RHANL-1521-12, Rev. 0 DATE: 8-16-2012

LOCATION: SWB

	NAME (PRINT NAME)	TITLE/POSITION	SIGNATURE
1.	Creta Kirkes	WCO	Creta Kirkes
2.	Helen M. Pettus	WCA	Helen M. Pettus
3.	Bobbie Valenzuela	WCA	B Valenzuela
4.	Connie Hernandez	WCO	Connie Hernandez
5.	Carolina Soaterna	WCA	Carolina Soat
6.	Romaine Hensley	WCA/WCO	Romaine Hensley
7.	Brandye Pyeatt	WCO	Brandye Pyeatt
8.	Andrew Stallings	WCO	[illegible]
9.	Joshua Haughton	WCO	[illegible]
10.	Roger Whitaker	WCA/SPM	Roger Whitaker
11.	Lena Dominguez	WCA	Lena Dominguez
12.	MIKE RAMIREZ	WCO	Mike Ramirez
13.	David Larson	WCO	See Attached Email

CK 8/21/12

Creta Kirkes — Instructor Name (Print)

Creta Kirkes — Signature

8-16-2012 — Date

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Attachment 2 Page 2 of 15

Kirkes, Creta - WTS

From: Larson, David - WTS
Sent: Thursday, August 16, 2012 10:57 AM
To: Kirkes, Creta - WTS
Subject: RE: ANL RH Briefing

I have read the 'ANL RH Briefing'.

David Larson
Central Characterization Project
Washington TRU Solutions LLC
Contractor for the U.S. Department of Energy
214-991-8824

From: Kirkes, Creta - WTS
Sent: Thursday, August 16, 2012 10:07 AM
To: Dominguez, Lena - WTS; Pettus, Helen - WTS; Soaterna, Carolina - WTS; Whiteaker, Roger - WTS; Hensley, Lorraine - WTS; Hernandez, Connie - WTS; Houghton, Joshua - WTS; Kirkes, Creta - WTS; Larson, David - WTS; Pyeatt, Brandye - WTS; Ramirez, Mike - WTS; Valenzuela, Bobbie
Subject: ANL RH Briefing

Please read the attached RH ANL Briefing ASAP and stop by my desk to sign the form indicating you read the briefing.

This is part of the steps needed to close out the NCR.

Thanks so much!!

Creta Kirkes
Central Characterization Project
Washington TRU Solutions LLC
Contractor for the U.S. Department of Energy
575-234-7477 (w)

NCR – RH-ANL-1521-12 Rev. 0
Attachment 2 Page 3 of 15

Waste Isolation Pilot Plant
User: KIRKES, CRETA

Thu Aug 16 17:38:21 MDT 2012
Database Instance: prd05.wipp.carlsbad.nm.us

Container Ad-Hoc Query Report

Selected Query Parameters							
Container Number	%H	**Certification Program Id**	C2	**Current Location Id**	AE	**Shipping Program Id**	C2
Generator Program ID	AE	**Container Status ID**		**Waste Stream Profile ID**	AERHDM	**Waste Matrix Code ID**	
Destination Site ID	WI	**Vent Date**		**Closure Date**		**Sample Date**	
Filter Model ID		**Filter Diffusivity (mol/s/mf)**		**Filter Quantity**		**Total Filter Diffusivity (mol/s/mf)**	
Panel		**Room**		**Row**		**Column**	
Height		**Borehole**		**FGE (g)**		**Weight (kg)**	
Decay Heat (w)		**Hydrogen (ppm)**		**Methane (ppm)**		**Combined Hydrogen and Methane (ppm)**	
Radionuclide Activity (Ci)		**Radionuclide Mass (g)**		**Total Flammable VOCs (ppm)**		**TRUCON Code**	
Shipping Category		**Aspiration Method ID**		**Disposal Date**		**CHTES Compliance Method**	
Compacted		**PCB Waste**		**Process Knowledge**		**Be Present**	
Be/BeO>1%		**Shipped?**	N	**No Radionuclide Choices**			
Container Type	39 - RH 55 gal TBO	**Handling Code**	RH	**Emplaced?**	N	**Total Dose Rate**	
In Overpack?		**In Overpack Plan?**		**In Payload?**	N	**In Payload Plan?**	N

10 Containers Matched Your Query.

Container Number	Certification Program ID	Current Location	Shipping Program ID	Destination Site ID	Container Type	Container Status	TRUCON Code / Shipping Category	Waste Stream Profile Code	Certification Date	Overpack Container & Status
1031H	C2	AE	C2	WI	RH 55 gal TBO	Approved Cert	AE322F	AERHDM	08/16/2012	AE0129 - PRESUBMITTAL TO CERTIFICATION
1049H	C2	AE	C2	WI	RH 55 gal TBO	Approved Cert	AE321M	AERHDM	08/16/2012	null - null
1052H	C2	AE	C2	WI	RH 55 gal TBO	Pending Cert	AE322F	AERHDM	08/16/2012	AE0129 - PRESUBMITTAL TO CERTIFICATION
1053H	C2	AE	C2	WI	RH 55 gal TBO	Pending Cert	AE322F	AERHDM	08/16/2012	AE0129 - PRESUBMITTAL TO CERTIFICATION
1082H	C2	AE	C2	WI	RH 55 gal TBO	Pending Cert	AE322F	AERHDM	08/16/2012	null - null
1092H	C2	AE	C2	WI	RH 55 gal TBO	Pending Cert	AE322F	AERHDM	08/16/2012	null - null
1120H	C2	AE	C2	WI	RH 55 gal TBO	Pending Cert	AE321M	AERHDM	08/16/2012	null - null
991H	C2	AE	C2	WI	RH 55 gal TBO	Approved Cert	AE321M	AERHDM	08/16/2012	AE0128 - PRESUBMITTAL TO CERTIFICATION
997H	C2	AE	C2	WI	RH 55 gal TBO	Approved Cert	AE321M	AERHDM	08/16/2012	AE0128 - PRESUBMITTAL TO CERTIFICATION

999H	C2	AE	C2	WI	RH 55 gal TBO	Approved Cert	AE321M	AERHDM	08/16/2012	AE0128 - PRESUBMITTAL TO CERTIFICATION

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WDS Page 2 of 2

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	RH WDS Master Template.xls Rev. 4 Addendum #4, SCO #1066 Excel 2003/2007 Microsoft Windows XP	Units	data				comments					CK 8/16/12	Initial	date
2	Shipper Site ID		[redacted]	Location ID	Dest Program ID	Shipping Purpose					991H		CH/BV	08/09/12
3	Waste Stream Profile		AERHDM	[redacted]	[redacted]	[redacted]							CH/BV	08/09/12
4	Container Number		991	H CK 8-16-12									CH/BV	08/09/12
5	Container Type		RH drum-55 tbo	drum, swb, tdop, etc., see WWIS labels for valid types.					U-235 FEM	U-235 FEM Uncert	FGGR Flag	FGGR Test Period	CK/CH	08/19/12
6	WAC Rev #		7.2	0					NULL	NULL	NULL	NULL	CH/BV	08/09/12
7	WAC Ex. #						Be <=100 kg	Be <= 1%	Be Present	Aqueous Material	Be Chem/Mech Bound	Compacted Wst		
8	Cert Site		C2				Y	Y	Y	N	N	N	CH/BV	08/09/12
9	Cert Date		8/16/2012											
10	Waste Handling Code		RH	CH, RH									CH/BV	08/09/12
11	Waste Type Code		MTRU	TRU, MTRU									CH/BV	08/09/12
12	Waste Stream BIR ID		AE-T009				p(CI):	choose	1sigma	2sigma	95%CI		CH/BV	08/09/12
13	Waste Stream MWIR ID		NONE	default to 0 for TRU			0.6827	1sigma	1.0000	0.5000	0.5102		CH/BV	08/09/12
14	Generator Site ID		AE				0.9545	2sigma	2.0000	1.0000	1.0204		CH/BV	08/09/12
15	IDC Code		001				0.9500	95%CI	1.9600	0.9800	1.0000		CH/BV	08/09/12
16	Matrix Code		S5400										CH/BV	08/09/12
17	Trucon Code		AE321M										CK/CH	08/16/12
18	Shipping Category						WWIS Req'd CI:	1sigma	1.0000	0.5000	0.5102			
19	Tru Alpha Act	Ci	5.22E-01		5.218E-01		Fraction of MDL Reported on HGAS		1.0000				CH/BV	08/09/12
20	Tru Alpha Act Uncert	1sigma Ci	2.24E-01	9.700E-01	Tru Alpha Act + 2sigma (Ci)								CH/BV	08/09/12
21	Tru Alpha Act Conc	nCi/g	2.82E+04		2.82E+04								CH/BV	08/09/12
22	Tru Alpha Act Conc Uncert	1sigma nCi/g	1.21E+04	5.240E+04	Tru Alpha Act Conc + 2sigma (Ci)								CH/BV	08/09/12
23	Pu239 Fiss Gm Eq	g	3.92E+00		3.915E+00								CH/BV	08/09/12
24	Pu239 Fiss Gm Eq Uncert	1sigma g	2.05E+00	8.020E+00	Pu239 Fiss Gm Eq + 2sigma (Ci)								CH/BV	08/09/12
25	Pu239 Eq Act	Ci	5.69E-01		5.690E-01								CH/BV	08/09/12
26	Decay Heat	watts	5.74E-02		5.736E-02								CH/BV	08/09/12
27	Decay Heat Uncert	1sigma watts	1.74E-02	7.48E-02	Decay Heat + 1sigma (watts)								CK/CH	08/16/12
28	Layers of Packaging		3											
					Liner Lid								CH/BV	08/09/12
29	Fill Factor		85	percentage	Present								CK/CH	08/16/12
30	Liner Type			1 = plastic drum liner									CK/CH	08/16/12
31	Liner Punctured				Liner Hole Size		(mm)						CH/BV	08/09/12
32	PCB Conc						PCB Waste	PCB Mass (kg)	Out of Service				CH/BV	08/09/12
33	Closure Date		4/3/2012	Watt-years	Waste Gen Date		N	NULL	NULL				CH/BV	08/09/12
34	Vent Date		4/3/2012	[redacted]									CH/BV	08/09/12
35	Filter Install Date		4/3/2012										CH/BV	08/09/12
36	Filter Manufacturer		NFT										CH/BV	08/09/12
37	Filter Serial Number(s)												CK/CH	08/16/12
38	Filter Model Number	NF012,NF013,NF020,NF9026	NF019D										CH/BV	08/09/12
39	Number of Filters Installed		1										CH/BV	08/09/12
40	Aspiration Method ID		3											
41	Gas Gen Rate			#VALUE!	<<Gas Gen Rate Calculated.		Avagdro's Number:	6.022142E+23	NIST					
42	Hydrogen/Methane Gen Rate						Electron Charge	1.602176E-19	V NIST					
43	Gas Gen Comp Date				Waste (kg)	Packaging (kg)	Total (kg)							
44	Gross Weight	kg	69.700	[redacted]									CK/CH	08/16/12
45	Gross Weight Uncert	1sigma kg	0.5		max. reported	mda							CH/BV	08/09/12
46	Alpha Surf Cont	dpm/100 cm^2	[redacted]		0		Minimum Detectable Activity			Shipping Calcs			CH/BV	08/09/12
47	Beta/Gamma Surf Cont	dpm/100 cm^2	[redacted]		0		Minimum Detectable Activity			Total TBq	6.78E-01		CH/BV	08/09/12
48	Neutron Dose Rate	mrem/hr	[redacted]		0.4		Minimum Detectable Activity			Fraction	3.72E-02		CH/BV	08/09/12
49	Beta/Gamma Dose Rate	mrem/hr	[redacted]		9100		Minimum Detectable Activity			Highway Route Control?	No		CH/BV	08/09/12
50	Radionuclide		U-233	U-234	U-235	U-238	Pu-238	Pu-239	Pu-240	Pu-241	Pu-242	Am-241	CH/BV	08/09/12
51	Activity	Ci	1.14E-08	2.86E-04	8.75E-06	1.02E-05	2.51E-01	7.93E-02	5.44E-02	3.57E+00	1.33E-04	1.37E-01	CH/BV	08/09/12
52	Activity Uncert	1sigma Ci	9.17E-09	1.68E-04	5.56E-06	5.03E-06	1.48E-01	6.18E-02	4.05E-02	1.92E+00	7.24E-05	9.39E-02	CH/BV	08/09/12
53	Mass	grams	1.17E-06	4.53E-02	4.00E+00	3.00E+01	1.45E-02	1.26E+00	2.37E-01	3.43E-02	3.35E-02	3.95E-02		
54	Mass Uncert	1sigma grams	9.40E-07	2.66E-02	2.54E+00	1.48E+01	8.55E-03	9.83E-01	1.76E-01	1.85E-02	1.62E-02	2.71E-02		
55	calc Tru Alpha Act	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.51E-01	7.93E-02	5.44E-02	0.00E+00	1.33E-04	1.37E-01		
56	calc Tru Alpha Act Conc	nCi/g	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.36E+04	4.29E+03	2.94E+03	0.00E+00	7.19E+00	7.41E+03		
57	calc Act	Ci	1.14E-08	2.86E-04	8.75E-06	1.02E-05	2.51E-01	7.93E-02	5.44E-02	3.57E+00	1.33E-04	1.37E-01		
58	calc Act Conc	nCi/g	6.16E-04	1.55E+01	4.73E-01	5.51E-01	1.36E+04	4.29E+03	2.94E+03	1.93E+05	7.19E+00	7.41E+03		

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	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	RH WDS Master Template.xls Rev. 4 Addendum #4, SCO #1066 Excel 2003/2007 Microsoft Windows XP	Units	data				comments				CK 8-16-12		initial	date
2	Shipper Site ID		[redacted]	Location ID	Dest Program ID	Shipping Purpose					997H		CK/HP	08/09/12
3	Waste Stream Profile		AERHDM	[redacted]	WI	[redacted]							CK/HP	08/09/12
4	Container Number		997	H CK 8-16-12									CK/HP	08/09/12
5	Container Type		RH drum-55 tbo	drum, swb, tdop, etc., see WWIS labels for valid types.					U-235 FEM	U-235 FEM Uncert	FGGR Flag	FGGR Test Period	CK/CH	08/16/12
6	WAC Rev #		7.2	0					NULL	NULL	NULL	NULL	CK/HP	08/09/12
7	WAC Ex. #						Be <=100 kg	Be <= 1%	Be Present	Aqueous Material	Be Chem/Mech Bound	Compacted Wst		
8	Cert Site		C2				Y	Y	Y	N	N	N	CK/HP	08/09/12
9	Cert Date		8/16/2012											
10	Waste Handling Code		RH	CH, RH									CK/HP	08/09/12
11	Waste Type Code		MTRU	TRU, MTRU									CK/HP	08/09/12
12	Waste Stream BIR ID		AE-T009				p(CI):	choose	1sigma	2sigma	95%CI		CK/HP	08/09/12
13	Waste Stream MWIR ID		NONE	default to 0 for TRU			0.6827	1sigma	1.0000	0.5000	0.5102		CK/HP	08/09/12
14	Generator Site ID		AE				0.9545	2sigma	2.0000	1.0000	1.0204		CK/HP	08/09/12
15	IDC Code		001				0.9500	95%CI	1.9600	0.9800	1.0000		CK/HP	08/09/12
16	Matrix Code		S5400										CK/HP	08/09/12
17	Trucon Code		AE321M										CK/CH	08/16/12
18	Shipping Category						WWIS Req'd CI:	1sigma	1.0000	0.5000	0.5102			
19	Tru Alpha Act	Ci	1.14E-01		1.139E-01		Fraction of MDL Reported on HGAS		1.0000				CK/HP	08/09/12
20	Tru Alpha Act Uncert	1sigma Ci	4.98E-02	2.136E-01	Tru Alpha Act + 2sigma (Ci)								CK/HP	08/09/12
21	Tru Alpha Act Conc	nCi/g	4.50E+03		4.50E+03								CK/HP	08/09/12
22	Tru Alpha Act Conc Uncert	1sigma nCi/g	1.97E+03	8.440E+03	Tru Alpha Act Conc + 2sigma (Ci)								CK/HP	08/09/12
23	Pu239 Fiss Gm Eq	g	8.54E-01		8.544E-01								CK/HP	08/09/12
24	Pu239 Fiss Gm Eq Uncert	1sigma g	4.52E-01	1.758E+00	Pu239 Fiss Gm Eq + 2sigma (Ci)								CK/HP	08/09/12
25	Pu239 Eq Act	Ci	1.24E-01		1.242E-01								CK/HP	08/09/12
26	Decay Heat	watts	1.25E-02		1.252E-02								CK/HP	08/09/12
27	Decay Heat Uncert	1sigma watts	3.93E-03	1.64E-02	Decay Heat + 1sigma (watts)								CK/CH	08/16/12
28	Layers of Packaging		3											
29	Fill Factor		85	percentage	Liner Lid Present								CK/HP	08/09/12
30	Liner Type			1 = plastic drum liner									CK/CH	08/16/12
31	Liner Punctured				Liner Hole Size	1	(mm)						CK/CH	08/16/12
32	PCB Conc						PCB Waste	PCB Mass (kg)	Out of Service				CK/HP	08/09/12
33	Closure Date		4/3/2012	Watt-years	Waste Gen Date		N	NULL	NULL				CK/HP	08/09/12
34	Vent Date		4/3/2012	[redacted]									CK/HP	08/09/12
35	Filter Install Date		4/3/2012										CK/HP	08/09/12
36	Filter Manufacturer		NFT										CK/HP	08/09/12
37	Filter Serial Number(s)												CK/CH	08/16/12
38	Filter Model Number	NF012,NF013,NF020,NF9026	NF019D										CK/HP	08/09/12
39	Number of Filters Installed		1										CK/HP	08/09/12
40	Aspiration Method ID		3											
41	Gas Gen Rate			#VALUE!	<<Gas Gen Rate Calculated.		Avagdro's Number:	6.022142E+23	NIST					
42	Hydrogen/Methane Gen Rate						Electron Charge	1.602176E-19 V	NIST					
43	Gas Gen Comp Date				Waste (kg)	Packaging (kg)	Total (kg)						CK/CH	08/16/12
44	Gross Weight	kg	76.500	[redacted]									CK/HP	08/09/12
45	Gross Weight Uncert	1sigma kg	0.5		max. reported	mda							CK/HP	08/09/12
46	Alpha Surf Cont	dpm/100 cm^2	[redacted]		0		Minimum Detectable Activity		Shipping Calcs				CK/HP	08/09/12
47	Beta/Gamma Surf Cont	dpm/100 cm^2	[redacted]		0		Minimum Detectable Activity		Total TBq	1.48E-01			CK/HP	08/09/12
48	Neutron Dose Rate	mrem/hr	[redacted]		0.4		Minimum Detectable Activity		Fraction	8.12E-03			CK/HP	08/09/12
49	Beta/Gamma Dose Rate	mrem/hr	[redacted]		1500		Minimum Detectable Activity		Highway Route Control?	No			CK/HP	08/09/12
50	Radionuclide		U-233	U-234	U-235	U-238	Pu-238	Pu-239	Pu-240	Pu-241	Pu-242	Am-241	CK/HP	08/09/12
51	Activity	Ci	2.49E-09	6.23E-05	1.91E-06	2.23E-06	5.48E-02	1.73E-02	1.19E-02	7.79E-01	2.89E-05	2.99E-02	CK/HP	08/09/12
52	Activity Uncert	1sigma CI	2.01E-09	3.70E-05	1.22E-06	1.11E-06	3.26E-02	1.36E-02	8.88E-03	4.23E-01	1.60E-05	2.06E-02	CK/HP	08/09/12
53	Mass	grams	2.55E-07	9.86E-03	8.72E-01	6.56E+00	3.17E-03	2.75E-01	5.17E-02	7.49E-03	7.28E-03	8.82E-03		
54	Mass Uncert	1sigma grams	2.06E-07	5.85E-03	5.57E-01	3.26E+00	1.88E-03	2.16E-01	3.86E-02	4.07E-03	4.03E-03	5.04E-03		
55	calc Tru Alpha Act	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.48E-02	1.73E-02	1.19E-02	0.00E+00	2.89E-05	2.99E-02		
56	calc Tru Alpha Act Conc	nCi/g	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.17E+03	6.84E+02	4.70E+02	0.00E+00	1.14E+00	1.18E+03		
57	calc Act	Ci	2.49E-09	6.23E-05	1.91E-06	2.23E-06	5.48E-02	1.73E-02	1.19E-02	7.79E-01	2.89E-05	2.99E-02		
58	calc Act Conc	nCi/g	9.84E-05	2.46E+00	7.55E-02	8.81E-02	2.17E+03	6.84E+02	4.70E+02	3.08E+04	1.14E+00	1.18E+03		

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	A	B	C	D	E	F	G	H	I	J	K	L	M	N
	RH WDS Master Template.xls Rev. 4 Addendum #4, SCO #1066 Excel 2003/2007 Microsoft Windows XP													
1		Units	data				comments						Initial	date
2	Shipper Site ID		[redacted]	Location ID	Dest Program ID	Shipping Purpose					999H		CK/HP	08/09/12
3	Waste Stream Profile		AERHDM	[redacted]	WI	D							CK/HP	08/09/12
4	Container Number		999	H CK 8-16-12									CK/HP	08/09/12
5	Container Type		RH drum-55 tbo	drum, swb, tdop, etc., see WWIS labels for valid types.					U-235 FEM	U-235 FEM Uncert	FGGR Flag	FGGR Test Period	CK/CH	08/16/12
6	WAC Rev #		7.2	0					NULL	NULL	NULL	NULL	CK/HP	08/09/12
7	WAC Ex. #						Be <=100 kg	Be <= 1%	Be Present	Aqueous Material	Be Chem/Mech Bound	Compacted Wst		
8	Cert Site		C2				Y	Y	Y	N	N	N	CK/HP	08/09/12
9	Cert Date		8/16/2012											
10	Waste Handling Code		RH	CH, RH									CK/HP	08/09/12
11	Waste Type Code		MTRU	TRU, MTRU									CK/HP	08/09/12
12	Waste Stream BIR ID		AE-T009				p(CI):	choose	1sigma	2sigma	95%CI		CK/HP	08/09/12
13	Waste Stream MWIR ID		NONE	default to 0 for TRU			0.6827	1sigma	1.0000	0.5000	0.5102		CK/HP	08/09/12
14	Generator Site ID		AE				0.9545	2sigma	2.0000	1.0000	1.0204		CK/HP	08/09/12
15	IDC Code		001				0.9500	95%CI	1.9600	0.9800	1.0000		CK/HP	08/09/12
16	Matrix Code		S5400										CK/HP	08/09/12
17	Trucon Code		AE321M										CK/CH	08/16/12
18	Shipping Category						WWIS Req'd CI:	1sigma	1.0000	0.5000	0.5102			
19	Tru Alpha Act	Ci	1.69E-01		1.687E-01		Fraction of MDL Reported on HGAS		1.0000				CK/HP	08/09/12
20	Tru Alpha Act Uncert	1sigma Ci	7.38E-02	3.166E-01	Tru Alpha Act + 2sigma (Ci)								CK/HP	08/09/12
21	Tru Alpha Act Conc	nCi/g	6.14E+03		6.14E+03								CK/HP	08/09/12
22	Tru Alpha Act Conc Uncert	1sigma nCi/g	2.69E+03	1.152E+04	Tru Alpha Act Conc + 2sigma (Ci)								CK/HP	08/09/12
23	Pu239 Fiss Gm Eq	g	1.27E+00		1.266E+00								CK/HP	08/09/12
24	Pu239 Fiss Gm Eq Uncert	1sigma g	6.70E-01	2.610E+00	Pu239 Fiss Gm Eq + 2sigma (Ci)								CK/HP	08/09/12
25	Pu239 Eq Act	Ci	1.84E-01		1.841E-01								CK/HP	08/09/12
26	Decay Heat	watts	1.85E-02		1.855E-02								CK/HP	08/09/12
27	Decay Heat Uncert	1sigma watts	5.82E-03	2.43E-02	Decay Heat + 1sigma (watts)								CK/HP	08/09/12
28	Layers of Packaging		3										CK/CH	08/16/12
29	Fill Factor		85	percentage	Liner Lid Present								CK/HP	08/09/12
30	Liner Type			1 = plastic drum liner									CK/CH	08/16/12
31	Liner Punctured				Liner Hole Size	(mm)							CK/CH	08/16/12
32	PCB Conc						PCB Waste	PCB Mass (kg)	Out of Service				CK/HP	08/09/12
33	Closure Date		4/3/2012	Watt-years	Waste Gen Date		N	NULL	NULL				CK/HP	08/09/12
34	Vent Date		4/3/2012	[redacted]									CK/HP	08/09/12
35	Filter Install Date		4/3/2012										CK/HP	08/09/12
36	Filter Manufacturer		NFT										CK/HP	08/09/12
37	Filter Serial Number(s)												CK/CH	08/16/12
38	Filter Model Number	NF012,NF013,NF020,NF9026	NF019D										CK/HP	08/09/12
39	Number of Filters Installed		1										CK/HP	08/09/12
40	Aspiration Method ID		3											
41	Gas Gen Rate			#VALUE!	<<Gas Gen Rate Calculated.		Avagdro's Number:	6.022142E+23	NIST					
42	Hydrogen/Methane Gen Rate						Electron Charge	1.602176E-19	V NIST					
43	Gas Gen Comp Date				Waste (kg)	Packaging (kg)	Total (kg)						CK/CH	08/16/12
44	Gross Weight	kg	78.700	[redacted]									CK/HP	08/09/12
45	Gross Weight Uncert	1sigma kg	0.5		max. reported	mda							CK/HP	08/09/12
46	Alpha Surf Cont	dpm/100 cm^2	[redacted]	[redacted]	0		Minimum Detectable Activity			Shipping Calcs			CK/HP	08/09/12
47	Beta/Gamma Surf Cont	dpm/100 cm^2	[redacted]	[redacted]	0		Minimum Detectable Activity			Total TBq	2.20E-01		CK/HP	08/09/12
48	Neutron Dose Rate	mrem/hr	[redacted]	[redacted]	0.4		Minimum Detectable Activity			Fraction	1.20E-02		CK/HP	08/09/12
49	Beta/Gamma Dose Rate	mrem/hr	[redacted]	[redacted]	1600		Minimum Detectable Activity			Highway Route Control?	No		CK/HP	08/09/12
50	Radionuclide		U-233	U-234	U-235	U-238	Pu-238	Pu-239	Pu-240	Pu-241	Pu-242	Am-241	CK/HP	08/09/12
51	Activity	Ci	3.69E-09	9.24E-05	2.83E-06	3.31E-06	8.12E-02	2.56E-02	1.76E-02	1.16E+00	4.29E-05	4.43E-02	CK/HP	08/09/12
52	Activity Uncert	1sigma Ci	2.98E-09	5.49E-05	1.81E-06	1.65E-06	4.83E-02	2.01E-02	1.32E-02	6.27E-01	2.37E-05	3.06E-02	CK/HP	08/09/12
53	Mass	grams	3.78E-07	1.46E-02	1.29E+00	9.74E+00	4.69E-03	4.07E-01	7.65E-02	1.12E-02	1.08E-02	1.28E-02		
54	Mass Uncert	1sigma grams	3.05E-07	8.69E-03	8.26E-01	4.85E+00	2.79E-03	3.20E-01	5.74E-02	6.03E-03	5.97E-03	8.82E-03		
55	calc Tru Alpha Act	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.12E-02	2.56E-02	1.76E-02	0.00E+00	4.29E-05	4.43E-02		
56	calc Tru Alpha Act Conc	nCi/g	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.95E+03	9.31E+02	6.40E+02	0.00E+00	1.56E+00	1.61E+03		
57	calc Act	Ci	3.69E-09	9.24E-05	2.83E-06	3.31E-06	8.12E-02	2.56E-02	1.76E-02	1.16E+00	4.29E-05	4.43E-02		
58	calc Act Conc	nCi/g	1.34E-04	3.36E+00	1.03E-01	1.20E-01	2.95E+03	9.31E+02	6.40E+02	4.22E+04	1.56E+00	1.61E+03		

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	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	RH WDS Master Template.xls Rev. 4 Addendum #4, SCO #1066 Excel 2003/2007 Microsoft Windows XP	Units	data					comments			CK 8-16-12		Initial	date
2	Shipper Site ID		[redacted]	Location ID	Dest Program ID	Shipping Purpose					1031 H		CH/BV	08/09/12
3	Waste Stream Profile		AERHDM	[redacted]	[redacted]	[redacted]							CH/BV	08/09/12
4	Container Number		1031	H CK 8-16-12									CH/BV	08/09/12
5	Container Type		RH drum-55 tbo	drum, swb, tdop, etc., see WWIS labels for valid types.					U-235 FEM	U-235 FEM Uncert	FGGR Flag	FGGR Test Period	CK/CH	08/16/12
6	WAC Rev #		7.2	0					NULL	NULL	NULL	NULL	CH/BV	08/09/12
7	WAC Ex. #						Be <=100 kg	Be <= 1%	Be Present	Aqueous Material	Be Chem/Mech Bound	Compacted Wst		
8	Cert Site		C2				Y	Y	Y	N	N	N	CH/BV	08/09/12
9	Cert Date		8/16/2012											
10	Waste Handling Code		RH	CH, RH									CH/BV	08/09/12
11	Waste Type Code		MTRU	TRU, MTRU									CH/BV	08/09/12
12	Waste Stream BIR ID		AE-T009				p(CI):	choose	1sigma	2sigma	95%CI		CH/BV	08/09/12
13	Waste Stream MWIR ID		NONE	default to 0 for TRU			0.6827	1sigma	1.0000	0.5000	0.5102		CH/BV	08/09/12
14	Generator Site ID		AE				0.9545	2sigma	2.0000	1.0000	1.0204		CH/BV	08/09/12
15	IDC Code		001				0.9500	95%CI	1.9600	0.9800	1.0000		CH/BV	08/09/12
16	Matrix Code		S5400										CH/BV	08/09/12
17	Trucon Code		AE322F										CK/CH	08/16/12
18	Shipping Category						WWIS Req'd CI:	1sigma	1.0000	0.5000	0.5102			
19	Tru Alpha Act	Ci	1.27E+01		1.274E+01		Fraction of MDL Reported on HGAS		1.0000				CH/BV	08/09/12
20	Tru Alpha Act Uncert	1sigma Ci	2.35E+00	1.740E+01	Tru Alpha Act + 2sigma (Ci)								CH/BV	08/09/12
21	Tru Alpha Act Conc	nCi/g	5.11E+05		5.12E+05								CH/BV	08/09/12
22	Tru Alpha Act Conc Uncert	1sigma nCi/g	9.43E+04	6.996E+05	Tru Alpha Act Conc + 2sigma (Ci)								CH/BV	08/09/12
23	Pu239 Fiss Gm Eq	g	1.15E+01		1.155E+01								CH/BV	08/09/12
24	Pu239 Fiss Gm Eq Uncert	1sigma g	1.11E+00	1.372E+01	Pu239 Fiss Gm Eq + 2sigma (Ci)								CH/BV	08/09/12
25	Pu239 Eq Act	Ci	1.85E+01		1.846E+01								CH/BV	08/09/12
26	Decay Heat	watts	1.95E+00		1.948E+00								CH/BV	08/09/12
27	Decay Heat Uncert	1sigma watts	2.66E-01	2.22E+00	Decay Heat + 1sigma (watts)								CH/BV	08/09/12
28	Layers of Packaging		2										CK/CH	08/16/12
29	Fill Factor		90	percentage	Liner Lid Present								CH/BV	08/09/12
30	Liner Type			1 = plastic drum liner									CH/BV	08/09/12
31	Liner Punctured				Liner Hole Size		(mm)						CH/BV	08/09/12
32	PCB Conc		NULL				PCB Waste	PCB Mass (kg)	Out of Service				CH/BV	08/09/12
33	Closure Date		4/3/2012	Watt-years	Waste Gen Date		N	NULL	NULL				CK/CH	08/16/12
34	Vent Date		4/3/2012	[redacted]									CK/CH	08/16/12
35	Filter Install Date		4/3/2012										CH/BV	08/09/12
36	Filter Manufacturer		NFT										CH/BV	08/09/12
37	Filter Serial Number(s)												CH/BV	08/09/12
38	Filter Model Number	NF012,NF013,NF020,NF9026	NF019D										CH/BV	08/09/12
39	Number of Filters Installed		1										CK/CH	08/16/12
40	Aspiration Method ID		3										CH/BV	08/09/12
41	Gas Gen Rate			#VALUE!	<<Gas Gen Rate Calculated.		Avagdro's Number:	6.022142E+23	NIST					
42	Hydrogen/Methane Gen Rate						Electron Charge	1.602176E-19	V NIST					
43	Gas Gen Comp Date				Waste (kg)	Packaging (kg)	Total (kg)							
44	Gross Weight	kg	133.700	[redacted]									CK/CH	08/16/12
45	Gross Weight Uncert	1sigma kg	0.5		max. reported	mda							CH/BV	08/09/12
46	Alpha Surf Cont	dpm/100 cm^2	[redacted]		0		Minimum Detectable Activity		Shipping Calcs				CH/BV	08/09/12
47	Beta/Gamma Surf Cont	dpm/100 cm^2	[redacted]		0		Minimum Detectable Activity		Total TBq		1.90E+01		CH/BV	08/09/12
48	Neutron Dose Rate	mrem/hr	[redacted]		0		Minimum Detectable Activity		Fraction		1.19E+00		CH/BV	08/09/12
49	Beta/Gamma Dose Rate	mrem/hr	[redacted]		482000		Minimum Detectable Activity		Highway Route Control?		Yes		CH/BV	08/09/12
50	Radionuclide		U-233	U-234	U-235	U-238	Pu-238	Pu-239	Pu-240	Pu-241	Pu-242	Am-241	CH/BV	08/09/12
51	Activity	Ci	5.93E-08	1.47E-03	1.05E-05	3.16E-04	8.53E+00	4.02E-01	7.94E-01	8.78E+01	3.40E-03	3.01E+00	CH/BV	08/09/12
52	Activity Uncert	1sigma Ci	1.87E-08	4.58E-04	1.08E-06	5.54E-06	2.12E+00	4.58E-02	1.51E-01	3.42E+01	1.14E-03	9.75E-01	CH/BV	08/09/12
53	Mass	grams	6.08E-06	2.33E-01	4.79E+00	9.29E+02	4.93E-01	6.39E+00	3.45E+00	8.44E-01	8.56E-03	8.67E-03		
54	Mass Uncert	1sigma grams	1.92E-06	7.25E-02	4.93E-01	1.63E+01	1.23E-01	7.28E-01	6.57E-01	3.29E-01	2.87E-01	2.61E-01		
55	calc Tru Alpha Act	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.53E+00	4.02E-01	7.94E-01	0.00E+00	3.40E-03	3.01E+00		
56	calc Tru Alpha Act Conc	nCi/g	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.43E+05	1.61E+04	3.19E+04	0.00E+00	1.37E+02	1.21E+05		
57	calc Act	Ci	5.93E-08	1.47E-03	1.05E-05	3.16E-04	8.53E+00	4.02E-01	7.94E-01	8.78E+01	3.40E-03	3.01E+00		
58	calc Act Conc	nCi/g	2.38E-03	5.90E+01	4.22E-01	1.27E+01	3.43E+05	1.61E+04	3.19E+04	3.53E+06	1.37E+02	1.21E+05		

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	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	RH WDS Master Template.xls Rev. 4 Addendum #4, SCO #1066 Excel 2003/2007 Microsoft Windows XP	Units	data					comments			CK 8-16-12		initial	date
2	Shipper Site ID		[redacted]	Location ID	Dest Program ID	Shipping Purpose					1049 H		CH/BV	08/09/12
3	Waste Stream Profile		AERHDM	[redacted]	WI	[redacted]							CH/BV	08/09/12
4	Container Number		1049	H CK 8-16-12									CH/BV	08/09/12
5	Container Type		RH drum-55 tbo	drum, swb, tdop, etc., see WWIS labels for valid types.					U-235 FEM	U-235 FEM Uncert	FGGR Flag	FGGR Test Period	CK/CH	08/16/12
6	WAC Rev #		7.2	0					NULL	NULL	NULL	NULL	CH/BV	08/09/12
7	WAC Ex. #						Be <=100 kg	Be <= 1%	Be Present	Aqueous Material	Be Chem/Mech Bound	Compacted Wst		
8	Cert Site		C2				Y	Y	Y	N	N	N	CH/BV	08/09/12
9	Cert Date		8/16/2012											
10	Waste Handling Code		RH	CH, RH									CH/BV	08/09/12
11	Waste Type Code		MTRU	TRU, MTRU									CH/BV	08/09/12
12	Waste Stream BIR ID		AE-T009				p(CI):	choose	1sigma	2sigma	95%CI		CH/BV	08/09/12
13	Waste Stream MWIR ID		NONE	default to 0 for TRU			0.6827	1sigma	1.0000	0.5000	0.5102		CH/BV	08/09/12
14	Generator Site ID		AE				0.9545	2sigma	2.0000	1.0000	1.0204		CH/BV	08/09/12
15	IDC Code		001				0.9500	95%CI	1.9600	0.9800	1.0000		CH/BV	08/09/12
16	Matrix Code		S5400										CH/BV	08/09/12
17	Trucon Code		AE321M										CK/CH	08/16/12
18	Shipping Category						WWIS Req'd CI:	1sigma	1.0000	0.5000	0.5102			
19	Tru Alpha Act	Ci	3.38E-02		3.387E-02		Fraction of MDL Reported on HGAS		1.0000				CH/BV	08/09/12
20	Tru Alpha Act Uncert	1sigma Ci	1.67E-02	6.520E-02	Tru Alpha Act + 2sigma (Ci)								CH/BV	08/09/12
21	Tru Alpha Act Conc	nCi/g	8.12E+02		8.12E+02								CH/BV	08/09/12
22	Tru Alpha Act Conc Uncert	1sigma nCi/g	3.76E+02	1.564E+03	Tru Alpha Act Conc + 2sigma (Ci)								CH/BV	08/09/12
23	Pu239 Fiss Gm Eq	g	2.54E-01		2.537E-01								CH/BV	08/09/12
24	Pu239 Fiss Gm Eq Uncert	1sigma g	1.40E-01	5.340E-01	Pu239 Fiss Gm Eq + 2sigma (Ci)								CH/BV	08/09/12
25	Pu239 Eq Act	Ci	3.69E-02		3.694E-02								CH/BV	08/09/12
26	Decay Heat	watts	3.72E-03		3.720E-03								CH/BV	08/09/12
27	Decay Heat Uncert	1sigma watts	1.30E-03	5.02E-03	Decay Heat + 1sigma (watts)								CH/BV	08/09/12
28	Layers of Packaging		3										CK/CH	08/16/12
29	Fill Factor		78	percentage	Liner Lid Present								CH/BV	08/09/12
30	Liner Type			1 = plastic drum liner									CK/CH	08/16/12
31	Liner Punctured				Liner Hole Size		(mm)						CK/CH	08/16/12
32	PCB Conc						PCB Waste	PCB Mass (kg)	Out of Service				CH/BV	08/09/12
33	Closure Date		4/2/2012	Watt-years	Waste Gen Date		N	NULL	NULL				CH/BV	08/09/12
34	Vent Date		4/2/2012	[redacted]									CH/BV	08/09/12
35	Filter Install Date		4/2/2012										CH/BV	08/09/12
36	Filter Manufacturer		NFT										CH/BV	08/09/12
37	Filter Serial Number(s)												CH/BV	08/09/12
38	Filter Model Number	NF012,NF013,NF020,NF9026	NF019D										CK/CH	08/16/12
39	Number of Filters Installed		1										CH/BV	08/09/12
40	Aspiration Method ID		3										CH/BV	08/09/12
41	Gas Gen Rate			#VALUE!	<<Gas Gen Rate Calculated.		Avagdro's Number:	6.022142E+23	NIST					
42	Hydrogen/Methane Gen Rate						Electron Charge	1.602176E-19 V	NIST					
43	Gas Gen Comp Date				Waste (kg)	Packaging (kg)	Total (kg)							
44	Gross Weight	kg	92.900	[redacted]									CK/CH	08/16/12
45	Gross Weight Uncert	1sigma kg	0.5		max. reported	mda							CH/BV	08/09/12
46	Alpha Surf Cont	dpm/100 cm^2	[redacted]	[redacted]	0		Minimum Detectable Activity			Shipping Calcs			CH/BV	08/09/12
47	Beta/Gamma Surf Cont	dpm/100 cm^2	[redacted]	[redacted]	0		Minimum Detectable Activity			Total TBq	4.40E-02		CH/BV	08/09/12
48	Neutron Dose Rate	mrem/hr	[redacted]	[redacted]	0.4		Minimum Detectable Activity			Fraction	2.41E-03		CH/BV	08/09/12
49	Beta/Gamma Dose Rate	mrem/hr	[redacted]	[redacted]	700		Minimum Detectable Activity			Highway Route Control?	No		CH/BV	08/09/12
50	Radionuclide		U-233	U-234	U-235	U-238	Pu-238	Pu-239	Pu-240	Pu-241	Pu-242	Am-241	CH/BV	08/09/12
51	Activity	Ci	7.41E-10	1.85E-05	5.67E-07	6.63E-07	1.63E-02	5.14E-03	3.53E-03	2.32E-01	8.59E-06	8.89E-03	CH/BV	08/09/12
52	Activity Uncert	1sigma Ci	6.08E-10	1.14E-05	3.74E-07	3.46E-07	1.00E-02	4.10E-03	2.69E-03	1.31E-01	4.92E-06	6.28E-03	CH/BV	08/09/12
53	Mass	grams	7.59E-08	2.93E-03	2.59E-01	1.95E+00	9.42E-04	8.17E-02	1.83E-02	2.23E-03	2.06E-03	2.06E-03		
54	Mass Uncert	1sigma grams	6.23E-08	1.80E-03	1.71E-01	1.02E+00	5.78E-04	6.52E-02	1.17E-02	1.26E-03	1.24E-03	1.81E-03		
55	calc Tru Alpha Act	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.63E-02	5.14E-03	3.53E-03	0.00E+00	8.59E-06	8.89E-03		
56	calc Tru Alpha Act Conc	nCi/g	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.91E+02	1.23E+02	8.47E+01	0.00E+00	2.06E-01	2.13E+02		
57	calc Act	Ci	7.41E-10	1.85E-05	5.67E-07	6.63E-07	1.63E-02	5.14E-03	3.53E-03	2.32E-01	8.59E-06	8.89E-03		
58	calc Act Conc	nCi/g	1.78E-05	4.44E-01	1.36E-02	1.59E-02	3.91E+02	1.23E+02	8.47E+01	5.56E+03	2.06E-01	2.13E+02		

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	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	RH WDS Master Template.xls Rev. 4 Addendum #4, SCO #1066 Excel 2003/2007 Microsoft Windows XP	Units	data				comments					Cle 8-16-12	initial	date
2	Shipper Site ID		[redacted]	Location ID	Dest Program ID	Shipping Purpose				1052 H			CH/BV	08/09/12
3	Waste Stream Profile		AERHDM	[redacted]	WI	[redacted]D							CH/BV	08/09/12
4	Container Number		1052	H Cle 8-16-12									CH/BV	08/09/12
5	Container Type		RH drum-55 tbo	drum, swb, tdop, etc., see WWIS labels for valid types.					U-235 FEM	U-235 FEM Uncert	FGGR Flag	FGGR Test Period	CK/CH	08/16/12
6	WAC Rev #		7.2	0					NULL	NULL	NULL	NULL	CH/BV	08/09/12
7	WAC Ex. #						Be <=100 kg	Be <= 1%	Be Present	Aqueous Material	Be Chem/Mech Bound	Compacted Wst		
8	Cert Site		C2				Y	Y	Y	N	N	N	CH/BV	08/09/12
9	Cert Date		8/16/2012											
10	Waste Handling Code		RH	CH, RH									CH/BV	08/09/12
11	Waste Type Code		MTRU	TRU, MTRU									CH/BV	08/09/12
12	Waste Stream BIR ID		AE-T009				p(CI):	choose	1sigma	2sigma	95%CI		CH/BV	08/09/12
13	Waste Stream MWIR ID		NONE	default to 0 for TRU			0.6827	1sigma	1.0000	0.5000	0.5102		CH/BV	08/09/12
14	Generator Site ID		AE				0.9545	2sigma	2.0000	1.0000	1.0204		CH/BV	08/09/12
15	IDC Code		001				0.9500	95%CI	1.9600	0.9800	1.0000		CH/BV	08/09/12
16	Matrix Code		S5400										CH/BV	08/09/12
17	Trucon Code		AE322F										CK/CH	08/16/12
18	Shipping Category						WWIS Req'd CI:	1sigma	1.0000	0.5000	0.5102			
19	Tru Alpha Act	Ci	1.33E+01		1.333E+01		Fraction of MDL Reported on HGAS		1.0000				CH/BV	08/09/12
20	Tru Alpha Act Uncert	1sigma Ci	2.68E+00	1.866E+01	Tru Alpha Act + 2sigma (Ci)								CH/BV	08/09/12
21	Tru Alpha Act Conc	nCi/g	5.47E+05		5.46E+05								CH/BV	08/09/12
22	Tru Alpha Act Conc Uncert	1sigma nCi/g	1.10E+05	7.670E+05	Tru Alpha Act Conc + 2sigma (Ci)								CH/BV	08/09/12
23	Pu239 Fiss Gm Eq	g	6.92E+01		6.909E+01								CH/BV	08/09/12
24	Pu239 Fiss Gm Eq Uncert	1sigma g	3.25E+00	7.570E+01	Pu239 Fiss Gm Eq + 2sigma (Ci)								CH/BV	08/09/12
25	Pu239 Eq Act	Ci	1.93E+01		1.923E+01								CH/BV	08/09/12
26	Decay Heat	watts	1.36E+00		1.361E+00								CH/BV	08/09/12
27	Decay Heat Uncert	1sigma watts	3.88E-01	1.75E+00	Decay Heat + 1sigma (watts)								CH/BV	08/09/12
28	Layers of Packaging		2										CK/CH	08/16/12
29	Fill Factor		85	percentage	Liner Lid Present								CH/BV	08/09/12
30	Liner Type			1 = plastic drum liner									CK/CH	08/16/12
31	Liner Punctured				Liner Hole Size		(mm)						CK/CH	08/16/12
32	PCB Conc		NULL				PCB Waste	PCB Mass (kg)	Out of Service				CH/BV	08/09/12
33	Closure Date		4/4/2012	Watt-years	Waste Gen Date		N	[redacted]					CH/BV	08/09/12
34	Vent Date		4/4/2012	[redacted]									CH/BV	08/09/12
35	Filter Install Date		4/4/2012										CH/BV	08/09/12
36	Filter Manufacturer		NFT										CH/BV	08/09/12
37	Filter Serial Number(s)												CH/BV	08/09/12
38	Filter Model Number	NF012,NF013,NF020,NF9026	NF019D										CK/CH	08/16/12
39	Number of Filters Installed		1										CH/BV	08/09/12
40	Aspiration Method ID		3										CH/BV	08/09/12
41	Gas Gen Rate			#VALUE!	<<Gas Gen Rate Calculated.		Avagdro's Number:	6.022142E+23	NIST					
42	Hydrogen/Methane Gen Rate						Electron Charge	1.602176E-19 V	NIST					
43	Gas Gen Comp Date				Waste (kg)	Packaging (kg)	Total (kg)							
44	Gross Weight	kg	128.700	[redacted]									CK/CH	08/16/12
45	Gross Weight Uncert	1sigma kg	0.5		max. reported	mda							CH/BV	08/09/12
46	Alpha Surf Cont	dpm/100 cm^2	[redacted]		0		Minimum Detectable Activity		Shipping Calcs				CH/BV	08/09/12
47	Beta/Gamma Surf Cont	dpm/100 cm^2	[redacted]		0		Minimum Detectable Activity		Total TBq		9.29E+00		CH/BV	08/09/12
48	Neutron Dose Rate	mrem/hr	[redacted]		0		Minimum Detectable Activity		Fraction		1.22E+00		CH/BV	08/09/12
49	Beta/Gamma Dose Rate	mrem/hr	[redacted]		109340		Minimum Detectable Activity		Highway Route Control?		Yes		CH/BV	08/09/12
50	Radionuclide		U-233	U-234	U-235	U-238	Pu-238	Pu-239	Pu-240	Pu-241	Pu-242	Am-241	CH/BV	08/09/12
51	Activity	Ci	9.06E-08	4.81E-03	1.27E-04	1.72E-04	7.78E+00	1.93E+00	1.25E+00	4.17E+01	2.50E-03	2.37E+00	CH/BV	08/09/12
52	Activity Uncert	1sigma Ci	2.34E-08	1.34E-03	8.48E-06	9.54E-06	2.48E+00	1.08E-01	1.74E-01	2.15E+01	1.12E-03	9.42E-01	CH/BV	08/09/12
53	Mass	grams	9.26E-08	7.81E-01	5.80E+01	5.06E+02	4.50E-01	3.07E+01	5.43E+00	4.01E-01	6.30E-01	6.83E-03		
54	Mass Uncert	1sigma grams	2.40E-08	2.12E-01	3.87E+00	2.81E+01	1.43E-01	1.72E+00	7.57E-01	2.07E-01	2.82E-01	2.71E-03		
55	calc Tru Alpha Act	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.78E+00	1.93E+00	1.25E+00	0.00E+00	2.50E-03	2.37E+00		
56	calc Tru Alpha Act Conc	nCi/g	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.19E+05	7.91E+04	5.12E+04	0.00E+00	1.02E+02	9.71E+04		
57	calc Act	Ci	9.06E-08	4.81E-03	1.27E-04	1.72E-04	7.78E+00	1.93E+00	1.25E+00	4.17E+01	2.50E-03	2.37E+00		
58	calc Act Conc	nCi/g	3.71E-03	1.97E+02	5.20E+00	7.05E+00	3.19E+05	7.91E+04	5.12E+04	1.71E+06	1.02E+02	9.71E+04		

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	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	RH WDS Master Template.xls Rev. 4 Addendum #4, SCO #1066 Excel 2003/2007 Microsoft Windows XP	Units	data				comments				CK 8-16-12		Initial	date
2	Shipper Site ID		[redacted]	Location ID	Dest Program ID	Shipping Purpose				1053H			CK/HP	08/09/12
3	Waste Stream Profile		AERHDM	[redacted]	[redacted]	[redacted]							CK/HP	08/09/12
4	Container Number		1053	H CK 8-16-12									CK/HP	08/09/12
5	Container Type		RH drum-55 tbo	drum, swb, tdop, etc., see WWIS labels for valid types.					U-235 FEM	U-235 FEM Uncert	FGGR Flag	FGGR Test Period	CK/CH	08/16/12
6	WAC Rev #		7.2	0					NULL	NULL	NULL	NULL	CK/HP	08/09/12
7	WAC Ex. #						Be <=100 kg	Be <= 1%	Be Present	Aqueous Material	Be Chem/Mech Bound	Compacted Wst		
8	Cert Site		C2				Y	Y	Y	N	N	N	CK/HP	08/09/12
9	Cert Date		8/16/2012											
10	Waste Handling Code		RH	CH, RH									CK/HP	08/09/12
11	Waste Type Code		MTRU	TRU, MTRU									CK/HP	08/09/12
12	Waste Stream BIR ID		AE-T009				p(CI):	choose	1sigma	2sigma	95%CI		CK/HP	08/09/12
13	Waste Stream MWIR ID		NONE		default to 0 for TRU		0.6827	1sigma	1.0000	0.5000	0.5102		CK/HP	08/09/12
14	Generator Site ID		AE				0.9545	2sigma	2.0000	1.0000	1.0204		CK/HP	08/09/12
15	IDC Code		001				0.9500	95%CI	1.9600	0.9800	1.0000		CK/HP	08/09/12
16	Matrix Code		S5400										CK/HP	08/09/12
17	Trucon Code		AE322F										CK/CH	08/16/12
18	Shipping Category						WWIS Req'd CI:	1sigma	1.0000	0.5000	0.5102			
19	Tru Alpha Act	Ci	1.33E+01		1.334E+01		Fraction of MDL Reported on HGAS		1.0000				CK/HP	08/09/12
20	Tru Alpha Act Uncert	1sigma Ci	2.64E+00	1.858E+01	Tru Alpha Act + 2sigma (Ci)								CK/HP	08/09/12
21	Tru Alpha Act Conc	nCi/g	5.47E+05		5.47E+05								CK/HP	08/09/12
22	Tru Alpha Act Conc Uncert	1sigma nCi/g	1.08E+05	7.630E+05	Tru Alpha Act Conc + 2sigma (Ci)								CK/HP	08/09/12
23	Pu239 Fiss Gm Eq	g	1.09E+02		1.088E+02								CK/HP	08/09/12
24	Pu239 Fiss Gm Eq Uncert	1sigma g	5.63E+00	1.203E+02	Pu239 Fiss Gm Eq + 2sigma (Ci)								CK/HP	08/09/12
25	Pu239 Eq Act	Ci	1.91E+01		1.913E+01								CK/HP	08/09/12
26	Decay Heat	watts	1.35E+00		1.351E+00								CK/HP	08/09/12
27	Decay Heat Uncert	1sigma watts	3.79E-01	1.73E+00	Decay Heat + 1sigma (watts)								CK/HP	08/09/12
28	Layers of Packaging		2										CK/CH	08/16/12
29	Fill Factor		85	percentage	Liner Lid Present								CK/HP	08/09/12
30	Liner Type			1 = plastic drum liner									CK/CH	08/16/12
31	Liner Punctured				Liner Hole Size		(mm)						CK/CH	08/16/12
32	PCB Conc		NULL				PCB Waste	PCB Mass (kg)	Out of Service				CK/HP	08/09/12
33	Closure Date		4/2/2012	Watt-years	Waste Gen Date		N	NULL	NULL				CK/HP	08/09/12
34	Vent Date		4/2/2012	[redacted]									CK/HP	08/09/12
35	Filter Install Date		4/2/2012										CK/HP	08/09/12
36	Filter Manufacturer		NFT										CK/HP	08/09/12
37	Filter Serial Number(s)												CK/HP	08/09/12
38	Filter Model Number	NF012,NF013,NF020,NF9026	NF019D										CK/CH	08/16/12
39	Number of Filters Installed		1										CK/HP	08/09/12
40	Aspiration Method ID		3										CK/HP	08/09/12
41	Gas Gen Rate			#VALUE!	<<Gas Gen Rate Calculated.		Avagdro's Number	6.022142E+23	NIST					
42	Hydrogen/Methane Gen Rate						Electron Charge	1.602176E-19 V	NIST					
43	Gas Gen Comp Date				Waste (kg)	Packaging (kg)	Total (kg)							
44	Gross Weight	kg	132.700		[redacted]								CK/CH	08/16/12
45	Gross Weight Uncert	1sigma kg	0.5		max. reported	mda							CK/HP	08/09/12
46	Alpha Surf Cont	dpm/100 cm^2	[redacted]		0		Minimum Detectable Activity		Shipping Calcs				CK/HP	08/09/12
47	Beta/Gamma Surf Cont	dpm/100 cm^2	[redacted]		0		Minimum Detectable Activity			Total TBq	9.21E+00		CK/HP	08/09/12
48	Neutron Dose Rate	mrem/hr	[redacted]		0		Minimum Detectable Activity			Fraction	1.21E+00		CK/HP	08/09/12
49	Beta/Gamma Dose Rate	mrem/hr	[redacted]		235060		Minimum Detectable Activity			Highway Route Control?	Yes		CK/HP	08/09/12
50	Radionuclide		U-233	U-234	U-235	U-238	Pu-238	Pu-239	Pu-240	Pu-241	Pu-242	Am-241	CK/HP	08/09/12
51	Activity	Ci	1.06E-07	8.95E-03	2.57E-04	1.52E-04	7.69E+00	2.03E+00	1.27E+00	4.11E+01	2.48E-03	2.35E+00	CK/HP	08/09/12
52	Activity Uncert	1sigma Ci	2.72E-08	2.63E-03	1.73E-05	3.81E-06	2.45E+00	1.14E-01	1.74E-01	2.12E+01	1.10E-03	9.33E-01	CK/HP	08/09/12
53	Mass	grams	1.09E-05	1.42E+00	1.17E+02	4.47E+02	4.45E-01	3.23E+03	6.52E+00	3.95E-01	8.25E-01	6.77E-01		
54	Mass Uncert	1sigma grams	2.79E-06	4.18E-01	7.90E+00	1.12E+01	1.42E-01	1.81E+00	7.57E-01	2.04E-01	2.77E-01	2.69E-01		
55	calc Tru Alpha Act	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.69E+00	2.03E+00	1.27E+00	0.00E+00	2.48E-03	2.35E+00		
56	calc Tru Alpha Act Conc	nCi/g	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.15E+05	8.32E+04	5.20E+04	0.00E+00	1.02E+02	9.63E+04		
57	calc Act	Ci	1.06E-07	8.95E-03	2.57E-04	1.52E-04	7.69E+00	2.03E+00	1.27E+00	4.11E+01	2.48E-03	2.35E+00		
58	calc Act Conc	nCi/g	4.34E-03	3.67E+02	1.05E+01	6.23E+00	3.15E+05	8.32E+04	5.20E+04	1.68E+06	1.02E+02	9.63E+04		

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	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	RH WDS Master Template.xls Rev. 4 Addendum #4, SCO #1066 Excel 2003/2007 Microsoft Windows XP	Units	data				comments					CK 8-16-12	Initial	date
2	Shipper Site ID		[redacted]	Location ID	Dest Program ID	Shipping Purpose					1082H		CK/BV	08/09/12
3	Waste Stream Profile		AERHDM	[redacted]	[redacted]	[redacted]							CK/BV	08/09/12
4	Container Number		1082	H 8-16-12 CK									CK/BV	08/09/12
5	Container Type		RH drum-55 tbo	drum, swb, tdop, etc., see WWIS labels for valid types.					U-235 FEM	U-235 FEM Uncert	FGGR Flag	FGGR Test Period	CK/CH	08/16/12
6	WAC Rev #		7.2	0					NULL	NULL	NULL	NULL	CK/BV	08/09/12
7	WAC Ex. #						Be <=100 kg	Be <= 1%	Be Present	Aqueous Material	Be Chem/Mech Bound	Compacted Wst		
8	Cert Site		C2				Y	Y	Y	N	N	N	CK/BV	08/09/12
9	Cert Date		8/16/2012											
10	Waste Handling Code		RH	CH, RH									CK/BV	08/09/12
11	Waste Type Code		MTRU	TRU, MTRU									CK/BV	08/09/12
12	Waste Stream BIR ID		AE-T009				p(CI):	choose	1sigma	2sigma	95%CI		CK/BV	08/09/12
13	Waste Stream MWIR ID		NONE	default to 0 for TRU			0.6827	1sigma	1.0000	0.5000	0.5102		CK/BV	08/09/12
14	Generator Site ID		AE				0.9545	2sigma	2.0000	1.0000	1.0204		CK/BV	08/09/12
15	IDC Code		001				0.9500	95%CI	1.9600	0.9800	1.0000		CK/BV	08/09/12
16	Matrix Code		S5400										CK/BV	08/09/12
17	Trucon Code		AE322F										CK/CH	08/16/12
18	Shipping Category						WWIS Req'd CI:	1sigma	1.0000	0.5000	0.5102			
19	Tru Alpha Act	Ci	4.97E+00		4.974E+00		Fraction of MDL Reported on HGAS		1.0000				CK/BV	08/09/12
20	Tru Alpha Act Uncert	1sigma Ci	5.34E-01	6.038E+00	Tru Alpha Act + 2sigma (Ci)								CK/BV	08/09/12
21	Tru Alpha Act Conc	nCi/g	2.09E+05		2.09E+05								CK/BV	08/09/12
22	Tru Alpha Act Conc Uncert	1sigma nCi/g	2.24E+04	2.538E+05	Tru Alpha Act Conc + 2sigma (Ci)								CK/BV	08/09/12
23	Pu239 Fiss Gm Eq	g	8.91E+01		8.902E+01								CK/BV	08/09/12
24	Pu239 Fiss Gm Eq Uncert	1sigma g	3.37E+00	9.584E+01	Pu239 Fiss Gm Eq + 2sigma (Ci)								CK/BV	08/09/12
25	Pu239 Eq Act	Ci	5.23E+00		5.234E+00								CK/BV	08/09/12
26	Decay Heat	watts	5.55E-01		5.544E-01								CK/BV	08/09/12
27	Decay Heat Uncert	1sigma watts	3.57E-02	5.91E-01	Decay Heat + 1sigma (watts)								CK/BV	08/09/12
28	Layers of Packaging		2										CK/CH	08/16/12
29	Fill Factor		85	percentage	Liner Lid Present								CK/BV	08/09/12
30	Liner Type			1 = plastic drum liner									CK/CH	08/16/12
31	Liner Punctured				Liner Hole Size		(mm)						CK/CH	08/16/12
32	PCB Conc		NULL				PCB Waste	PCB Mass (kg)	Out of Service				CK/BV	08/09/12
33	Closure Date		4/3/2012	Watt-years	Waste Gen Date		N	NULL	NULL				CK/BV	08/09/12
34	Vent Date		4/3/2012	[redacted]									CK/BV	08/09/12
35	Filter Install Date		4/3/2012										CK/BV	08/09/12
36	Filter Manufacturer		NFT										CK/BV	08/09/12
37	Filter Serial Number(s)												CK/BV	08/09/12
38	Filter Model Number	NF012,NF013,NF020,NF9026	NF019D										CK/CH	08/16/12
39	Number of Filters Installed		1										CK/BV	08/09/12
40	Aspiration Method ID		3										CK/BV	08/09/12
41	Gas Gen Rate			#VALUE!	<<Gas Gen Rate Calculated.		Avagdro's Number:	6.022142E+23	NIST					
42	Hydrogen/Methane Gen Rate						Electron Charge	1.602176E-19 V	NIST					
43	Gas Gen Comp Date				Waste (kg)	Packaging (kg)	Total (kg)							
44	Gross Weight	kg	123.300	[redacted]									CK/CH	08/16/12
45	Gross Weight Uncert	1sigma kg	0.5		max. reported	mda							CK/BV	08/09/12
46	Alpha Surf Cont	dpm/100 cm^2	[redacted]		0		Minimum Detectable Activity			Shipping Calcs			CK/BV	08/09/12
47	Beta/Gamma Surf Cont	dpm/100 cm^2	[redacted]		0		Minimum Detectable Activity			Total TBq	5.86E+00		CK/BV	08/09/12
48	Neutron Dose Rate	mrem/hr	[redacted]		0		Minimum Detectable Activity			Fraction	3.31E-01		CK/BV	08/09/12
49	Beta/Gamma Dose Rate	mrem/hr	[redacted]		215730		Minimum Detectable Activity			Highway Route Control?	No		CK/BV	08/09/12
50	Radionuclide		U-233	U-234	U-235	U-238	Pu-238	Pu-239	Pu-240	Pu-241	Pu-242	Am-241	CK/BV	08/09/12
51	Activity	Ci	3.85E-07	6.60E-03	1.83E-04	1.69E-05	3.62E-01	2.19E+00	1.46E+00	1.48E+01	3.06E-04	9.62E-01	CK/BV	08/09/12
52	Activity Uncert	1sigma Ci	1.08E-07	1.61E-03	9.36E-06	5.68E-06	2.16E-01	9.90E-02	1.30E-01	7.16E+00	7.14E-05	4.70E-01	CK/BV	08/09/12
53	Mass	grams	3.94E-05	1.04E+00	8.36E+01	4.97E+01	2.09E-02	3.48E+01	6.35E+00	1.42E-01	7.71E-02	2.77E-02		
54	Mass Uncert	1sigma grams	1.11E-05	2.55E-01	4.27E+00	1.67E+01	1.25E-02	1.57E+00	5.65E-01	6.88E-02	1.80E-02	1.35E-01		
55	calc Tru Alpha Act	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.62E-01	2.19E+00	1.46E+00	0.00E+00	3.06E-04	9.62E-01		
56	calc Tru Alpha Act Conc	nCi/g	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.52E+04	9.20E+04	6.13E+04	0.00E+00	1.29E+01	4.04E+04		
57	calc Act	Ci	3.85E-07	6.60E-03	1.83E-04	1.69E-05	3.62E-01	2.19E+00	1.46E+00	1.48E+01	3.06E-04	9.62E-01		
58	calc Act Conc	nCi/g	1.62E-02	2.77E+02	7.69E+00	7.10E-01	1.52E+04	9.20E+04	6.13E+04	6.22E+05	1.29E+01	4.04E+04		

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	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	RH WDS Master Template.xls Rev. 4 Addendum #4, SCO #1066 Excel 2003/2007 Microsoft Windows XP	Units	data				comments						Initial	date
2	Shipper Site ID		[redacted]	Location ID	Dest Program ID	Shipping Purpose					1092 H		CH/BV	08/09/12
3	Waste Stream Profile		AERHDM	[redacted]	WI	[redacted] D							CH/BV	08/09/12
4	Container Number		1092	H CL 8-16-12									CH/BV	08/09/12
5	Container Type		RH drum-55 tbo	drum, swb, tdop, etc., see WWIS labels for valid types.					U-235 FEM	U-235 FEM Uncert	FGGR Flag	FGGR Test Period	CK/CH	08/16/12
6	WAC Rev #		7.2	0					NULL	NULL	NULL	NULL	CH/BV	08/09/12
7	WAC Ex. #						Be <=100 kg	Be <= 1%	Be Present	Aqueous Material	Be Chem/Mech Bound	Compacted Wst		
8	Cert Site		C2				Y	Y	Y	N	N	N	CH/BV	08/09/12
9	Cert Date		8/16/2012											
10	Waste Handling Code		RH	CH, RH									CH/BV	08/09/12
11	Waste Type Code		MTRU	TRU, MTRU									CH/BV	08/09/12
12	Waste Stream BIR ID		AE-T009				p(CI):	choose	1sigma	2sigma	95%CI		CH/BV	08/09/12
13	Waste Stream MWIR ID		NONE	default to 0 for TRU			0.6827	1sigma	1.0000	0.5000	0.5102		CH/BV	08/09/12
14	Generator Site ID		AE				0.9545	2sigma	2.0000	1.0000	1.0204		CH/BV	08/09/12
15	IDC Code		001				0.9500	95%CI	1.9600	0.9800	1.0000		CH/BV	08/09/12
16	Matrix Code		S5400										CH/BV	08/09/12
17	Trucon Code		AE322F										CH/BV	08/09/12
18	Shipping Category						WWIS Req'd CI:	1sigma	1.0000	0.5000	0.5102		CK/CH	08/16/12
19	Tru Alpha Act	CI	5.63E+00		5.635E+00		Fraction of MDL Reported on HGAS		1.0000					
20	Tru Alpha Act Uncert	1sigma CI	8.62E-01	7.354E+00	Tru Alpha Act + 2sigma (Ci)								CH/BV	08/09/12
21	Tru Alpha Act Conc	nCi/g	2.18E+05		2.18E+05								CH/BV	08/09/12
22	Tru Alpha Act Conc Uncert	1sigma nCi/g	3.34E+04	2.848E+05	Tru Alpha Act Conc + 2sigma (Ci)								CH/BV	08/09/12
23	Pu239 Fiss Gm Eq	g	8.29E+01		8.286E+01								CH/BV	08/09/12
24	Pu239 Fiss Gm Eq Uncert	1sigma g	4.77E+00	9.244E+01	Pu239 Fiss Gm Eq + 2sigma (Ci)								CH/BV	08/09/12
25	Pu239 Eq Act	CI	5.98E+00		5.968E+00								CH/BV	08/09/12
26	Decay Heat	watts	6.57E-01		6.566E-01								CH/BV	08/09/12
27	Decay Heat Uncert	1sigma watts	3.33E-02	6.90E-01	Decay Heat + 1sigma (watts)								CH/BV	08/09/12
28	Layers of Packaging		2										CK/CH	08/16/12
29	Fill Factor		85	percentage	Liner Lid Present									
30	Liner Type			1 = plastic drum liner									CH/BV	08/09/12
31	Liner Punctured				Liner Hole Size		(mm)						CK/CH	08/16/12
32	PCB Conc		NULL				PCB Waste	PCB Mass (kg)	Out of Service				CK/CH	08/16/12
33	Closure Date		4/3/2012	Watt-years	Waste Gen Date		N	NULL	NULL				CH/BV	08/09/12
34	Vent Date		4/3/2012	[redacted]									CH/BV	08/09/12
35	Filter Install Date		4/3/2012										CH/BV	08/09/12
36	Filter Manufacturer		NFT										CH/BV	08/09/12
37	Filter Serial Number(s)												CH/BV	08/09/12
38	Filter Model Number	NF012,NF013,NF020,NF9026	NF019D										CH/BV	08/09/12
39	Number of Filters Installed		1										CK/CH	08/16/12
40	Aspiration Method ID		3										CH/BV	08/09/12
41	Gas Gen Rate			#VALUE!	<<Gas Gen Rate Calculated.		Avagdro's Number:	6.022142E+23	NIST				CH/BV	08/09/12
42	Hydrogen/Methane Gen Rate						Electron Charge	1.602176E-19	V NIST					
43	Gas Gen Comp Date				Waste (kg)	Packaging (kg)	Total (kg)							
44	Gross Weight	kg	125.300	[redacted]										
45	Gross Weight Uncert	1sigma kg	0.5		max reported	mda							CK/CH	08/16/12
46	Alpha Surf Cont	dpm/100 cm^2	[redacted]		0		Minimum Detectable Activity						CH/BV	08/09/12
47	Beta/Gamma Surf Cont	dpm/100 cm^2	[redacted]		0		Minimum Detectable Activity			Shipping Calcs			CH/BV	08/09/12
48	Neutron Dose Rate	mrem/hr	[redacted]		0		Minimum Detectable Activity			Total TBq	7.02E+00		CH/BV	08/09/12
49	Beta/Gamma Dose Rate	mrem/hr	[redacted]		162150		Minimum Detectable Activity			Fraction	3.79E-01		CH/BV	08/09/12
50	Radionuclide		U-233	U-234	U-235	U-238	Pu-238	Pu-239	Pu-240	Highway Route Control?	No	Am-241	CH/BV	08/09/12
51	Activity	CI	1.34E-07	6.95E-03	1.84E-04	5.11E-04	5.65E-01	1.78E+00	1.10E+00	Pu-241	Pu-242		CH/BV	08/09/12
52	Activity Uncert	1sigma CI	3.44E-08	1.97E-03	1.49E-05	1.30E-05	1.77E-01	1.02E-01	1.20E-01	1.93E+01	4.55E-04	2.19E+00	CH/BV	08/09/12
53	Mass	grams	1.37E-05	1.10E+00	8.40E+01	1.50E+03	3.27E-02	2.83E+01	4.78E+00	7.73E+00	1.39E-04	8.39E-01	CH/BV	08/09/12
54	Mass Uncert	1sigma grams	3.62E-06	3.12E-01	6.80E+00	3.82E+01	1.02E-02	1.62E+00	5.22E-01	1.86E-01	1.15E-01	6.31E-01		
55	calc Tru Alpha Act	CI	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.65E-01	1.78E+00	1.10E+00	7.43E-02	3.50E-02	2.42E-01		
56	calc Tru Alpha Act Conc	nCi/g	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.19E+04	6.90E+04	4.26E+04	0.00E+00	4.55E-04	2.19E+00		
57	calc Act	CI	1.34E-07	6.95E-03	1.84E-04	5.11E-04	5.65E-01	1.78E+00	1.10E+00	0.00E+00	1.76E+01	8.49E+04		
58	calc Act Conc	nCi/g	5.19E-03	2.69E+02	7.13E+00	1.98E+01	2.19E+04	6.90E+04	4.26E+04	1.93E+01	4.55E-04	2.19E+00		
										7.48E+05	1.76E+01	8.49E+04		

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	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	RH WDS Master Template.xls Rev. 4 Addendum #4, SCO #1066 Excel 2003/2007 Microsoft Windows XP	Units	data				comments				CK 8-16-12		Initial	date
2	Shipper Site ID		[redacted]	Location ID	Dest Program ID	Shipping Purpose					1120H		CH/BV	08/09/12
3	Waste Stream Profile		AERHDM	[redacted]	[redacted] WI	[redacted] D							CH/BV	08/09/12
4	Container Number		1120	H 8-16-12 CK									CH/BV	08/09/12
5	Container Type		RH drum-55 tbo	drum, swb, tdop, etc., see WWIS labels for valid types.					U-235 FEM	U-235 FEM Uncert	FGGR Flag	FGGR Test Period	CK/CH	08/16/12
6	WAC Rev #		7.2	0					NULL	NULL	NULL	NULL	CH/BV	08/09/12
7	WAC Ex. #						Be <=100 kg	Be <= 1%	Be Present	Aqueous Material	Be Chem/Mech Bound	Compacted Wst		
8	Cert Site		C2				Y	Y	Y	N	N	N	CH/BV	08/09/12
9	Cert Date		8/16/2012											
10	Waste Handling Code		RH	CH, RH									CH/BV	08/09/12
11	Waste Type Code		MTRU	TRU, MTRU									CH/BV	08/09/12
12	Waste Stream BIR ID		AE-T009				p(CI):	choose	1sigma	2sigma	95%CI		CH/BV	08/09/12
13	Waste Stream MWIR ID		NONE		default to 0 for TRU		0.6827	1sigma	1.0000	0.5000	0.5102		CH/BV	08/09/12
14	Generator Site ID		AE				0.9545	2sigma	2.0000	1.0000	1.0204		CH/BV	08/09/12
15	IDC Code		001				0.9500	95%CI	1.9600	0.9800	1.0000		CH/BV	08/09/12
16	Matrix Code		S5400										CH/BV	08/09/12
17	Trucon Code		AE321M										CH/BV	08/09/12
18	Shipping Category						WWIS Req'd CI:	1sigma	1.0000	0.5000	0.5102		CK/CH	08/16/12
19	Tru Alpha Act	Ci	1.73E-01		1.728E-01		Fraction of MDL Reported on HGAS		1.0000					
20	Tru Alpha Act Uncert	1sigma CI	7.56E-02	3.242E-01	Tru Alpha Act + 2sigma (Ci)								CH/BV	08/09/12
21	Tru Alpha Act Conc	nCi/g	6.29E+03		6.29E+03								CH/BV	08/09/12
22	Tru Alpha Act Conc Uncert	1sigma nCi/g	2.75E+03	1.179E+04	Tru Alpha Act Conc + 2sigma (Ci)								CH/BV	08/09/12
23	Pu239 Fiss Gm Eq	g	1.30E+00		1.296E+00								CH/BV	08/09/12
24	Pu239 Fiss Gm Eq Uncert	1sigma g	6.66E-01	2.672E+00	Pu239 Fiss Gm Eq + 2sigma (Ci)								CH/BV	08/09/12
25	Pu239 Eq Act	CI	1.88E-01		1.884E-01								CH/BV	08/09/12
26	Decay Heat	watts	1.90E-02		1.899E-02								CH/BV	08/09/12
27	Decay Heat Uncert	1sigma watts	5.96E-03	2.50E-02	Decay Heat + 1sigma (watts)								CH/BV	08/09/12
28	Layers of Packaging		3										CK/CH	08/16/12
29	Fill Factor		85	percentage	Liner Lid Present								CH/BV	08/09/12
30	Liner Type			1 = plastic drum liner									CK/CH	08/16/12
31	Liner Punctured				Liner Hole Size		(mm)						CK/CH	08/16/12
32	PCB Conc						PCB Waste	PCB Mass (kg)	Out of Service				CH/BV	08/09/12
33	Closure Date		4/4/2012	Watt-years	Waste Gen Date		N	NULL	NULL				CH/BV	08/09/12
34	Vent Date		4/4/2012	[redacted]									CH/BV	08/09/12
35	Filter Install Date		4/4/2012										CH/BV	08/09/12
36	Filter Manufacturer		NFT										CH/BV	08/09/12
37	Filter Serial Number(s)												CH/BV	08/09/12
38	Filter Model Number	NF012,NF013,NF020,NF9026	NF019D										CK/CH	08/16/12
39	Number of Filters Installed		1										CH/BV	08/09/12
40	Aspiration Method ID		3										CH/BV	08/09/12
41	Gas Gen Rate			#VALUE!	<<Gas Gen Rate Calculated.		Avagdro's Number:	6.022142E+23	NIST					
42	Hydrogen/Methane Gen Rate						Electron Charge	1.602176E-19 V	NIST					
43	Gas Gen Comp Date				Waste (kg)	Packaging (kg)	Total (kg)							
44	Gross Weight	kg	78.700		[redacted]								CK/CH	08/16/12
45	Gross Weight Uncert	1sigma kg	0.5		max. reported	mda							CH/BV	08/09/12
46	Alpha Surf Cont	dpm/100 cm^2	[redacted]		0		Minimum Detectable Activity		Shipping Calcs				CH/BV	08/09/12
47	Beta/Gamma Surf Cont	dpm/100 cm^2	[redacted]		0		Minimum Detectable Activity			Total TBq	2.24E-01		CH/BV	08/09/12
48	Neutron Dose Rate	mrem/hr	[redacted]		0.4		Minimum Detectable Activity			Fraction	1.23E-02		CH/BV	08/09/12
49	Beta/Gamma Dose Rate	mrem/hr	[redacted]		3000		Minimum Detectable Activity			Highway Route Control?	No		CH/BV	08/09/12
50	Radionuclide		U-233	U-234	U-235	U-238	Pu-238	Pu-239	Pu-240	Pu-241	Pu-242	Am-241	CH/BV	08/09/12
51	Activity	Ci	3.78E-09	9.46E-05	2.90E-06	3.39E-06	8.32E-02	2.62E-02	1.80E-02	1.18E+00	4.39E-05	4.54E-02	CH/BV	08/09/12
52	Activity Uncert	1sigma Ci	3.05E-09	5.62E-05	1.86E-06	1.69E-06	4.94E-02	2.06E-02	1.35E-02	6.42E-01	2.42E-05	3.13E-02	CH/BV	08/09/12
53	Mass	grams	3.87E-07	1.50E-02	1.32E+00	9.97E+00	4.81E-03	4.17E-01	7.63E-02	1.13E-02	1.11E-02	1.31E-02		
54	Mass Uncert	1sigma grams	3.13E-07	8.89E-03	8.49E-01	4.97E+00	2.86E-03	3.28E-01	5.87E-02	6.17E-03	6.10E-03	9.02E-03		
55	calc Tru Alpha Act	CI	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.32E-02	2.62E-02	1.80E-02	0.00E+00	4.39E-05	4.54E-02		
56	calc Tru Alpha Act Conc	nCi/g	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.03E+03	9.53E+02	6.55E+02	0.00E+00	1.60E+00	1.65E+03		
57	calc Act	CI	3.78E-09	9.46E-05	2.90E-06	3.39E-06	8.32E-02	2.62E-02	1.80E-02	1.18E+00	4.39E-05	4.54E-02		
58	calc Act Conc	nCi/g	1.37E-04	3.44E+00	1.05E-01	1.23E-01	3.03E+03	9.53E+02	6.55E+02	4.29E+04	1.60E+00	1.65E+03		

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DIVIDER

PAGE

COPY
For Information Only

Attachment 1 – CCP Nonconformance Report (NCR)

NCR No. NCR-RHANL-1522-12 Revision 0

1. Lot No./Heat No. or Serial No. (as applicable): NA	2. Process (e.g., NDA, HSG, NDE, VE, Other): ~~RH DG~~ RH_STC 8/28/12	3. Batch Data Report #(s): RHANLDG12004
4. Order/Work Order/Job Control Number (as applicable): NA	5. PO # (as applicable): NA	Container #(s): NA
	6. Supplier (as applicable): NA	

DESCRIPTION OF NONCONFORMANCE

7. (a) NCR Description: ☐ < 100 nCi/g ☐ Prohibited Item ☐ E-Flag ☐ Receipt Inspection ☐ Transportation ☐ WWIS/WDS ☒ Other

7. (b) Description of Nonconformance Required Condition (Implementing Procedure, Revision, Section, & Text):

CCP-TP-513 Revision 1, "CCP Procedure for Dimensional or Gravimetric Measurements for Radiological Characterization of Remote-Handled Transuranic Waste" section 3.4.1 states in part, " Reviews and approves the Radiological Documentation Package and completes Attachments 4 and 6, SPM Checklist"

7. (c) Actual Condition

The SPM used the ITR checklist attachment 3 for the BDR listed in box 3 instead of completing the correct SPM checklist Attachment 4.

8. NCR Originator (Print name, sign, and date) Laura Nelson Laura Nelson 8/28/12	9. CCP QA Engineer or Designee Validation (Print name, sign, and date) Laura R. Jones 08/28/12 Laura Ramos Jones

9a. Does the identified condition have the potential to impact AK? ☐ YES ☒ NO ☐ INDETERMINATE
If YES or INDETERMINATE, then apply Trend Code L in Block 12.

9b. Have the CCP HOLD TAGS associated with the NCR been applied? ☐ YES ☒ NO If no is marked, provide an explanation. Due to ALARA considerations, NCR tagging will not be applied for this NCR, Administrative control will be applied through container entry in the CCP Data Center. In addition, a listing of containers has been posted on the CCP sftp site identifying those containers where NCR tagging is not being applied due to ALARA. Container information for this NCR has been included in the listing which is to alert Mobile Loading Unit personnel as a second control mechanism for non-tagged containers. The current listing has been posted to the sftp site.

10. Significant Condition? (If Yes, List CAR) ☐ YES ☒ NO	11. Recurring Condition? ☐ YES ☒ NO (If YES, List NCRs/CARs)
12. Trend Code: A	13. Responsible Manager: Laura Nelson

CCP RECORDS ORIGINAL
DATE REC'D 1.28.13

Attachment 1 – CCP Nonconformance Report (NCR) (Continued)

NCR No.NCR-RHANL-1522-12	Revision 0
INTERIM DISPOSITION	
14. Interim Disposition (Check One) ☒ N/A (See Final Disposition) ☐ Hold ☐ Conditional Accept ☐ Conditional Use ☐ Sort ☐Reinspect/Retest ☐ Remediate (a) Instructions for Completion of the Interim Disposition:	
INTERIM DISPOSITION APPROVALS	
15 .Responsible Manager/Individual (Print, sign, and date)	16. CCP QA Engineer or Designee (Print, sign and date)
Additional Approvals: (Print, sign and date)	Additional Approvals: (Print, sign and date)
COMPLETION OF INTERIM DISPOSITION	
17. Interim Disposition Complete Responsible Manager/Individual: (Print, sign and date)	
18. Interim Disposition Verified CCP QA Engineer: (Print, sign and date)	

Attachment 1 – CCP Nonconformance Report (NCR) (Continued)

NCR No.NCR-RHANL-1522-12 Revision 0

FINAL DISPOSITION

19. Final Disposition (Check One)
☐ Use-As-Is ☐ Reject ☐ Repair ☒ Rework ☐ Scrap

(a) Technical Justification (Required for Use-As-Is and Repair dispositions, Enter N/A for Reject, Scrap, or Rework dispositions.)
NA

(b) Instructions for Completion (Required for Reject, Repair, Rework and Scrap – Enter N/A for Use-As-Is).
1. Have the SPM re-do the SPM checklist on the correct attachment.
2. Supercede the incorrect attachment.
3. Insert the correct SPM Checklist attachment in the BDR listed in box 3.

(c) Corrective Actions (Actions to Prevent Recurrence – Required for Repair and Rework; Enter N/A for Use-As-Is, Reject, and Scrap). not needed 8/28/12

FINAL DISPOSITION APPROVALS

20. Responsible Manager/Individual: (Print, sign, and date)	21. CCP QA Engineer or Designee: (Print, sign, and date)
Laura Nelson Laura Nelson 8/28/12	Laura R. Jones 08/28/2012 Laura Raven Jones
Additional Approvals: (Print, sign, and date)	Additional Approvals: (Print, sign, and date)

CLOSURE

22. Final Disposition Complete Responsible Manager/Individual: (Print, sign, and date)
Laura Nelson Laura Nelson 1-23-13

23. Attachments:
Attachment 1: SPM Checklist. 2.- Email Documenting Reportability.

24. (a) HOLD TAG removal has been validated and reconciled for all nonconforming items on the NCR. ☐
(b) Check if not applicable (N/A) and provide an explanation here or on a continuation sheet. ☒

SEE 9B

25. Final Disposition Verified – NCR Closed	CCP QA Engineer: (Print, sign, and date)
Laura R. Jones	Laura Raven Jones 01/24/2013

Attachment 4 – Dimensional/Gravimetric Site Project Manager Checklist

Batch Data Report No: RHANLDG12004

Description of Criteria Reviewed	Criteria Met (Check One)
SPM Checklist	
Was the correct revision of the operating procedure used?	☑ YES ☐ NO
Were all the transcription errors corrected?	☑ YES ☐ NO
Were the measurement data recorded to 0.1 of an inch or gram?	☑ YES ☐ NO
Was the equipment used for measurement verified to be calibrated and within the calibration date?	☑ YES ☐ NO
Is all raw data recorded clearly, legibly, and accurately?	☑ YES ☐ NO
Have all the Quality Assurance Objectives (QAOs) for Dimensional or Gravimetric measurement been met? Precision – Measurement equipment shall be maintained according to manufacturer's recommendation. Balance shall be calibrated and maintained according to manufacturer's recommendation. Accuracy – Balance redout shall be 2 percent of the check weight. The length measurement shall be 0.1 of an inch verified by a second operator Completeness – Every quantity or item of fuel test specimen loaded into container is measured. Comparability QAO – Not applicable Representativeness – Not applicable	☑ YES ☐ NO
The Batch Data Report is complete.	☑ YES ☐ NO
Any NCRs generated are contained in the BDR.	☑ YES ☐ N/A

Comments:

NCR - RHANL - 1522 - 12 rev. 0 included as SPM-01

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SPM Approval

Printed Name	Signature	Date
Laura Nelson	Laura Nelson	8/28/12

CCP RECORDS ORIGINAL
DATE RECD 8 28 12

Attachment 3 – Dimensional/Gravimetric Independent Technical Reviewer Checklist

Batch Data Report No: RHANLDG12004

Description of Criteria Reviewed	Criteria Met (Check One)
ITR Checklist	
Was the correct revision of the operating procedure used?	☑ YES ☐ NO
Were all the transcription errors corrected?	☑ YES ☐ NO
Were the measurement data recorded to 0.1 of an inch or gram?	☑ YES ☐ NO
Was the equipment used for measurement verified to be calibrated and within the calibration date?	☑ YES ☐ NO
Is all raw data recorded clearly, legibly, and accurately?	☑ YES ☐ NO
Have all the Quality Assurance Objectives (QAOs) for Dimensional or Gravimetric measurement been met? Precision – Measurement equipment shall be maintained according to manufacturer's recommendation. Balance shall be calibrated and maintained according to manufacturer's recommendation. Accuracy – Balance redout shall be 2 percent of the check weight. The length measurement shall be 0.1 of an inch verified by a second operator. Completeness – Every quantity or item of fuel test specimen loaded into container is measured. Comparability QAO – Not applicable Representativeness – Not applicable	☑ YES ☐ NO
The Batch Data Report is complete.	☑ YES ☐ NO
Any NCRs generated are contained in the BDR.	☐ YES ☑ N/A

Comments: No NCR's.

NCR-RHANL-1522-12 rev. 0
Attachment 1 page 2 of 5

ITR Approval

Printed Name	Signature	Date
Laura Nelson	Laura Nelson	7/26/12

Superseded by [illegible] SPM [illegible]

CCP RECORDS ORIGINAL
DATE REC'D 7/26/12

Attachment 1 – CCP Nonconformance Report (NCR)

NCR No.NCR-RHANL-1522-12 Revision 0

1. Lot No./Heat No. or Serial No. (as applicable): NA	2. Process (e.g., NDA, HSG, NDE, VE, Other): ~~RH DG~~ RH STC 8/28/12	3. Batch Data Report #(s): RHANLDG12004
4. Order/Work Order/Job Control Number (as applicable): NA	5. PO # (as applicable): NA	Container #(s): NA
	6. Supplier (as applicable): NA	

DESCRIPTION OF NONCONFORMANCE

7. (a) NCR Description: ☐ < 100 nCi/g ☐ Prohibited Item ☐ E-Flag ☐ Receipt Inspection ☐ Transportation ☐ WWIS/WDS ☒ Other

7. (b) Description of Nonconformance Required Condition (Implementing Procedure, Revision, Section, & Text):

CCP-TP-613 Revision 1, "CCP Procedure for Dimensional or Gravimetric Measurements for Radiological Characterization of Remote-Handled Transuranic Waste" section 3.4.1 states in part, " Reviews and approves the Radiological Documentation Package and completes Attachments 4 and 6, SPM Checklist"

7. (c) Actual Condition

The SPM used the ITR checklist attachment 3 for the BDR listed in box 3 instead of completing the correct SPM checklist Attachment 4.

8. NCR Originator (Print name, sign, and date) Laura Nelson Laura Nelson 8/28/12	9. CCP QA Engineer or Designee Validation (Print name, sign, and date) Laura R. Jones 08/28/12 Laura Ramos Jones

9a. Does the identified condition have the potential to impact AK? ☐ YES ☒ NO ☐ INDETERMINATE
If YES or INDETERMINATE, then apply Trend Code L in Block 12.

9b. Have the CCP HOLD TAGS associated with the NCR been applied? ☐ YES ☒ NO If no is marked, provide an explanation. Due to ALARA considerations, NCR tagging will not be applied for this NCR, Administrative control will be applied through container entry in the CCP Data Center. In addition, a listing of containers has been posted on the CCP sftp site identifying those containers where NCR tagging is not being applied due to ALARA. Container information for this NCR has been included in the listing which is to alert Mobile Loading Unit personnel as a second control mechanism for non-tagged containers. The current listing has been posted to the sftp site.

10. Significant Condition? (If Yes, List CAR) ☐ YES ☒ NO	11. Recurring Condition? ☐ YES ☒ NO (If YES, List NCRs/CARs)
12. Trend Code: A	13. Responsible Manager: Laura Nelson

NCR-RHANL-1522-12 rev. 0
Attachment 1 page 3 of 5

SPM-1

Attachment 1 – CCP Nonconformance Report (NCR) (Continued)

NCR No.NCR-RHANL-1522-12	Revision 0
INTERIM DISPOSITION	
14. Interim Disposition (Check One) ☒ N/A (See Final Disposition) ☐ Hold ☐ Conditional Accept ☐ Conditional Use ☐ Sort ☐ Reinspect/Retest ☐ Remediate (a) Instructions for Completion of the Interim Disposition:	
INTERIM DISPOSITION APPROVALS	
15 .Responsible Manager/Individual (Print, sign, and date)	16. CCP QA Engineer or Designee (Print, sign and date)
Additional Approvals: (Print, sign and date)	Additional Approvals: (Print, sign and date)
COMPLETION OF INTERIM DISPOSITION	
17. Interim Disposition Complete Responsible Manager/Individual: (Print, sign and date)	
18. Interim Disposition Verified CCP QA Engineer: (Print, sign and date)	

NCR-RHANL-1522-12 rev 0
Attachment 1 page 4 of 5

Pm-2

Attachment 1 – CCP Nonconformance Report (NCR) (Continued)

NCR No.NCR-RHANL-1522-12	Revision 0
FINAL DISPOSITION	
19. Final Disposition (Check One) ☐ Use-As-Is ☐ Reject ☐ Repair ☒ Rework ☐ Scrap	
(a) Technical Justification (Required for Use-As-Is and Repair dispositions, Enter N/A for Reject, Scrap, or Rework dispositions.) NA	
(b) Instructions for Completion (Required for Reject, Repair, Rework and Scrap – Enter N/A for Use-As-Is). 1. Have the SPM re-do the SPM checklist on the correct attachment. 2. Supercede the incorrect attachment. 3. Insert the correct SPM Checklist attachment in the BDR listed in box 3.	
(c) Corrective Actions (Actions to Prevent Recurrence – Required for Repair and Rework; Enter N/A for Use-As-Is-, Reject, and Scrap). not needed 8/28/12	
FINAL DISPOSITION APPROVALS	
20. Responsible Manager/Individual: (Print, sign, and date) Laura Nelson 8/28/12	21. CCP QA Engineer or Designee: (Print, sign, and date) Laura R. Jones 08/28/2012
Additional Approvals: (Print, sign, and date)	Additional Approvals: (Print, sign, and date)
CLOSURE	
22. Final Disposition Complete Responsible Manager/Individual: (Print, sign, and date)	
23. Attachments:	
24. (a) HOLD TAG removal has been validated and reconciled for all nonconforming items on the NCR. ☐ (b) Check if not applicable (N/A) and provide an explanation here or on a continuation sheet. ☒ SEE 9B	
25. Final Disposition Verified – NCR Closed	CCP QA Engineer: (Print, sign, and date)

NCR-RHANL-1522-12 rev.0
Attachment 1 page 5of5

SPM-3

Jones, Laura - WTS

From: Pearcy, Mark - WTS
Sent: Wednesday, August 29, 2012 7:16 AM
To: Jones, Laura - WTS
Cc: Quintana, Irene - WTS
Subject: RE: New NCR-RHANL-1522-12

Not reportable

Mark Pearcy
Central Characterization Project
Washington TRU Solutions LLC
Contractor for the U.S. Department of Energy
575-234-7394 (W)
575-499-7339 (C)

From: Jones, Laura - WTS
Sent: Tuesday, August 28, 2012 1:20 PM
To: Quintana, Irene - WTS; Nelson, Laura - WTS; Reeves, Ron - WTS; Pearcy, Sheila - Stoller; Pearcy, Mark - WTS; Punchios, Sheri - Stoller
Cc: Jones, Laura - WTS
Subject: New NCR-RHANL-1522-12

Irene / Laura / Ron – For your information
Mark - Please review for notification purposes.
Sheri – Please post this open NCR.

Thanks,

Laura R. Jones
Quality Assurance
Washington TRU Solutions, LLC
Contractor for the U.S. Department of Energy
Office: (575) 234-7244
Email: laura.jones@wipp.ws
Fax: (575) 234-7071

Jones, Laura - WTS

From: IDC [SQLMaster@wipp.ws]
Sent: Wednesday, August 29, 2012 7:16 AM
To: Jones, Laura - WTS; Mueller, Terry - WTS; Walker, Mak (Maryann) - WTS
Subject: Project Office NCR [NCR-RHANL1522120] was just reviewed.

Certification Manager/Designee has just reviewed the project office NCR NCR-RHANL1522120 and has indicated that it [should NOT] be reported to CBFO. IDC has already updated the NCR for you.

DIVIDER

PAGE

Attachment 1 – CCP Nonconformance Report (NCR)

NCR No.NCR-RHANL-1523-12	Revision 0	
1. Lot No./Heat No. or Serial No. (as applicable): NA	2. Process (e.g., NDA, HSG, NDE, VE, Other): ~~RH DG~~ RH-VE 8/30/12	3. Batch Data Report #(s): RHANLVE100015
4. Order/Work Order/Job Control Number (as applicable): NA	5. PO # (as applicable): NA 6. Supplier (as applicable): NA	Container #(s): NA

DESCRIPTION OF NONCONFORMANCE

7. (a) NCR Description: ☐ < 100 nCi/g ☐ Prohibited Item ☐ E-Flag

☐ Receipt Inspection ☐ Transportation ☐ WWIS/WDS ☒ Other

7. (b) Description of Nonconformance Required Condition (Implementing Procedure, Revision, Section, & Text):

CCP-TP-500 Revision 11 *CCP Remote Handled Waste Visual Examination* Section 4.4.3 states in part, "Review the BDR to the criteria in Attachment 3 and document on Attachment 3"

7. (c) Actual Condition

The SPM failed to complete question 3 on Attachment 3, the SPM Checklist.

8. NCR Originator (Print name, sign, and date) Laura Nelson Laura Nelson 8/30/12	9. CCP QA Engineer or Designee Validation (Print name, sign, and date) Laura R. Jones 08/30/2012 Laura Romero Jones

9a. Does the identified condition have the potential to impact AK? ☐ YES ☒ NO ☐ INDETERMINATE
If YES or INDETERMINATE, then apply Trend Code L in Block 12.

9b. Have the CCP HOLD TAGS associated with the NCR been applied? ☐ YES ☒ NO If no is marked, provide an explanation. Due to ALARA considerations, NCR tagging will not be applied for this NCR, Administrative control will be applied through container entry in the CCP Data Center. In addition, a listing of containers has been posted on the CCP sftp site identifying those containers where NCR tagging is not being applied due to ALARA. Container information for this NCR has been included in the listing which is to alert Mobile Loading Unit personnel as a second control mechanism for non-tagged containers. The current listing has been posted to the sftp site.

10. Significant Condition? (If Yes, List CAR) ☐ YES ☒ NO	11. Recurring Condition? ☐ YES ☒ NO (If YES, List NCRs/CARs)
12. Trend Code: A	13. Responsible Manager: Laura Nelson

CCP RECORDS ORIGINAL
DATE REC'D 1.28.13

Attachment 1 – CCP Nonconformance Report (NCR) (Continued)

NCR No.NCR-RHANL-1523-12	Revision 0
INTERIM DISPOSITION	
14. Interim Disposition (Check One) ☒ N/A (See Final Disposition) ☐ Hold ☐ Conditional Accept ☐ Conditional Use ☐ Sort ☐Reinspect/Retest ☐ Remediate (a) Instructions for Completion of the Interim Disposition:	
INTERIM DISPOSITION APPROVALS	
15 .Responsible Manager/Individual (Print, sign, and date)	16. CCP QA Engineer or Designee (Print, sign and date)
Additional Approvals: (Print, sign and date)	Additional Approvals: (Print, sign and date)
COMPLETION OF INTERIM DISPOSITION	
17. Interim Disposition Complete Responsible Manager/Individual: (Print, sign and date)	
18. Interim Disposition Verified CCP QA Engineer: (Print, sign and date)	

Attachment 1 – CCP Nonconformance Report (NCR) (Continued)

NCR No.NCR-RHANL-1523-12 Revision 0

FINAL DISPOSITION

19. Final Disposition (Check One)
☐ Use-As-Is ☐ Reject ☐ Repair ☒ Rework ☐ Scrap

(a) Technical Justification (Required for Use-As-Is and Repair dispositions, Enter N/A for Reject, Scrap, or Rework dispositions.)
NA

(b) Instructions for Completion (Required for Reject, Repair, Rework and Scrap – Enter N/A for Use-As-Is).
1. Have the SPM re-do the SPM checklist completing all questions.
2. Supercede the incorrect Attachment 3.
3. Insert the correct SPM Checklist in the BDR listed in box 3.

(c) Corrective Actions (Actions to Prevent Recurrence – Required for Repair and Rework; Enter N/A for Use-As-Is-, Reject, and Scrap).
None needed

FINAL DISPOSITION APPROVALS

20. Responsible Manager/Individual: (Print, sign, and date)	21. CCP QA Engineer or Designee: (Print, sign, and date)
Laura Nelson Laura Nelson 8/30/12	Laura R. Jones Laura Romero Jones 08/30/2012
Additional Approvals: (Print, sign, and date)	Additional Approvals: (Print, sign, and date)

CLOSURE

22. Final Disposition Complete Responsible Manager/Individual: (Print, sign, and date)
Laura Nelson Laura Nelson 1-23-13

23. Attachments: Attachment 1: Corrected SPM Checklist.
2.- Email Documenting Reportability.

24. (a) HOLD TAG removal has been validated and reconciled for all nonconforming items on the NCR. ☐
(b) Check if not applicable (N/A) and provide an explanation here or on a continuation sheet. ☒

SEE 9a

25. Final Disposition Verified – NCR Closed CCP QA Engineer: (Print, sign, and date)
Laura R. Jones Laura Romero Jones 01/24/2013

Attachment 3 – Visual Examination Site Project Manager Checklist

Batch Data Report No.: RHANLVE100D15

1. Has all the data received an independent technical review as evidenced by a completed checklist (Attachment 2) and the appropriate ITR signature?		☐ NO	☑ YES
2. Are BDR contents complete and match the Visual Examination Batch Data Report Table of Contents?		☐ NO	☑ YES
3. Is the BDR complete (appropriately filled in forms for each container)?		☐ NO	☑ YES
4. Have the RH Quality Assurance Objectives (QAOs) for VE been met?			
Precision – reconciled discrepancies between operators		☐ NO	☑ YES
Accuracy – trained operators		☐ NO	☑ YES
Representativeness – description of container contents		☐ NO	☑ YES
Completeness – completed data form and/or recording		☐ NO	☑ YES
Comparability – proper training and adequate AK for unopened containers		☐ NO	☑ YES
5. Were NCRs generated included in the BDR?	☐ NO	☑ YES	☐ N/A

Comments

NCR-RHANL-1523-12 rev. 0 is included in the BDR as Attachment to SPM checklist.

SPM:

LAUREA NELSON — Laura Nelson — 8/30/12

Printed Name — Signature — Date

NCR-RHANL-1523-12 rev. 0
Attachment 1 page 1 of 5

Attachment 1 – CCP Nonconformance Report (NCR)

NCR No.NCR-RHANL-1523-12	Revision 0	
1. Lot No./Heat No. or Serial No. (as applicable): NA	2. Process (e.g., NDA, HSG, NDE, VE, Other): ~~RHDG~~ RH-VE 8/30/12	3. Batch Data Report #(s): RHANLVE100015
4. Order/Work Order/Job Control Number (as applicable): NA	5. PO # (as applicable): NA	Container #(s): NA
	6. Supplier (as applicable): NA	

DESCRIPTION OF NONCONFORMANCE

7. (a) NCR Description: ☐ < 100 nCi/g ☐ Prohibited Item ☐ E-Flag ☐ Receipt Inspection ☐ Transportation ☐ WWIS/WDS ☒ Other

7. (b) Description of Nonconformance Required Condition (Implementing Procedure, Revision, Section, & Text):

CCP-TP-500 Revision 11 *CCP Remote Handled Waste Visual Examination* Section 4.4.3 states in part, "Review the BDR to the criteria in Attachment 3 and document on Attachment 3"

7. (c) Actual Condition

The SPM failed to complete question 3 on Attachment 3, the SPM Checklist.

8. NCR Originator (Print name, sign, and date)	9. CCP QA Engineer or Designee Validation (Print name, sign, and date)
Laura Nelson Laura Nelson 8/30/12	Laura R. Jones 08/30/2012 Laura Renee Jones

9a. Does the identified condition have the potential to impact AK? ☐ YES ☒ NO ☐ INDETERMINATE
If YES or INDETERMINATE, then apply Trend Code L in Block 12.

9b. Have the CCP HOLD TAGS associated with the NCR been applied? ☐ YES ☒ NO If no is marked, provide an explanation. Due to ALARA considerations, NCR tagging will not be applied for this NCR. Administrative control will be applied through container entry in the CCP Data Center. In addition, a listing of containers has been posted on the CCP sftp site identifying those containers where NCR tagging is not being applied due to ALARA. Container information for this NCR has been included in the listing which is to alert Mobile Loading Unit personnel as a second control mechanism for non-tagged containers. The current listing has been posted to the sftp site.

10. Significant Condition? (If Yes, List CAR)	11. Recurring Condition? ☐ YES ☒ NO (If YES, List NCRs/CARs)
☐ YES ☒ NO	
12. Trend Code: A	13. Responsible Manager: Laura Nelson

NCR RHANL-1523-12 rev. 0
Attachment 1 page 2 of 5

SPM-1

Attachment 1 – CCP Nonconformance Report (NCR) (Continued)

NCR No.NCR-RHANL-1523-12	Revision 0
INTERIM DISPOSITION	
14. Interim Disposition (Check One) ☒ N/A (See Final Disposition) ☐ Hold ☐ Conditional Accept ☐ Conditional Use ☐ Sort ☐Reinspect/Retest ☐ Remediate (a) Instructions for Completion of the Interim Disposition:	
INTERIM DISPOSITION APPROVALS	
15 .Responsible Manager/Individual (Print, sign, and date)	16. CCP QA Engineer or Designee (Print, sign and date)
Additional Approvals: (Print, sign and date)	Additional Approvals: (Print, sign and date)
COMPLETION OF INTERIM DISPOSITION	
17. Interim Disposition Complete Responsible Manager/Individual: (Print, sign and date)	
18. Interim Disposition Verified CCP QA Engineer: (Print, sign and date)	

NCR-RHANL-1523-12 rev. D
Attachment 1 page 3 of 5

SPM-2

Attachment 1 – CCP Nonconformance Report (NCR) (Continued)

NCR No.NCR-RHANL-1523-12	Revision 0
FINAL DISPOSITION	
19. Final Disposition (Check One) ☐ Use-As-Is ☐ Reject ☐ Repair ☒ Rework ☐ Scrap	
(a) Technical Justification (Required for Use-As-Is and Repair dispositions, Enter N/A for Reject, Scrap, or Rework dispositions.) NA	
(b) Instructions for Completion (Required for Reject, Repair, Rework and Scrap – Enter N/A for Use-As-Is). 1. Have the SPM re-do the SPM checklist completing all questions. 2. Supercede the incorrect Attachment 3. 3. Insert the correct SPM Checklist in the BDR listed in box 3.	
(c) Corrective Actions (Actions to Prevent Recurrence – Required for Repair and Rework; Enter N/A for Use-As-Is-, Reject, and Scrap). None needed	
FINAL DISPOSITION APPROVALS	
20. Responsible Manager/Individual: (Print, sign, and date) Laura Nelson Laura Nelson 8/30/12	21. CCP QA Engineer or Designee: (Print, sign, and date) Laura R. Jones Laura Romero Jones 08/30/2012
Additional Approvals: (Print, sign, and date)	Additional Approvals: (Print, sign, and date)
CLOSURE	
22. Final Disposition Complete Responsible Manager/Individual: (Print, sign, and date)	
23. Attachments:	
24. (a) HOLD TAG removal has been validated and reconciled for all nonconforming items on the NCR. ☐ (b) Check if not applicable (N/A) and provide an explanation here or on a continuation sheet. ☒ SEE 9B	
25. Final Disposition Verified – NCR Closed	CCP QA Engineer: (Print, sign, and date)

NCR-RHANL-1523-12 rev. 0
Attachment 1 page 4 of 5

SPM-3

Attachment 3 – Visual Examination Site Project Manager Checklist

Batch Data Report No.: RHANLVE100015

1. Has all the data received an independent technical review as evidenced by a completed checklist (Attachment 2) and the appropriate ITR signature?		☐ NO	☒ YES
2. Are BDR contents complete and match the Visual Examination Batch Data Report Table of Contents?		☐ NO	☒ YES
3. Is the BDR complete (appropriately filled in forms for each container)?		☐ NO	☐ YES
4. Have the RH Quality Assurance Objectives (QAOs) for VE been met?			
Precision – reconciled discrepancies between operators		☐ NO	☒ YES
Accuracy – trained operators		☐ NO	☒ YES
Representativeness – description of container contents		☐ NO	☒ YES
Completeness – completed data form and/or recording		☐ NO	☒ YES
Comparability – proper training and adequate AK for unopened containers		☐ NO	☒ YES
5. Were NCRs generated included in the BDR?	☐ NO	☐ YES	☒ N/A

Comments

NA

SPM:

Laura Nelson — Laura Nelson — 11-1-10
Printed Name — Signature — Date

Superseded by QM checklist 9/8/12

NCR-RHANL-1523-12 rev 0
Attachment 1 page 5 of 5

ORIGINAL

Jones, Laura - WTS

From: Pearcy, Mark - WTS
Sent: Thursday, August 30, 2012 12:44 PM
To: Jones, Laura - WTS
Subject: RE: New NCR-RHANL-1523-12

Not reportable

Mark Pearcy
Central Characterization Project
Washington TRU Solutions LLC
Contractor for the U.S. Department of Energy
575-234-7394 (W)
575-499-7339 (C)

From: Jones, Laura - WTS
Sent: Thursday, August 30, 2012 8:49 AM
To: Quintana, Irene - WTS; Nelson, Laura - WTS; Reeves, Ron - WTS; Pearcy, Sheila - Stoller; Pearcy, Mark - WTS; Kantrowitz, Rich - WTS; Punchios, Sheri - Stoller; Martin, Linda - Stoller
Cc: Jones, Laura - WTS
Subject: New NCR-RHANL-1523-12

Laura / Irene / Ron – For your information
Mark – Please review for notification purposes.
Linda / Sheri – Please post this open NCR.

Thanks,

Laura R. Jones
Quality Assurance
Washington TRU Solutions, LLC
Contractor for the U.S. Department of Energy
Office: (575) 234-7244
Email: laura.jones@wipp.ws
Fax: (575) 234-7071

Jones, Laura - WTS

From: IDC [SQLMaster@wipp.ws]
Sent: Thursday, August 30, 2012 12:45 PM
To: Jones, Laura - WTS; Mueller, Terry - WTS; Walker, Mak (Maryann) - WTS
Subject: Project Office NCR [NCR-RHANL1523120] was just reviewed.

Certification Manager/Designee has just reviewed the project office NCR NCR-RHANL1523120 and has indicated that it [should NOT] be reported to CBFO. IDC has already updated the NCR for you.

GEN5

GEN5

RH NCR Log for Project/DGL Levels since Last Recert Audit.

8-5-13

NCR-RHANL0509130	RH	ANL	Superseded	RH_DTC	NA	Other	The Attachment 5 Batch Data Report Table of Contents, Attachment 6 Batch Data Report Narrative Summary, and Attachment 7 ITR Checklist were all completed using the incorrect revision of CCP-TP-504. Reason for Revision 1: Correct the Process in Block 2 from RH 512 to RH-DTC.	2/27/2013	Laura Nelson	A-Personnel Error and Failure to Follow Procedure	Rework	4/9/2013
NCR-RHANL0509131	RH	ANL	Closed	RH_DTC	NA	Other	The Attachment 5 Batch Data Report Table of Contents, Attachment 6 Batch Data Report Narrative Summary, and Attachment 7 ITR Checklist were all completed using the incorrect revision of CCP-TP-504. Reason for Revision 1: Correct the Process in Block 2 from RH 512 Sampling to RH-DTC.	4/9/2013	Laura Nelson	A-Personnel Error and Failure to Follow Procedure	Rework	5/14/2013
NCR-RHANL1521120	RH	ANL	Closed	OTHER	NA	Other	Drums were certified as 30-gallon. The 30-gallon drums were overpacked into 55-gallon drums and therefore should be certified as 55-gallon drums. CCP-TP-530, Section 4.3.5 states that 30-gallon drums overpacked into 55-gallon drums must adjust the gross weight of the 30-gallon drum. This step was not performed, as it is not required for certifying 30-gallon drums.	8/16/2012	Creta Kirkes	A-Personnel Error and Failure to Follow Procedure	Rework	8/21/2012
NCR-RHANL1522120	RH	ANL	Closed	RH_DTC	NA	Other	The SPM used the ITR checklist attachment 3 for the BDR listed in box 3 instead of completing the correct SPM checklist Attachment 4.	8/28/2012	Laura Nelson	A-Personnel Error and Failure to Follow Procedure	Rework	1/24/2013
NCR-RHANL1523120	RH	ANL	Closed	RH_VE	NA	Other	The SPM failed to complete question 3 on Attachment 3, the SPM Checklist.	8/30/2012	Laura Nelson	A-Personnel Error and Failure to	Rework	1/24/2013
NCR-RHANL1524120	RH	ANL	Void	RH_DTC	NA	Other	For the container listed in Block 3 the Surface Dose Rate Survey mesured less than 200 mrem/hr. This NCR was voided because: Rad survey found container > 200 mrem/hr	11/5/2012	Laura Nelson	K-WAP/WAC Deficiency (Exempt from Trending)		11/6/2012

GEN6

WDS WWIS DATA ENTRY WCA/WCO PACKAGE **GEN6**
RH – ANLE

August 27, 2013

1. Canister AE0130 – which contains drums 1121, 1122 and 1123
   a. Waste Container Data Report from WDS for Canister AE0130
   b. Build Sheet
   c. TCO Load Sheets
   d. CIS for Lot 37
   e. AK Tracking Spreadsheet Vent/Closure Dates
   f. NCR/CAR check for Lot 37
   g. DRUM 1121
      i. Waste Container Data Report from WDS for drum 1121
      ii. WWIS/WDS Data Entry Spreadsheet
      iii. DTC BDR Data Sheets
      iv. VE BDR Data Sheets
      v. Filter Data
      vi. Surface Dose Rate Calculation Report
   h. DRUM 1122
      i. Waste Container Data Report from WDS for drum 1122
      ii. WWIS/WDS Data Entry Spreadsheet
      iii. DTC BDR Data Sheets
      iv. VE BDR Data Sheets
      v. Filter Data
      vi. Surface Dose Rate Calculation Report
   F. DRUM 1123
      i. Waste Container Data Report from WDS for drum 1123
      ii. WWIS/WDS Data Entry Spreadsheet
      iii. DTC BDR Data Sheets
      iv. VE BDR Data Sheets
      v. Filter Data
      vi. Surface Dose Rate Calculation Report

Waste Isolation Pilot Plant
Canister Data Report

Report Statistics

Report Version:	**2.3**
WDS Instance:	**prd05.wipp.carlsbad.nm.us**
Generated on:	**August 19, 2013 10:43 AM**
Generated by:	**KIRKES, CRETA**
Total Pages:	**7**

Selection Criteria

Container Number: **AE0130**

Container: AE0130
Type: 11 - 72-B Removable Lid OP

Extended Status: APPROVED CERT EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 08/27/2012

Waste Handling Code: RH
Disposal Date: 09/19/2012

Current Location Site: WI
Generator Site: AE
Destination Site ID: WI

Certification Program ID: C2
Shipping Program ID: C2

Neutron Dose Rate (mrem/hr): 0.0
Beta Gamma Dose Rate (mrem/hr): 3000.0
Total Dose Rate (mrem/hr): 3000.0

FGE (g): 6.39E00
FGE Uncertainty (g): 2.087E00

Gross Weight (kg): 685.21
Gross Weight Uncert (kg): 25.86

Decay Heat (W): 9.35E-02
Decay Heat Uncertainty (W): 1.83E-02

Shipment Data

Payload ID: **AE0130** Assembly ID: AE118788 Payload Complete? Y
Shipment Number: AER12023 Send Date: 09/10/2012 Receipt Date: 09/11/2012
Shipment Status: SHIPMENT RECEIVED AT DESTINATION

Emplacement Location

Panel: 6 Room: 2 Borehole: 019

Certification Data Values

Waste Stream Profile Code: AERHDM
Waste Type Code: MTRU
IDC Code: 001
Waste Matrix Code: S5400
WAC Revision Number: 7.2
Fill Factor (%): 32.13

TRU Alpha Activity (Ci): 8.52E-01
TRU Alpha Activity Uncertainty (Ci): 2.302E-01
TRU Alpha Activity Concentration (Ci/g): 8.721E-06
PU-239 Equivalent Activity (PE-Ci): 9.29E-01
Alpha Surface Contamination (dpm/cm^2): 19.0
Beta/Gamma Surface Contamination (dpm/cm^2): 199.0

Transportation Data Values

Closure Date: 08/27/2012 Shipment Purpose: DISPOSAL
Vent Date: 08/27/2012 Machine Compacted? N

Waste Gen Date:
Content Code: AE321C
U-235 FEM (g):
U-235 FEM Uncert (g):
Be chemically/ mechanically bound:

Filters

Filter Model Number	Filter Diffusivity (mol/s/ml)	Quantity	Install Date

Container: AE0130
Type: 11 - 72-B Removable Lid OP

Extended Status: APPROVED CERT EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 08/27/2012

Waste Handling Code: RH
Disposal Date: 09/19/2012

PCB Waste? N
PCB Mass (kg):
PCB Concentration (ppm):
PCB Out of Service Date:
Be Present? Y
Be <= 1% by weight? Y

Governing Packing Fraction (compaction level): non-compacted

Filters

Filter Model Number	Filter Diffusivity (mol/s/ml)	Quantity	Install Date
NF019D	1.85E-05	1	08/27/2012

Certification Comments

Radionuclides

Radionuclide	Activity (Ci)	Activity Uncert (Ci)	Mass (g)	Mass Uncert (g)
AM-241	2.241E-01	9.491E-02	6.458E-02	2.735E-02
BA-137M	6.800E00	1.234E00	1.264E-08	2.293E-09
CS-137	7.190E00	1.301E00	8.170E-02	1.479E-02
PU-238	4.094E-01	1.498E-01	2.366E-02	8.660E-03
PU-239	1.292E-01	6.240E-02	2.054E00	9.921E-01
PU-240	8.870E-02	4.088E-02	3.857E-01	1.777E-01
PU-241	5.830E00	1.952E00	5.606E-02	1.877E-02
PU-242	2.163E-04	7.356E-05	5.448E-02	1.853E-02
SR-90	4.600E00	8.943E-01	3.333E-02	6.480E-03
U-233	1.863E-08	9.250E-09	1.909E-06	9.478E-07
U-234	4.670E-04	1.705E-04	7.389E-02	2.698E-02
U-235	1.427E-05	5.636E-06	6.516E00	2.574E00

Container: AE0130
Type: 11 - 72-B Removable Lid OP

Extended Status: APPROVED CERT EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 08/27/2012

Waste Handling Code: RH
Disposal Date: 09/19/2012

Radionuclides

Radionuclide	Activity (Ci)	Activity Uncert (Ci)	Mass (g)	Mass Uncert (g)
U-238	1.667E-05	5.130E-06	4.903E01	1.509E01
Y-90	4.600E00	8.943E-01	8.456E-06	1.644E-06

Material Parameters

Material Parameter	Description	Weight (kg)
1	IRON BASE METAL ALLOYS	49.08
8	PLASTICS	119.12
13	STEEL CONTAINER MATERIALS	517.01
	Waste Weight:	168.20
	Packaging Weight:	517.01
	Total Material Weight:	685.21

Hazardous Codes

Hazardous Code	Description
D004	ARSENIC
D005	BARIUM
D006	CADMIUM
D007	CHROMIUM
D008	LEAD
D009	MERCURY
D010	SELENIUM
D011	SILVER

Container: AE0130
Type: 11 - 72-B Removable Lid OP

Extended Status: APPROVED CERT EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 08/27/2012

Waste Handling Code: RH
Disposal Date: 09/19/2012

Hazardous Codes

Hazardous Code	Description
D019	CARBON TETRACHLORIDE
D028	1,2-DICHLOROETHANE
D029	1,1-DICHLOROETHYLENE
F002	SPENT HALOGENATED SOLVENTS
F005	SPENT NON-HALOGENATED SOLVENTS

Edit Limit Check Results

Evaluation Date: 08/27/2012 16:48:01 Overall Status: PASS

Evaluation Code	Status	Return Code	Detailed Description
DI_CERT_ALL	PASS		
DI_CERT_BE	PASS		
DI_CERT_CERT	PASS		
DI_CERT_CHARZ	PASS		
DI_CERT_ED	PASS		
DI_CERT_EPA	PASS		
DI_CERT_PCB	PASS		
DI_CERT_PERC	PASS		
DI_CERT_TRAMPAC	PASS		
DSA	PASS		
WAC	PASS		
WAP_CERT	PASS		

Container: AE0130
Type: 11 - 72-B Removable Lid OP

Extended Status: APPROVED CERT EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 08/27/2012

Waste Handling Code: RH
Disposal Date: 09/19/2012

TRAMPAC Evaluation Results

Evaluation Date: 08/27/2012 16:48:01 Overall Status: PASS

Evaluation Code	Status	Return Code	Detailed Description
CANISTER_72B_ALL	PASS		
CANISTER_72B_ASP	PASS		
CANISTER_72B_CONT	PASS		
CANISTER_72B_FIL	PASS		
CANISTER_72B_GVE	PASS		
CANISTER_72B_NUC	PASS		
CANISTER_72B_PDH	PASS		
CANISTER_72B_RDR	PASS		
CANISTER_72B_WGT	PASS		

Inner Containers

Container Number	Type Code	Content Code	Gross Weight + Error	FGE + 2x Error	Waste Stream
1121	40 - RH 30 gal TBO	AE321C	66.90	3.45E00	AERHDM
1122	40 - RH 30 gal TBO	AE321C	49.10	6.62E00	AERHDM
1123	40 - RH 30 gal TBO	AE321C	53.70	3.14E00	AERHDM

History

Event Date/Time	Event Description	Reason
08/09/2012 17:11:47	INSERT DATA INTO THE DATABASE	
08/16/2012 17:06:53	DELETE DATA FROM THE DATABASE	
08/24/2012 14:20:26	INSERT DATA INTO THE DATABASE	
08/27/2012 16:48:03	SUCCESSFUL SUBMISSION FOR CERT	

Container: AE0130

Type: 11 - 72-B Removable Lid OP

Extended Status: APPROVED CERT EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 08/27/2012

Waste Handling Code: RH
Disposal Date: 09/19/2012

History

Event Date/Time	Event Description	Reason
08/27/2012 16:51:35	APPROVED FOR CERT	
08/28/2012 06:32:52	ASSIGNED TO PAYLOAD	

Generated: 8/24/2012 14:21

Canister #: AE0130

Canister Gross Weight + Error

711.07 kg

1,567.92 lbs

Canister Content

Code/Governing Shipping Period (days): AE321C / 60

Canister Filters

Filter Model	Quantity
NF019D	1

Inner Containers

Container Number	Gross (kg)	Wgt+Err (lbs)	PCB Waste?	Be Present?	Total Dose Rate (mrem/hr)	Content Code	Waste Stream Profile	Filter Model	Qty
1121	66.9	147.51	N	Y	2000.5	AE321C	AERHDM	NF013	1
1123	53.7	118.41	N	Y	1900.5	AE321C	AERHDM	NF013	1
1122	49.1	108.27	N	Y	4800.5	AE321C	AERHDM	NF013	1

Attachment 1 – RLC Loading Form Page 1 of 1

RLC Inspection

RLC Canister ID: AE0130
RLC Serial Number: 110091

Filter Type Number	Filter Serial Numbers	Date Filter Installed
1 NUCFIL-019DS	1 DL-462	1 8-27-12
2 N/A	2 N/A	2 N/A
3 N/A	3 N/A	3 N/A
4 N/A	4 N/A	4 N/A

Pintle Cap Screws
Torque Wrench Serial Number: N/A Cal Due Date: N/A

Filters/Pipe Plugs
Torque Wrench Serial Number: XC0066 Cal Due Date: 11-11-12

Maintenance/Inspections Complete
Canister Loading Operator
Printed Name Mike Tyson Signature [signature] Date 8-27-12

Dunnage Container is empty? YES ☐ NO ☐ NA ☒

Dunnage Container is dry? YES ☐ NO ☐ NA ☒

Dunnage Container vent port plug removed? YES ☐ NO ☐ NA ☒

Dunnage Container Weight in pounds (lbs): N/A

RH Waste Container Numbers	Operator Initials	Peer Verifier Initials
1122	[initials]	ML
1121	[initials]	ML
1123	[initials]	ML

Peer Verifier – Waste containers loaded into RLC match RH Waste Container Numbers listed above.
Printed Name Martin Reed Signature [signature] Date 8-27-12

RLC Closure Date: 8-27-12

Gross Weight in pounds (lbs): 1520
Load Cell Serial Number: XC0525 Calibration Due Date: 1-28-13

Canister Loading Operator
Printed Name Mike Tyson Signature [signature] Date 8-27-12

Supervisor
Printed Name Brandon Rigby Signature [signature] Date 8-27-12

Argonne Radiological Survey Report

20120827 M_W 331 JSS 03	
08/27/2012 3:21:00 PM	
Approved	

Removable Lid Canister Survey			
Job Specific Survey (e.g.for RWP)			
Ray, Willis D.		NWM	
331		YARD	
		2012-331-007 R.01	HPT: Wilkins, Marlen (212835)
Wilkins, Marlen		08/27/2012	
Cooney, Joseph, Jr.		08/27/2012	

Bkgd β	286.44	cpm
Bkgd α	2.65	cpm
Eff β high	0.53	cpm/dpm
Eff β mid	0.331	cpm/dpm
Eff α	0.297	cpm/dpm
MDA β	77	dpm/100cm²
MDA α	17	dpm/100cm²
Ts	2	min
Tb	100	min

Bkgd Dose	< 0.2	mR/h

RLC [illegible] (Sections 1-4) see attachment		
Gross γ	3000 mR/h	0 cm
Removable β (Use Beta High)	12.4 dpm/100cm²	N/A
Removable α	0 dpm/100cm²	N/A
Gross Removable β (Use Beta High)	293 cpm/100cm²	N/A
Gross Removable α	2 cpm/100cm²	N/A

image/jpeg	RLC AE0130 08-27-2012.jpg	152234	Aug 27, 2012 3:27 PM

Printed or electronically downloaded copies may be obsolete. Before using such a copy for work direction, employees must verify that it is current by comparing its revision number to that shown in the on-line version.

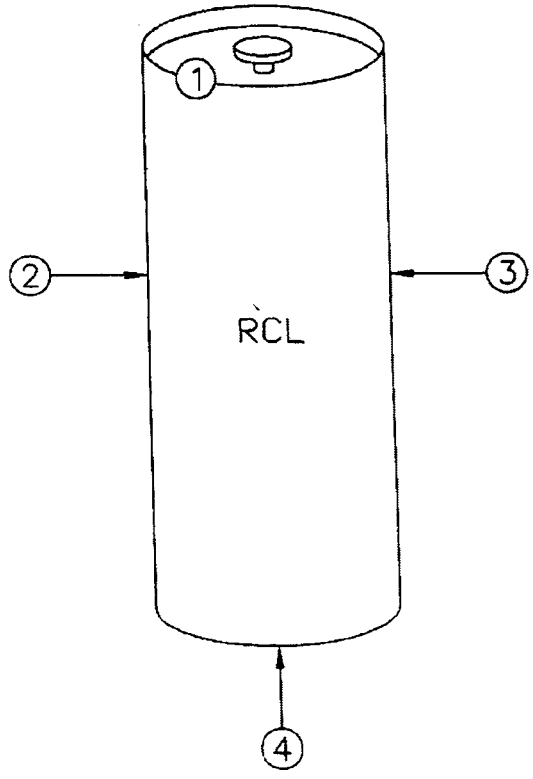
Removable Lid Canister

Survey #: 20120827MW331 J3 03

RCL #: AE0130

Highest Reading on Contact:

3000 mrem/hr gamma



(X) Smear Location

[X] Direct Location

(30sa Apr 2012)

CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

Waste Stream: # AERHDM

Lot # 37

Container ID Number	Historical Container ID	NDA BDR or Radiological Characterization BDR (CH only)	VE BDR	RTR BDR	Solids Sampling BDR	Solids Analytical BDR	Load Management/ Overpack Yes	Permit Required Headspace Gas BDR			
								Sample	Analysis		
1121	NA	ANLRHDTC12007	ANLRHVE12014	NA	NA	NA		NA	NA	NA	NA
1122	NA	ANLRHDTC12007	ANLRHVE12014	NA	NA	NA		NA	NA	NA	NA
1123	NA	ANLRHDTC12007	ANLRHVE12014	NA	NA	NA		NA	NA	NA	NA
1124	NA	ANLRHDTC12007	ANLRHVE12014	NA	NA	NA		NA	NA	NA	NA
1125	NA	ANLRHDTC12007	ANLRHVE12014	NA	NA	NA		NA	NA	NA	NA
1126	NA	ANLRHDTC12007	ANLRHVE12014	NA	NA	NA		NA	NA	NA	NA
1127	NA	ANLRHDTC12007	ANLRHVE12014	NA	NA	NA		NA	NA	NA	NA
1128	NA	ANLRHDTC12007	ANLRHVE12014	NA	NA	NA		NA	NA	NA	NA
1129	NA	ANLRHDTC12007	ANLRHVE12014	NA	NA	NA		NA	NA	NA	NA
1130	NA	ANLRHDTC12007	ANLRHVE12014	NA	NA	NA		NA	NA	NA	NA
1132	NA	ANLRHDTC12007	ANLRHVE12014	NA	NA	NA		NA	NA	NA	NA
1133	NA	ANLRHDTC12007	ANLRHVE12014	NA	NA	NA		NA	NA	NA	NA
1134	NA	ANLRHDTC12007	ANLRHVE12014	NA	NA	NA		NA	NA	NA	NA
1135	NA	ANLRHDTC12007	ANLRHVE12014	NA	NA	NA		NA	NA	NA	NA
1142	NA	ANLRHDTC12007	ANLRHVE12014	NA	NA	NA		NA	NA	NA	NA
1143	NA	ANLRHDTC12007	ANLRHVE12014	NA	NA	NA		NA	NA	NA	NA
1144	NA	ANLRHDTC12007	ANLRHVE12014	NA	NA	NA		NA	NA	NA	NA
1145	NA	ANLRHDTC12007	ANLRHVE12014	NA	NA	NA		NA	NA	NA	NA
1131	NA	ANLRHDTC12007	ANLRHVE12014	NA	NA	NA		NA	NA	NA	NA

Laura Nelson
Signature of Site Project Manager

Laura Nelson
Printed Name

8/21/12
Date

CLS-003

AK VENT/CLOSURE DATES FOR INNER DRUMS OF CANISTER AE0130 - AUDIT PURPOSES ONLY

CONTAINER ID	WASTE STREAM	AK REPORT	WASTE MATRIX CODE	VENT DATE	CLOSURE DATE
1123	AERHDM	CCP-AK-ANLE-500	S5400	5/10/2012	5/10/2012
1122	AERHDM	CCP-AK-ANLE-500	S5400	5/9/2012	5/9/2012
1121	AERHDM	CCP-AK-ANLE-500	S5400	5/4/2012	5/4/2012

Dominguez, Lena - NWP

From: Mueller, Terry - WTS
Sent: Friday, August 24, 2012 1:13 PM
To: Dominguez, Lena - WTS; Larson, David - WTS; Pettus, Helen - WTS; Soaterna, Carolina - WTS; Valenzuela, Bobbie
Cc: Walker, Mak (Maryann) - WTS; Jones, Laura - WTS; Waldram, Veronica - WTS
Subject: FW: NCR/CAR check for ANL AERHDM Lot Eval Forms Lot 37
Attachments: NCR_BDR_CONTAINER_CHECK_ANL AERHDM Lot 37.xls

There are no NCR or CAR dispositions that impact the acceptability of these drums, alternate drum IDs, and associated BDRs for certification and shipping as listed on the attached. This check was verified independently.

Thanks!

Terry L. Mueller
WTS QA
Washington TRU Solutions, LLC
Contractor to the Department of Energy
MS GSA-103
work (575)-234-7016
fax (575)-234-7042

From: Pettus, Helen - WTS
Sent: Friday, August 24, 2012 12:59 PM
To: Jones, Laura - WTS; Kantrowitz, Rich - WTS; Mueller, Terry - WTS; Walker, Mak (Maryann) - WTS
Subject: NCR/CAR check for ANL AERHDM Lot Eval Forms Lot 37

Please do an NCR/CAR check for ANL AERHDM Lot 37.

Thanks,

Helen Pettus
Central Characterization Project
Washington TRU Solutions LLC
Contractor for the U.S. Department of Energy
575-234-7696 (W)
helen.pettus@wipp.ws

Waste Isolation Pilot Plant
Container Data Report

Report Statistics

Report Version:	**2.3**
WDS Instance:	**prd05.wipp.carlsbad.nm.us**
Generated on:	**August 19, 2013 10:43 AM**
Generated by:	**KIRKES, CRETA**
Total Pages:	**7**

Selection Criteria

Container Number: **1121**

Container: 1121
Type: 40 - RH 30 gal TBO

Extended Status: APPROVED CERT IN APPROVED CERT CANISTER EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 08/24/2012
Waste Handling Code: RH
Disposal Date: 09/19/2012

Current Location Site: WI
Generator Site: AE
Destination Site ID: WI

Certification Program ID: C2
Shipping Program ID: C2

Overpack Container: AE0130
Overpack Type: REMOVABLE-LID 72-B CANISTER
Overpack Status: CERTIFICATION DATA APPROVED

Neutron Dose Rate (mrem/hr): 0.5
Beta Gamma Dose Rate (mrem/hr): 2000.0
Total Dose Rate (mrem/hr): 2000.5

FGE (g): 1.65E00
FGE Uncertainty (g): 9.0E-01

Gross Weight (kg): 66.40
Gross Weight Uncert (kg): 0.50

Decay Heat (W): 2.42E-02
Decay Heat Uncertainty (W): 8.24E-03

Shipment Data

Payload ID: **AE0130** Assembly ID: AE118788 Payload Complete? Y
Shipment Number: AER12023 Send Date: 09/10/2012 Receipt Date: 09/11/2012
Shipment Status: SHIPMENT RECEIVED AT DESTINATION

Emplacement Location

Panel: 6 Room: 2 Borehole: 019

Certification Data Values

Waste Stream Profile Code: AERHDM
Waste Type Code: MTRU
IDC Code: 001
Waste Matrix Code: S5400
WAC Revision Number: 7.2
Fill Factor (%): 90.00
Waste Stream BIR ID: AE-T009
Waste Stream MWIR ID: NONE

TRU Alpha Activity (Ci): 2.2E-01
TRU Alpha Activity Uncertainty (Ci): 1.0E-01
TRU Alpha Activity Concentration (Ci/g): 5.13E-06
PU-239 Equivalent Activity (PE-Ci): 2.4E-01
Alpha Surface Contamination (dpm/cm^2): 0.0
Beta/Gamma Surface Contamination (dpm/cm^2): 0.0

Transportation Data Values

Closure Date: 05/04/2012
Vent Date: 05/04/2012
Process Knowledge? Y
Waste Gen Date:
Content Code: AE321C
U-235 FEM (g):
U-235 FEM Uncert (g):
Be chemically/ mechanically bound:

Shipment Purpose: DISPOSAL
Machine Compacted? N
Liner Exists? Y
Liner Hole Size(mm):
Liner Lid Present? N
Layers of Packaging 2
Aqueous Material? N

Gas Generation Data Values

Measured FGGR (mol/s)	Measured TGRR (mol/s)	Truncated FGGR Test (Y/N)	Truncated FGGR Test Period (days)

Container: 1121

Type: 40 - RH 30 gal TBO

Extended Status: APPROVED CERT IN APPROVED CERT CANISTER EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 08/24/2012
Waste Handling Code: RH
Disposal Date: 09/19/2012

PCB Waste? N
PCB Mass (kg):
PCB Concentration (ppm):
PCB Out of Service Date:
Be Present? Y
Be <= 1% by weight? Y
Be mass <= 100kg? Y
Separation OK? Y
Packing Fraction (compaction level): non-compacted

Filters

Filter Model Number	Filter Diffusivity (mol/s/ml)	Quantity	Install Date
NF013	3.7E-06	1	05/04/2012

Certification Comments

Radionuclides

Radionuclide	Activity (Ci)	Activity Uncert (Ci)	Mass (g)	Mass Uncert (g)
AM-241	5.790E-02	4.060E-02	1.669E-02	1.170E-02
BA-137M	1.760E00	5.610E-01	3.271E-09	1.043E-09
CS-137	1.860E00	5.930E-01	2.114E-02	6.739E-03
PU-238	1.060E-01	6.450E-02	6.127E-03	3.728E-03
PU-239	3.340E-02	2.660E-02	5.310E-01	4.229E-01
PU-240	2.290E-02	1.740E-02	9.957E-02	7.565E-02
PU-241	1.510E00	8.420E-01	1.452E-02	8.096E-03
PU-242	5.590E-05	3.170E-05	1.408E-02	7.985E-03
SR-90	1.190E00	4.030E-01	8.623E-03	2.920E-03
U-233	4.820E-09	3.940E-09	4.939E-07	4.037E-07
U-234	1.210E-04	7.330E-05	1.915E-02	1.160E-02
U-235	3.690E-06	2.410E-06	1.685E00	1.100E00

Container: 1121
Type: 40 - RH 30 gal TBO

Extended Status: APPROVED CERT IN APPROVED CERT CANISTER EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 08/24/2012
Waste Handling Code: RH
Disposal Date: 09/19/2012

Radionuclides

Radionuclide	Activity (Ci)	Activity Uncert (Ci)	Mass (g)	Mass Uncert (g)
U-238	4.320E-06	2.220E-06	1.271E01	6.529E00
Y-90	1.190E00	4.030E-01	2.188E-06	7.408E-07

Material Parameters

Material Parameter	Description	Weight (kg)
8	PLASTICS	42.90
13	STEEL CONTAINER MATERIALS	16.36
14	PLASTIC/LINERS CONTAINER MATERIALS	7.14
	Waste Weight:	42.90
	Packaging Weight:	23.50
	Total Material Weight:	66.40

Hazardous Codes

Hazardous Code	Description
D004	ARSENIC
D005	BARIUM
D006	CADMIUM
D007	CHROMIUM
D008	LEAD
D009	MERCURY
D010	SELENIUM
D011	SILVER

Container: 1121
Type: 40 - RH 30 gal TBO

Extended Status: APPROVED CERT IN APPROVED CERT CANISTER EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 08/24/2012
Waste Handling Code: RH
Disposal Date: 09/19/2012

Hazardous Codes

Hazardous Code	Description
D019	CARBON TETRACHLORIDE
D028	1,2-DICHLOROETHANE
D029	1,1-DICHLOROETHYLENE
F002	SPENT HALOGENATED SOLVENTS
F005	SPENT NON-HALOGENATED SOLVENTS

Assay Methods

Labor Code	Assay Method	Description	Assay Date
C2	8DTC1	RH DOSE TO CURIE	08/08/2012

Non-Destructive Examination (NDE)

Labor Code	NDE Method	Description	Examination Date
C2	8RHVE2	VE OF NEWLY PACKAGED RH WASTE	05/09/2012

Edit Limit Check Results

Evaluation Date: 08/24/2012 14:18:32 Overall Status: PASS

Evaluation Code	Status	Return Code	Detailed Description
DI_CERT_ALL	PASS		
DI_CERT_BE	PASS		
DI_CERT_CERT	PASS		
DI_CERT_CHARZ	PASS		
DI_CERT_ED	PASS		
DI_CERT_EPA	PASS		

Container: 1121
Type: 40 - RH 30 gal TBO

Extended Status: APPROVED CERT IN APPROVED CERT CANISTER EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 08/24/2012
Waste Handling Code: RH
Disposal Date: 09/19/2012

Edit Limit Check Results

Evaluation Date: 08/24/2012 14:18:32 Overall Status: PASS

Evaluation Code	Status
DI_CERT_PCB	PASS
DI_CERT_PERC	PASS
DI_CERT_TRAMPAC	PASS
DSA	PASS
WAC	PASS
WAP_CERT	PASS

TRAMPAC Evaluation Results

Evaluation Date: Overall Status:

Evaluation Code	Status	Return Code	Detailed Description

History

Event Date/Time	Event Description	Reason
08/24/2012 14:18:32	INSERT DATA INTO THE DATABASE	
08/24/2012 14:18:32	SUCCESSFUL SUBMISSION FOR CERT	
08/24/2012 14:20:26	ASSIGNED TO OVERPACK	
08/24/2012 14:20:52	ASSIGNED TO OVERPACK	
08/24/2012 14:21:05	ASSIGNED TO OVERPACK	
08/24/2012 15:02:05	APPROVED FOR CERT	
08/27/2012 16:47:47	ASSIGNED TO OVERPACK	

Container: 1121

Type: 40 - RH 30 gal TBO

Extended Status: APPROVED CERT IN APPROVED CERT CANISTER EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 08/24/2012
Waste Handling Code: RH
Disposal Date: 09/19/2012

History

Event Date/Time	Event Description	Reason
08/27/2012 16:48:01	ASSIGNED TO OVERPACK	

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	RH WDS Master Template.xls Rev. 4 Addendum #4, SCO #:C66 Excel 2003/2007 Microsoft Windows XP	Units	data				comments						Initial	date
2	Shipper Site ID		C2	Location ID	Dest Program ID	Shipping Purpose					1121		LD/cs	08/24/12
3	Waste Stream Profile		AERHDM	AE	WI	D							LD/cs	08/24/12
4	Container Number		1121										LD/cs	08/24/12
5	Container Type		RH drum-30 tbo	drum, swb, tdop, etc.. see WWIS labels for valid types					U-235 FEM	U-235 FEM Uncert	FGGR Flag	FGGR Test Period	LD/cs	08/24/12
6	WAC Rev #		7.2	0					NULL	NULL	NULL	NULL	LD/cs	08/24/12
7	WAC Ex. #						Be <=100 kg	Be <= 1%	Be Present	Aqueous Material	Be Chem/Mech Bound	Compacted Wst		
8	Cert Site		C2				Y	Y	Y	N	N	N	LD/cs	08/24/12
9	Cert Date		8/24/2012											
10	Waste Handling Code		RH	CH, RH									LD/cs	08/24/12
11	Waste Type Code		MTRU	TRU, MTRU									LD/cs	08/24/12
12	Waste Stream BIR ID		AE-T009				p(CI)	choose	1sigma	2sigma	95%CI		LD/cs	08/24/12
13	Waste Stream MWIR ID		NONE		default to 0 for TRU		0.6827	1sigma	1.0000	0.5000	0.5102		LD/cs	08/24/12
14	Generator Site ID		AE				0.9545	2sigma	2.0000	1.0000	1.0204		LD/cs	08/24/12
15	IDC Code		001				0.9500	95%CI	1.9600	0.9800	1.0000		LD/cs	08/24/12
16	Matrix Code		S5400										LD/cs	08/24/12
17	Trucon Code		AE321C										LD/cs	08/24/12
18	Shipping Category						WWIS Req'd CI:	1sigma	1.0000	0.5000	0.5102			
19	Tru Alpha Act	Ci	2.20E-01		2.203E-01		Fraction of MDL Reported on HGAS		1.0000				LD/cs	08/24/12
20	Tru Alpha Act Uncert	1sigma Ci	1.00E-01	4.200E-01	Tru Alpha Act + 2sigma (Ci)								LD/cs	08/24/12
21	Tru Alpha Act Conc	nCi/g	5.13E+03		5.13E+03								LD/cs	08/24/12
22	Tru Alpha Act Conc Uncert	1sigma nCi/g	2.34E+03	9.810E+03	Tru Alpha Act Conc + 2sigma (Ci)								LD/cs	08/24/12
23	Pu239 Fiss Gm Eq	g	1.65E+00		1.650E+00								LD/cs	08/24/12
24	Pu239 Fiss Gm Eq Uncert	1sigma g	9.00E-01	3.450E+00	Pu239 Fiss Gm Eq + 2sigma (Ci)								LD/cs	08/24/12
25	Pu239 Eq Act	Ci	2.40E-01		2.402E-01								LD/cs	08/24/12
26	Decay Heat	watts	2.42E-02		2.421E-02								LD/cs	08/24/12
27	Decay Heat Uncert	1sigma watts	8.24E-03	3.24E-02	Decay Heat + 1sigma (watts)								LD/cs	08/24/12
28	Layers of Packaging		2										LD/cs	08/24/12
29	Fill Factor		90	percentage	Liner Lid Present	N							LD/cs	08/24/12
30	Liner Type		1	1 = plastic drum liner									LD/cs	08/24/12
31	Liner Punctured		Y		Liner Hole Size	457.2	(mm)						LD/cs	08/24/12
32	PCB Conc						PCB Waste	PCB Mass (kg)	Out of Service				LD/cs	08/24/12
33	Closure Date		5/4/2012	Watt-years	Waste Gen Date		N	NULL	NULL				LD/cs	08/24/12
34	Vent Date		5/4/2012	0.007									LD/cs	08/24/12
35	Filter Install Date		5/4/2012										LD/cs	08/24/12
36	Filter Manufacturer		NFT										LD/cs	08/24/12
37	Filter Serial Number(s)												LD/cs	08/24/12
38	Filter Model Number	NF012 NF013 NF020 NF9026	NF013										LD/cs	08/24/12
39	Number of Filters Installed		1										LD/cs	08/24/12
40	Aspiration Method ID		3										LD/cs	08/24/12
41	Gas Gen Rate			#VALUE!	<<Gas Gen Rate Calculated.		Avagdro's Number	6.022142E+23	NIST					
42	Hydrogen/Methane Gen Rate						Electron Charge	1.602176E-19	V NIST					
43	Gas Gen Comp Date				Waste (kg)	Packaging (kg)	Total (kg)							
44	Gross Weight	kg	66.400		42.9	23.50	66.40						LD/cs	08/24/12
45	Gross Weight Uncert	1sigma kg	0.5		max. reported	mda							LD/cs	08/24/12
46	Alpha Surf Cont	dpm/100 cm^2	0		0		Minimum Detectable Activity			Shipping Calcs			LD/cs	08/24/12
47	Beta/Gamma Surf Cont	dpm/100 cm^2	0		0		Minimum Detectable Activity			Total TBq	2.86E-01		LD/cs	08/24/12
48	Neutron Dose Rate	mrem/hr	0.5		0.5		Minimum Detectable Activity			Fraction	1.57E-02		LD/cs	08/24/12
49	Beta/Gamma Dose Rate	mrem/hr	2000		2000		Minimum Detectable Activity			Highway Route Control?	No		LD/cs	08/24/12
50	Radionuclide		U-233	U-234	U-235	U-238	Pu-238	Pu-239	Pu-240	Pu-241	Pu-242	Am-241	LD/cs	08/24/12
51	Activity	Ci	4.82E-09	1.21E-04	3.69E-06	4.32E-06	1.06E-01	3.34E-02	2.29E-02	1.51E+00	5.59E-05	5.79E-02	LD/cs	08/24/12
52	Activity Uncert	1sigma Ci	3.94E-09	7.33E-02	2.41E-06	2.22E-06	6.45E-02	2.66E-02	1.74E-02	8.42E-01	3.17E-05	4.06E-02	LD/cs	08/24/12
53	Mass	grams	4.94E-07	1.91E-02	1.68E+00	1.27E+01	6.13E-03	5.31E-01	9.96E-02	1.45E-02	1.41E-02	1.67E-02		
54	Mass Uncert	1sigma grams	4.04E-07	1.16E+00	1.10E+00	6.53E+00	3.73E-03	4.23E-01	7.57E-02	8.10E-03	7.98E-03	1.17E-02		
55	calc Tru Alpha Act	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.06E-01	3.34E-02	2.29E-02	0.00E+00	5.59E-05	5.79E-02		
56	calc Tru Alpha Act Conc	nCi/g	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.47E+03	7.79E+02	5.34E+02	0.00E+00	1.30E+00	1.35E+03		
57	calc Act	Ci	4.82E-09	1.21E-04	3.69E-06	4.32E-06	1.06E-01	3.34E-02	2.29E-02	1.51E+00	5.59E-05	5.79E-02		
58	calc Act Conc	nCi/g	1.12E-04	2.82E+00	8.60E-02	1.01E-01	2.47E+03	7.79E+02	5.34E+02	3.52E+04	1.30E+00	1.35E+03		

CK 8/12
8/24/12

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	A	B	C	D	E	F	G	H	I	J	K	L	M	N
59	calc Pu239 FGE	g	4.44E-07	0.00E+00	1.08E+00	0.00E+00	6.92E-04	5.31E-01	2.24E-03	3.27E-02	1.06E-04	3.12E-04		
60	calc Pu239 Eq Act	Ci	1.24E-09	0.00E+00	0.00E+00	0.00E+00	9.64E-02	3.34E-02	2.29E-02	2.96E-02	5.08E-05	5.79E-02		
61	calc Decay Heat	watts	1.40E-10	3.48E-06	1.02E-07	1.10E-07	3.51E-03	1.04E-03	7.13E-04	4.81E-05	1.65E-06	1.94E-03		
62	uncert Tru Alpha Act	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.45E-02	2.66E-02	1.74E-02	0.00E+00	3.17E-05	4.06E-02		
63	uncert Tru Alpha Act Conc	nCi/g	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.50E+03	6.20E+02	4.06E+02	0.00E+00	7.39E-01	9.46E+02		
64	uncert Act	Ci	3.94E-09	7.33E-03 - 5	2.41E-06	2.22E-06	6.45E-02	2.66E-02	1.74E-02	8.42E-01	3.17E-05	4.06E-02		
65	uncert Act Conc	nCi/g	9.18E-05	1.71E+02	5.62E-02	5.17E-02	1.50E+03	6.20E+02	4.06E+02	1.96E+04	7.39E-01	9.46E+02		
66	uncert Pu239 FGE	g	3.63E-07	0.00E+00	7.08E-01	0.00E+00	4.21E-04	4.23E-01	1.70E-03	1.82E-02	5.99E-05	2.19E-04		
67	uncert Pu239 Eq Act	Ci	1.01E-09	0.00E+00	0.00E+00	0.00E+00	5.86E-02	2.66E-02	1.74E-02	1.65E-02	2.88E-05	4.06E-02		
68	uncert Decay Heat	watts	1.15E-10	2.11E-04 - 6	6.65E-08	5.63E-08	2.14E-03	8.25E-04	5.42E-04	2.69E-05	9.34E-07	1.36E-03		
69	Shipping Calcs	4.71E+01	1.79E-07	4.48E-03	0.00E+00	0.00E+00	1.96E+01	6.17E+00	4.23E+00	5.59E+00	1.03E-02	1.07E+01		
70	49CFR173.433f		0.00%	0.01%	0.00%	0.00%	41.59%	13.11%	8.99%	11.87%	0.02%	22.72%		
71	Radionuclide		Cs-137	Ba-137m	Sr-90	Y-90								
72	Activity	Ci	1.86E+00	1.76E+00	1.19E+00	1.19E+00							LD/cs	08/24/12
73	Activity Uncert	1sigma Ci	5.93E-01	5.61E-01	4.03E-01	4.03E-01							LD/cs	08/24/12
74	Mass	grams	2.11E-02	3.27E-09	8.62E-03	2.19E-06	NULL	NULL	NULL	NULL	NULL	NULL	LD/cs	08/24/12
75	Mass Uncert	1sigma grams	6.74E-03	1.04E-09	2.92E-03	7.41E-07	NULL	NULL	NULL	NULL	NULL	NULL		
76	calc Tru Alpha Act	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NULL	NULL	NULL	NULL	NULL	NULL		
77	calc Tru Alpha Act Conc	nCi/g	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NULL	NULL	NULL	NULL	NULL	NULL		
78	calc Act	Ci	1.86E+00	1.76E+00	1.19E+00	1.19E+00	NULL	NULL	NULL	NULL	NULL	NULL		
79	calc Act Conc	nCi/g	4.34E+04	4.10E+04	2.77E+04	2.77E+04	NULL	NULL	NULL	NULL	NULL	NULL		
80	calc Pu239 FGE	g	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NULL	NULL	NULL	NULL	NULL	NULL		
81	calc Pu239 Eq Act	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NULL	NULL	NULL	NULL	NULL	NULL		
82	calc Decay Heat	watts	2.06E-03	6.94E-03	1.38E-03	6.58E-03	NULL	NULL	NULL	NULL	NULL	NULL		
83	uncert Tru Alpha Act	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NULL	NULL	NULL	NULL	NULL	NULL		
84	uncert Tru Alpha Act Conc	nCi/g	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NULL	NULL	NULL	NULL	NULL	NULL		
85	uncert Act	Ci	5.93E-01	5.61E-01	4.03E-01	4.03E-01	NULL	NULL	NULL	NULL	NULL	NULL		
86	uncert Act Conc	nCi/g	1.38E+04	1.31E+04	9.39E+03	9.39E+03	NULL	NULL	NULL	NULL	NULL	NULL		
87	uncert Pu239 FGE	g	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NULL	NULL	NULL	NULL	NULL	NULL		
88	uncert Pu239 Eq Act	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NULL	NULL	NULL	NULL	NULL	NULL		
89	uncert Decay Heat	watts	6.56E-04	2.21E-03	4.67E-04	2.23E-03	NULL	NULL	NULL	NULL	NULL	NULL		
90	Shipping Calcs		1.38E-01	0.00E+00	4.41E-01	2.20E-01	NULL	NULL	NULL	NULL	NULL	NULL		
91	49CFR173.433f		0.29%	0.00%	0.94%	0.47%	NULL	NULL	NULL	NULL	NULL	NULL		
92	Waste Material Parameter		PW											
93	Wgt of Mat Parms (kg or lbs)	kg	42.9										LD/cs	08/24/12
94	Radio Assay Method		8DTC1										LD/cs	08/24/12
95	Data Package Number		ANLRHDTC12007										LD/cs	08/24/12
96	Assay Date		8/8/2012					kg					LD/cs	08/24/12
97	Charz Method ID		8RHVE2				lbs	0.4536					LD/cs	08/24/12
98	Data Package Number		ANLRHVE12014				kg	1.0000					LD/cs	08/24/12
99	Charz Method Date		5/9/2012										LD/cs	08/24/12
100	Haz Codes		D004	D005	D006	D007	D008	D009	D010	D011	D019	D028	LD/cs	08/24/12
101	Haz Codes		D029	F002	F005								LD/cs	08/24/12
102	Haz Codes												LD/cs	08/24/12
103	Haz Codes													
104	Sample ID	Headspace Gas H/M	NULL											
105	Sample Type			HGHM									LD/cs	08/24/12
106	Layer No. Sampled				0								LD/cs	08/24/12
107	Date Sampled					Sample Site							LD/cs	08/24/12
108	Method ID			DTP-1.2-041									LD/cs	08/24/12
109	Data Package Number												LD/cs	08/24/12
110	CAS #		NULL	NULL									LD/cs	08/24/12
111	Analyte													
112	Concentration												LD/cs	08/24/12
113	units	%vol											LD/cs	08/24/12
114	Date Analyzed			NULL									LD/cs	08/24/12
115	B Detectable Flag												LD/cs	08/24/12
116	D Detectable Flag													
117	E Detectable Flag													
118	J Detectable Flag													
119	U Detectable Flag													
120	NA Detectable Flag		NA	NA									LD/cs	08/24/12
121														
122	Sample ID	Headspace Gas VOC												
123	Sample Type			HGVO									LD/cs	08/24/12
124	Layer No. Sampled					SARP-Flammable VOCs (ppmv)		0					LD/cs	08/24/12
125	Date Sampled												LD/cs	08/24/12

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Addendum #4, SCO #1066
Excel 2003/2007 Microsoft Windows XP

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	A	B	C	D	E	F	G	H	I	J	K	L	M	N
126	Method ID			DTP-1.2-041										
127	Data Package Number												LD/cs	08/24/12
128	Methanol Method ID												LD/cs	08/24/12
129	CAS #													
													LD/cs	08/24/12
130	Analyte		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
131	Concentration													
132	units	ppmv											LD/cs	08/24/12
133	Date Analyzed		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL			LD/cs	08/24/12
134	B Detectable Flag												LD/cs	08/24/12
135	D Detectable Flag													
136	E Detectable Flag													
137	J Detectable Flag													
138	U Detectable Flag													
139	NA Detectable Flag		NA	NA	NA	NA	NA	NA	NA	NA			LD/cs	08/24/12
140	SARP-Flammable Calc		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
141	CAS #													
													LD/cs	08/24/12
142	Analyte		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
143	Concentration													
144	units	ppmv											LD/cs	08/24/12
145	Date Analyzed		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL			LD/cs	08/24/12
146	B Detectable Flag												LD/cs	08/24/12
147	D Detectable Flag													
148	E Detectable Flag													
149	J Detectable Flag													
150	U Detectable Flag													
151	NA Detectable Flag		NA	NA	NA	NA	NA	NA	NA	NA			LD/cs	08/24/12
152	SARP-Flammable Calc		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
153	CAS #													
													LD/cs	08/24/12
154	Analyte		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
155	Concentration													
156	units	ppmv											LD/cs	08/24/12
157	Date Analyzed		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL			LD/cs	08/24/12
158	B Detectable Flag												LD/cs	08/24/12
159	D Detectable Flag													
160	E Detectable Flag													
161	J Detectable Flag													
162	U Detectable Flag													
163	NA Detectable Flag		NA	NA	NA	NA	NA	NA	NA	NA			LD/cs	08/24/12
164	SARP-Flammable Calc		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
165	CAS #													
													LD/cs	08/24/12
166	Analyte		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
167	Concentration													
168	units	ppmv											LD/cs	08/24/12
169	Date Analyzed		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL			LD/cs	08/24/12
170	B Detectable Flag												LD/cs	08/24/12
171	D Detectable Flag													
172	E Detectable Flag													
173	J Detectable Flag													
174	U Detectable Flag													
175	NA Detectable Flag		NA	NA	NA	NA	NA	NA	NA	NA			LD/cs	08/24/12
176	SARP-Flammable Calc		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
177	CAS #													
178	Analyte		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
179	Concentration													
180	units	ppmv												
181	Date Analyzed		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
182	B Detectable Flag													
183	D Detectable Flag													
184	E Detectable Flag										RH WDS Master Template xls Rev. 4			
185	J Detectable Flag										Addendum #4. SCO #1066			
186	U Detectable Flag										Excel 2003/2007 Microsoft Windows			
187	NA Detectable Flag		NA	NA	NA	NA	NA	NA	NA	NA	XP			

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
188	SARP-Flammable Calc		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
189			type	comment										
190	Comment													
191	Comment													
192	Comment													
193	Comment													
194	Comment													
195	Comment													
196	Comment													
197	Comment													
198	Comment													
199	Comment													
200														
201			Requirements Met?											
202	Free liquids <1% by volume		YES											
203	No non-rad. pyrophorics		YES											
204	Chemical compatability		YES											
205	No explosives		YES											
206	No corrosives		YES											
207	No pressurized containers		YES											
208	No sealed Containers >4 liters		YES											
209	Liner punctured/ filtered		YES											
210	Flammable VOCs <500ppmv		YES											
211	Container is in Approved Waste Stream Profile Form?	AERHDM	YES											
212	Can it be established through Process Knowledge that the concentration of flammable VOCs present in the headspace of the container is <= 500 ppm?.		YES											
213														
214														
215														
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Creta Kirks
CCP Certification Official

8-24-2012
Date

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Lot #

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Addendum #4, SCO #1066
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Attachment 2 – Container Data Sheet

BDR Number: ANLRHDTC12007

Date:	8-8-12
Container No.:	1121
Probe Position:	30 Gallon
Instrument No.:	XCO 433
Probe No.:	XCO 434
Measured Background Dose Rate (mR/hr):	~10
Gross Weight (kg):	66.4
Dose Rate 1 (mR/hr):	248
Dose Rate 2 (mR/hr):	221
Dose Rate 3 (mR/hr):	286
Dose Rate 4 (mR/hr):	310
Highest measured dose rate is greater than three times the measured background.	(YES) NO

Monty Harris — Monty Harris — 8-8-12

Printed Name — Signature — Date

09

Waste Container Dose-to-Curie Conversion Record

SCO 697 AERHDM Dose-to-Curie Spreadsheet Rev. 2 Addendum 3 Microsoft Excel 2003 and 2007; Microsoft Windows XP Professional 2002 and 2003

Operating Procedure		CCP-TP-504 REV 12		
Date of Survey		8/8/2012		
Waste Stream Designation		AERHDM		
Container Number		1121		
Container Gross Weight		66.4	kg	
Waste Cans	Can #1	Can #2	Can #3	
Can Sizes	7	7		gallons
Estimate Fill Percentages	90	90		%
Container Net Weight		42.9		
Measured Container Dose Rate				Background
Quadrant #1		248	mR/hr	10 mR/hr
Quadrant #2		221	mR/hr	
Quadrant #3		286	mR/hr	
Quadrant #4		310	mR/hr	
Average Dose Rate Minus Background		256.25	mR/hr	

Nuclide	Curie Scaling Factors	Activity (Ci)	Grams	FGE	PECi	Watts	Uncertainty	Uncertainty in Curies	Uncertainty in Grams
U-233	2.59E-09	4.82E-09	4.94E-07	4.44E-07	1.24E-09	1.40E-10	81.73%	3.94E-09	4.04E-07
U-234	6.48E-05	1.21E-04	1.91E-02	0.00E+00	0.00E+00	3.47E-06	60.76%	7.33E-05	1.16E-02
U-235	1.99E-06	3.69E-06	1.69E+00	1.08E+00	0.00E+00	1.02E-07	65.38%	2.41E-06	1.10E+00
U-238	2.32E-06	4.32E-06	1.27E+01	0.00E+00	0.00E+00	1.09E-07	51.50%	2.22E-06	6.54E+00
Pu-238	5.70E-02	1.06E-01	6.13E-03	6.92E-04	9.63E-02	3.51E-03	60.87%	6.45E-02	3.73E-03
Pu-239	1.80E-02	3.34E-02	5.31E-01	5.31E-01	3.34E-02	1.04E-03	79.49%	2.66E-02	4.22E-01
Pu-240	1.23E-02	2.29E-02	9.98E-02	2.24E-03	2.29E-02	7.14E-04	75.98%	1.74E-02	7.58E-02
Pu-241	8.11E-01	1.51E+00	1.45E-02	3.26E-02	2.96E-02	4.80E-05	55.84%	8.42E-01	8.09E-03
Pu-242	3.01E-05	5.59E-05	1.41E-02	1.06E-04	5.08E-05	1.65E-06	56.69%	3.17E-05	7.99E-03
Am-241	3.11E-02	5.79E-02	1.67E-02	3.12E-04	5.79E-02	1.93E-03	70.12%	4.06E-02	1.17E-02
Cs-137	1.00E+00	1.86E+00	2.11E-02	0.00E+00	0.00E+00	2.06E-03	31.88%	5.93E-01	6.74E-03
Ba-137m	9.46E-01	1.76E+00	3.27E-09	0.00E+00	0.00E+00	6.93E-03	31.88%	5.61E-01	1.04E-09
Sr-90	6.40E-01	1.19E+00	8.62E-03	0.00E+00	0.00E+00	1.38E-03	33.87%	4.03E-01	2.92E-03
Y-90	6.40E-01	1.19E+00	2.19E-06	0.00E+00	0.00E+00	6.58E-03	33.87%	4.03E-01	7.41E-07
Totals		7.73E+00	1.51E+01	1.65E+00	2.40E-01	2.42E-02			

	Value	(one Sigma)	
TRU Alpha Activity Concentration	5.13E+03	2.34E+03	nCi/g
TRU Alpha Activity	2.20E-01	1.00E-01	Ci
Total Pu-239 Equiv Activity	2.40E-01	1.03E-01	Ci
Total Pu-239 Fissile Gram Equiv	1.65E+00	9.00E-01	g
Total Decay Heat	2.42E-02	8.24E-03	W
Volume Activity	6.60E-02	2.27E-02	Ci/L

Originator Monty Harris (Print Name)

Signed Monterry Harris Date 8-14-12

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 5-9-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☒ N/A		Final Container ☐ N/A	
Container or Package ID Number:		Container or Package ID Number: 1121	
Container Type:		Container Type: 30 GALLON CONTAINER	
Waste Matrix Code:		Waste Matrix Code: S5400	
Waste Stream:		Waste Stream: AERHDN	
		Rigid Liner: ☒Y ☐N Type: 140 MIL	Rigid Liner Lid: ☐ Y ☒N
		Rigid Liner Vented or Hole Size: NA	
Percent Fill:	Percent Organic Waste:	Percent Fill: 85%	Percent Organic Waste: 30%
Layers of Confinement:	Closure Method:	Layers of Confinement: 1	Closure Method: HEAT SEALED FILTERED
Comments (e.g., filter information, NCRs): NA			

Waste Description:

BOTTOM CAN 1008

TOP CAN 950

03

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1121

Prohibited Item(s) Summary	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	X	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	X	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	X	
Does the container have observable liquid containing PCBs?	☐	X	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	X	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	X	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	X	
Is there an indication of wastes containing explosives or compressed gases?	☐	X	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	X	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	X	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	X	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	X	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	X	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	X	
Is the waste consistent with the TRUCON Code?	X	☐	

Comments: NA

Visual Examination Operator 1: ERIC BOND (Print Name) — Eric Bond (Signature) — 5-9-12 (Date)

Visual Examination Operator 2: GLORIA RUPPERT (Print Name) — Gloria Ruppert (Signature) — 5-9-12 (Date)

04

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 5-2-12		Batch Number: N/A	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: N/A
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: N/A	Recording Stop: N/A
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 1008		Container or Package ID Number:	
Container Type: 7 gallon container		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 90%	Percent Organic Waste: 20%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: N/A	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): N/A			

Waste Description: 7 gallon Container (IM)
Steel Pipe (IM)
cable (OM) (IM)
PVC Pipe (P)
silica Beads ~~(P)~~ PBS-212 (OIM)
Metal hardware (IM)
Plastic Piece (P)
Metal Pieces (IM) (OM)
Aluminum Piece (AM)
Paper (C)
Dry Rags (C)
Saw Blade (IM)

05

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1008

Prohibited Items Summary	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
Rpt 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: N/A

Visual Examination Operator 1:
Pat Beallis — Print Name
Pat Beallis — Signature
5-2-12 — Date

Visual Examination Operator 2:
William H. Riley — Print Name
William H. Riley — Signature
05-02-12 — Date

06

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 04-25-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒N/A	
Container or Package ID Number: 950		Container or Package ID Number:	
Container Type: 7-Gallon Container		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 90%	Percent Organic Waste: 30%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description: 7-Gallon Container-(IM)

Paper-(C)
Tape-(C)
manipulator tape-(IM)
Copper tubing-(OM)
manipulator weight-(OM)
manipulator parts-(AM)
Metal Cable-(IM)
Empty cans-(AM)
Metal Lids-(AM)
Met-Mounts Pieces-(P)(IM)
Electrical Cords-(OM)(IM)(R)
Dry Rags-(C)

07

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 950

Prohibited Item(s) Summary	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: N/A

Visual Examination Operator 1:
William H. Riley — Print Name
Signature — Date: 04-25-12

Visual Examination Operator 2:
ERIC BOND — Print Name
Signature — Date: 4-25-12

08

AGHCF RH-TRU 30-Gallon Waste Drum Datasheet

(The bracketed numbers in the left margin refer to the corresponding procedure step number.)

AGHCF Drum No. 1121

Section 1 — Fill out in accordance with NOD-AGHCF-OPS-303

[8.2.1] AGHCF Drum No. 1121

[8.2.14] Requisition Number: RW – 88005

[8.2.2] Drum Is Type A [ISI][1]: YES ☒ NO ☐

[8.2.5] Drum Inspection [ISI][1]: SAT ☒ UNSAT ☐

[8.2.6] Drum Vent Model No. [ISI][1]: NUCFIL-013

[8.2.6] Drum Vent Serial No. [ISI][1]: AL-1155

[8.2.7] Torque Wrench for Drum Vent
ID Number: ARG 218670
Calibration Due Date: 10-1-12

[8.2.21] Acceptance Criteria Met: YES ☒ NO ☐

ROBERT LOPPINK (FM Print Name) — Robert Ruppert (FM Sign Name) — 4/13/12 (Date)

1 [ISI] identifies an In-Service Inspection specified in the Technical Safety Requirements

Section 2 — Fill out in accordance with NOD-AGHCF-OPS-305

[37] Top Waste Can No. 950

[37] Bottom Waste Can No. 1008

[59] ERIC BOND (VEO Print Name) — [signature] (VEO Sign Name) — 5-9-12 (Date)

[59] GLORIA RUPPERT (VEO Print Name) — Gloria Ruppert (VEO Sign Name) — 5-9-12 (Date)

[80.2] Torque Wrench for Ring Bolt
ID Number: 88733
Calibration Due Date: 6/23/12

[86] Date Loaded: 5/9/12

[86] Tamper Seal 1 No.: 6681

[86] Tamper Seal 2 No.: 6682

[89.2] Total Wt. Loaded Drum: 145 lbs

[Step 89.3] Spring Scale for Drum Weight
ID Number: 10759-2
Calibration Due Date: 9/30/2012

RH-TRU Dose to Curie Survey Log for 331 Shell

RWP # 2012-331-005

Drum # 1121_____

Instrument	Set Number	Cal. Due Date	Verify Daily Source Check Initials
RO-7	1267	Jan 31 2013	
ASP2 w NRD	2248	Jan 31 2013	
NE Electra	3865	Nov 30 2012	
Ludlum Mod.77-3	3766	Jan 31 2013	
RO-20	1701	Feb 28 2013	
DABRAS	2029	Feb 28 2013	

Instrument	Set #	Efficiency Alpha/Beta	Count Time	Type of Radiation	Type of Contamination
NE Electra	3865	0.199/0.309	2 min.	Alpha / Beta	Removable
DABRAS	2029	0.29/0.53	2 min.	Alpha / Beta	Removable

Instrument	Set #	Background -Alpha	Background -Beta
NE Electra	3865	0	357

Lv 4 Radiation Monitors	Turn Off (start of day)	Turn On (end of day)
Initials		

Smear – I/S Cask Lid: __N/A dpm/100cm²α _N/A____dpm/100cm² βγ (field check)

_N/A___ dpm/100cm²α N/A_____dpm/100cm² βγ (DABRAS)

Neutron Measurement: mrem/h (n)

(1) __<0.5____
(2) __<0.5__
(3) _<0.5____
(4) __<0.5_____

RO-7 Measurement: mrem/h (γ)

(1) 1200___
(2) 1000 ____
(3) 1700 ____
(4) 2000 ____

Smear –Vac-U-Lift Pad: BKGD__ dpm/100cm²α BKGD__dpm/100cm² βγ (field check)

_BKGD dpm/100cm²α BKGD___dpm/100cm² βγ (DABRAS)

Smear –Turntable: BKGD_ dpm/100cm²α BKGD_dpm/100cm² βγ (field check)

_BKGD__ dpm/100cm²α BKGD_dpm/100cm² βγ (DABRAS)

Name(s) / Signature(s): _J.Reed/ _____

Date / Time: 8/8/2012_____/ _14:13_____

Supervisor: _____

Waste Isolation Pilot Plant
Container Data Report

Report Statistics

Report Version:	**2.3**
WDS Instance:	**prd05.wipp.carlsbad.nm.us**
Generated on:	**August 19, 2013 10:44 AM**
Generated by:	**KIRKES, CRETA**
Total Pages:	**7**

Selection Criteria

Container Number: **1122**

Container: 1122
Type: 40 - RH 30 gal TBO

Extended Status: APPROVED CERT IN APPROVED CERT CANISTER EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 08/24/2012
Waste Handling Code: RH
Disposal Date: 09/19/2012

Current Location Site: WI
Generator Site: AE
Destination Site ID: WI

Certification Program ID: C2
Shipping Program ID: C2

Overpack Container: AE0130
Overpack Type: REMOVABLE-LID 72-B CANISTER
Overpack Status: CERTIFICATION DATA APPROVED

Neutron Dose Rate (mrem/hr): 0.5
Beta Gamma Dose Rate (mrem/hr): 4800.0
Total Dose Rate (mrem/hr): 4800.5

FGE (g): 3.22E00
FGE Uncertainty (g): 1.7E00

Gross Weight (kg): 48.60
Gross Weight Uncert (kg): 0.50

Decay Heat (W): 4.71E-02
Decay Heat Uncertainty (W): 1.47E-02

Shipment Data

Payload ID: **AE0130** Assembly ID: AE118788 Payload Complete? Y
Shipment Number: AER12023 Send Date: 09/10/2012 Receipt Date: 09/11/2012
Shipment Status: SHIPMENT RECEIVED AT DESTINATION

Emplacement Location

Panel: 6 Room: 2 Borehole: 019

Certification Data Values

Waste Stream Profile Code: AERHDM
Waste Type Code: MTRU
IDC Code: 001
Waste Matrix Code: S5400
WAC Revision Number: 7.2
Fill Factor (%): 85.00
Waste Stream BIR ID: AE-T009
Waste Stream MWIR ID: NONE

TRU Alpha Activity (Ci): 4.29E-01
TRU Alpha Activity Uncertainty (Ci): 1.87E-01
TRU Alpha Activity Concentration (Ci/g): 1.71E-05
PU-239 Equivalent Activity (PE-Ci): 4.68E-01
Alpha Surface Contamination (dpm/cm^2): 0.0
Beta/Gamma Surface Contamination (dpm/cm^2): 0.0

Transportation Data Values

Closure Date: 05/09/2012
Vent Date: 05/09/2012
Process Knowledge? Y
Waste Gen Date:
Content Code: AE321C
U-235 FEM (g):
U-235 FEM Uncert (g):
Be chemically/ mechanically bound:

Shipment Purpose: DISPOSAL
Machine Compacted? N
Liner Exists? Y
Liner Hole Size(mm):
Liner Lid Present? N
Layers of Packaging 2
Aqueous Material? N

Gas Generation Data Values

Measured FGGR (mol/s)	Measured TGRR (mol/s)	Truncated FGGR Test (Y/N)	Truncated FGGR Test Period (days)

Container: 1122
Type: 40 - RH 30 gal TBO

Extended Status: APPROVED CERT IN APPROVED CERT CANISTER EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 08/24/2012
Waste Handling Code: RH
Disposal Date: 09/19/2012

PCB Waste? N
PCB Mass (kg):
PCB Concentration (ppm):
PCB Out of Service Date:
Be Present? Y
Be <= 1% by weight? Y
Be mass <= 100kg? Y
Separation OK? Y
Packing Fraction (compaction level): non-compacted

Filters

Filter Model Number	Filter Diffusivity (mol/s/ml)	Quantity	Install Date
NF013	3.7E-06	1	05/09/2012

Certification Comments

Radionuclides

Radionuclide	Activity (Ci)	Activity Uncert (Ci)	Mass (g)	Mass Uncert (g)
AM-241	1.130E-01	7.750E-02	3.256E-02	2.233E-02
BA-137M	3.420E00	9.870E-01	6.357E-09	1.835E-09
CS-137	3.620E00	1.040E00	4.114E-02	1.182E-02
PU-238	2.060E-01	1.220E-01	1.191E-02	7.052E-03
PU-239	6.510E-02	5.100E-02	1.035E00	8.108E-01
PU-240	4.470E-02	3.340E-02	1.943E-01	1.452E-01
PU-241	2.930E00	1.590E00	2.817E-02	1.529E-02
PU-242	1.090E-04	5.990E-05	2.746E-02	1.509E-02
SR-90	2.320E00	7.180E-01	1.681E-02	5.203E-03
U-233	9.380E-09	7.560E-09	9.611E-07	7.746E-07
U-234	2.350E-04	1.390E-04	3.718E-02	2.199E-02
U-235	7.190E-06	4.600E-06	3.283E00	2.100E00

Container: 1122
Type: 40 - RH 30 gal TBO

Extended Status: APPROVED CERT IN APPROVED CERT CANISTER EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 08/24/2012
Waste Handling Code: RH
Disposal Date: 09/19/2012

Radionuclides

Radionuclide	Activity (Ci)	Activity Uncert (Ci)	Mass (g)	Mass Uncert (g)
U-238	8.410E-06	4.170E-06	2.474E01	1.226E01
Y-90	2.320E00	7.180E-01	4.265E-06	1.320E-06

Material Parameters

Material Parameter	Description	Weight (kg)
8	PLASTICS	25.10
13	STEEL CONTAINER MATERIALS	16.36
14	PLASTIC/LINERS CONTAINER MATERIALS	7.14
	Waste Weight:	25.10
	Packaging Weight:	23.50
	Total Material Weight:	48.60

Hazardous Codes

Hazardous Code	Description
D004	ARSENIC
D005	BARIUM
D006	CADMIUM
D007	CHROMIUM
D008	LEAD
D009	MERCURY
D010	SELENIUM
D011	SILVER

Container: 1122
Type: 40 - RH 30 gal TBO

Extended Status: APPROVED CERT IN APPROVED CERT CANISTER EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 08/24/2012
Waste Handling Code: RH
Disposal Date: 09/19/2012

Hazardous Codes

Hazardous Code	Description
D019	CARBON TETRACHLORIDE
D028	1,2-DICHLOROETHANE
D029	1,1-DICHLOROETHYLENE
F002	SPENT HALOGENATED SOLVENTS
F005	SPENT NON-HALOGENATED SOLVENTS

Assay Methods

Labor Code	Assay Method	Description	Assay Date
C2	8DTC1	RH DOSE TO CURIE	08/08/2012

Non-Destructive Examination (NDE)

Labor Code	NDE Method	Description	Examination Date
C2	8RHVE2	VE OF NEWLY PACKAGED RH WASTE	05/09/2012

Edit Limit Check Results

Evaluation Date: 08/24/2012 13:30:27 Overall Status: PASS

Evaluation Code	Status	Return Code	Detailed Description
DI_CERT_ALL	PASS		
DI_CERT_BE	PASS		
DI_CERT_CERT	PASS		
DI_CERT_CHARZ	PASS		
DI_CERT_ED	PASS		
DI_CERT_EPA	PASS		

Container: 1122
Type: 40 - RH 30 gal TBO

Extended Status: APPROVED CERT IN APPROVED CERT CANISTER EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 08/24/2012
Waste Handling Code: RH
Disposal Date: 09/19/2012

Edit Limit Check Results

Evaluation Date: 08/24/2012 13:30:27 Overall Status: PASS

Evaluation Code	Status
DI_CERT_PCB	PASS
DI_CERT_PERC	PASS
DI_CERT_TRAMPAC	PASS
DSA	PASS
WAC	PASS
WAP_CERT	PASS

TRAMPAC Evaluation Results

Evaluation Date: Overall Status:

Evaluation Code	Status	Return Code	Detailed Description

History

Event Date/Time	Event Description	Reason
08/24/2012 13:30:27	INSERT DATA INTO THE DATABASE	
08/24/2012 13:30:27	SUCCESSFUL SUBMISSION FOR CERT	
08/24/2012 14:20:27	ASSIGNED TO OVERPACK	
08/24/2012 14:20:53	ASSIGNED TO OVERPACK	
08/24/2012 14:21:05	ASSIGNED TO OVERPACK	
08/24/2012 15:02:07	APPROVED FOR CERT	
08/27/2012 16:47:47	ASSIGNED TO OVERPACK	

Container: 1122

Type: 40 - RH 30 gal TBO

Extended Status: APPROVED CERT IN APPROVED CERT CANISTER EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 08/24/2012
Waste Handling Code: RH
Disposal Date: 09/19/2012

History

Event Date/Time	Event Description	Reason
08/27/2012 16:48:01	ASSIGNED TO OVERPACK	

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	RH WDS Master Template.xls Rev. 4 Addendum #4, SCO #1066 Excel 2003/2007 Microsoft Windows XP	Units	data					comments					initial	date
2	Shipper Site ID		C2	Location ID	Dest Program ID	Shipping Purpose					1122		LD/HP	08/23/12
3	Waste Stream Profile		AERHDM	AE	WI	D							LD/HP	08/23/12
4	Container Number		1122										LD/HP	08/23/12
5	Container Type		RH drum-30 tbo	drum, swb, tdop, etc., see WWIS labels for valid types.									LD/HP	08/23/12
6	WAC Rev #		7.2	0					U-235 FEM	U-235 FEM Uncert	FGGR Flag	FGGR Test Period	LD/HP	08/23/12
7	WAC Ex. #								NULL	NULL	NULL	NULL	LD/HP	08/23/12
8	Cert Site		C2				Be <=100 kg	Be <= 1%	Be Present	Aqueous Material	Be Chem/Mech Bound	Compacted Wst		
9	Cert Date		8/24/12				Y	Y	Y	N	N	N	LD/HP	08/23/12
10	Waste Handling Code		RH	CH, RH										
11	Waste Type Code		MTRU	TRU, MTRU									LD/HP	08/23/12
12	Waste Stream BIR ID		AE-T009										LD/HP	08/23/12
13	Waste Stream MWIR ID		NONE	default to 0 for TRU			p(CI):	choose	1sigma	2sigma	95%CI		LD/HP	08/23/12
14	Generator Site ID		AE				0.6827	1sigma	1.0000	0.5000	0.5102		LD/HP	08/23/12
15	IDC Code		001				0.9545	2sigma	2.0000	1.0000	1.0204		LD/HP	08/23/12
16	Matrix Code		S5400				0.9500	95%CI	1.9600	0.9800	1.0000		LD/HP	08/23/12
17	Trucon Code		AE321C										LD/HP	08/23/12
18	Shipping Category						WWIS Req'd CI:	1sigma	1.0000	0.5000	0.5102		LD/HP	08/23/12
19	Tru Alpha Act	Ci	4.29E-01		4.289E-01		Fraction of MDL Reported on HGAS		1.0000					
20	Tru Alpha Act Uncert	1sigma Ci	4.87E-01	8.030E-01	Tru Alpha Act + 2sigma (Ci)								LD/HP	08/23/12
21	Tru Alpha Act Conc	nCi/g	1.71E+04		1.71E+04								LD/HP	08/23/12
22	Tru Alpha Act Conc Uncert	1sigma nCi/g	7.44E+03	3.198E+04	Tru Alpha Act Conc + 2sigma (Ci)								LD/HP	08/23/12
23	Pu239 Fiss Gm Eq	g	3.22E+00		3.216E+00								LD/HP	08/23/12
24	Pu239 Fiss Gm Eq Uncert	1sigma g	1.70E+00	6.620E+00	Pu239 Fiss Gm Eq + 2sigma (Ci)								LD/HP	08/23/12
25	Pu239 Eq Act	Ci	4.68E-01		4.676E-01								LD/HP	08/23/12
26	Decay Heat	watts	4.71E-02		4.712E-02								LD/HP	08/23/12
27	Decay Heat Uncert	1sigma watts	1.47E-02	6.18E-02	Decay Heat + 1sigma (watts)								LD/HP	08/23/12
28	Layers of Packaging		2										LD/HP	08/23/12
29	Fill Factor		85	percentage	Liner Lid Present	N							LD/HP	08/23/12
30	Liner Type		1	1 = plastic drum liner									LD/HP	08/23/12
31	Liner Punctured		Y		Liner Hole Size	457.2	(mm)						LD/HP	08/23/12
32	PCB Conc						PCB Waste	PCB Mass (kg)	Out of Service				LD/HP	08/23/12
33	Closure Date		5/9/2012	Watt-years	Waste Gen Date		N	NULL	NULL				LD/HP	08/23/12
34	Vent Date		5/9/2012	0.014									LD/HP	08/23/12
35	Filter Install Date		5/9/2012										LD/HP	08/23/12
36	Filter Manufacturer		NFT										LD/HP	08/23/12
37	Filter Serial Number(s)												LD/HP	08/23/12
38	Filter Model Number	NF012,NF013,NF020,NF9026	NF013										LD/HP	08/23/12
39	Number of Filters Installed		1										LD/HP	08/23/12
40	Aspiration Method ID		3										LD/HP	08/23/12
41	Gas Gen Rate			#VALUE!	<<Gas Gen Rate Calculated.		Avagdro's Number:	6.022142E+23	NIST				LD/HP	08/23/12
42	Hydrogen/Methane Gen Rate						Electron Charge	1.602176E-19 V	NIST					
43	Gas Gen Comp Date				Waste (kg)	Packaging (kg)	Total (kg)							
44	Gross Weight	kg	48.600		25.1	23.50	48.60							
45	Gross Weight Uncert	1sigma kg	0.5		max. reported	mda							LD/HP	08/23/12
46	Alpha Surf Cont	dpm/100 cm^2	0		0		Minimum Detectable Activity						LD/HP	08/23/12
47	Beta/Gamma Surf Cont	dpm/100 cm^2	0		0		Minimum Detectable Activity			Shipping Calcs			LD/HP	08/23/12
48	Neutron Dose Rate	mrem/hr	0.5		0.5		Minimum Detectable Activity			Total TBq	5.57E-01		LD/HP	08/23/12
49	Beta/Gamma Dose Rate	mrem/hr	4800		4800		Minimum Detectable Activity			Fraction	3.06E-02		LD/HP	08/23/12
50	Radionuclide		U-233	U-234	U-235	U-238	Pu-238	Pu-239	Pu-240	Pu-241	Pu-242	Am-241	LD/HP	08/23/12
51	Activity	Ci	9.38E-09	2.35E-04	7.19E-06	8.41E-06	2.06E-01	6.51E-02	4.47E-02	2.93E+00	1.09E-04	1.13E-01	LD/HP	08/23/12
52	Activity Uncert	1sigma Ci	7.56E-09	1.39E-04	4.60E-06	4.17E-06	1.22E-01	5.10E-02	3.34E-02	1.59E+00	5.99E-05	7.75E-02	LD/HP	08/23/12
53	Mass	grams	9.61E-07	3.72E-02	3.28E+00	2.47E+01	1.19E-02	1.03E+00	1.94E-01	2.82E-02	2.75E-02	3.26E-02		
54	Mass Uncert	1sigma grams	7.75E-07	2.20E-02	2.10E+00	1.23E+01	7.05E-03	8.11E-01	1.45E-01	1.53E-02	1.51E-02	2.23E-02		
55	calc Tru Alpha Act	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.06E-01	6.51E-02	4.47E-02	0.00E+00	1.09E-04	1.13E-01		
56	calc Tru Alpha Act Conc	nCi/g	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.21E+03	2.59E+03	1.78E+03	0.00E+00	4.34E+00	4.50E+03		
57	calc Act	Ci	9.38E-09	2.35E-04	7.19E-06	8.41E-06	2.06E-01	6.51E-02	4.47E-02	2.93E+00	1.09E-04	1.13E-01		
58	calc Act Conc	nCi/g	3.74E-04	9.36E+00	2.86E-01	3.35E-01	8.21E+03	2.59E+03	1.78E+03	1.17E+05	4.34E+00	4.50E+03		

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	A	B	C	D	E	F	G	H	I	J	K	L	M	N
59	calc Pu239 FGE	g	8.65E-07	0.00E+00	2.11E+00	0.00E+00	1.35E-03	1.03E+00	4.37E-03	6.34E-02	2.06E-04	6.09E-04		
60	calc Pu239 Eq Act	Ci	2.41E-09	0.00E+00	0.00E+00	0.00E+00	1.87E-01	6.51E-02	4.47E-02	5.75E-02	9.91E-05	1.13E-01		
61	calc Decay Heat	watts	2.73E-10	6.77E-06	1.98E-07	2.13E-07	6.82E-03	2.02E-03	1.39E-03	9.33E-05	3.21E-06	3.78E-03		
62	uncert Tru Alpha Act	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.22E-01	5.10E-02	3.34E-02	0.00E+00	5.99E-05	7.75E-02		
63	uncert Tru Alpha Act Conc	nCi/g	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.86E+03	2.03E+03	1.33E+03	0.00E+00	2.39E+00	3.09E+03		
64	uncert Act	Ci	7.56E-09	1.39E-04	4.60E-06	4.17E-06	1.22E-01	5.10E-02	3.34E-02	1.59E+00	5.99E-05	7.75E-02		
65	uncert Act Conc	nCi/g	3.01E-04	5.54E+00	1.83E-01	1.66E-01	4.86E+03	2.03E+03	1.33E+03	6.33E+04	2.39E+00	3.09E+03		
66	uncert Pu239 FGE	g	6.97E-07	0.00E+00	1.35E+00	0.00E+00	7.97E-04	8.11E-01	3.27E-03	3.44E-02	1.13E-04	4.18E-04		
67	uncert Pu239 Eq Act	Ci	1.94E-09	0.00E+00	0.00E+00	0.00E+00	1.11E-01	5.10E-02	3.34E-02	3.12E-02	5.45E-05	7.75E-02		
68	uncert Decay Heat	watts	2.20E-10	4.00E-06	1.27E-07	1.06E-07	4.04E-03	1.58E-03	1.04E-03	5.06E-05	1.77E-06	2.59E-03		
69	Shipping Calcs	9.17E+01	3.47E-07	8.70E-03	0.00E+00	0.00E+00	3.81E+01	1.20E+01	8.26E+00	1.09E+01	2.01E-02	2.09E+01		
70	49CFR173.433f		0.00%	0.01%	0.00%	0.00%	41.53%	13.12%	9.01%	11.83%	0.02%	22.78%		
71	Radionuclide		Cs-137	Ba-137m	Sr-90	Y-90								
72	Activity	Ci	3.62E+00	3.42E+00	2.32E+00	2.32E+00							LD/HP	08/23/12
73	Activity Uncert	1sigma Ci	1.04E+00	9.87E-01	7.18E-01	7.18E-01							LD/HP	08/23/12
74	Mass	grams	4.11E-02	6.36E-09	1.68E-02	4.26E-06	NULL	NULL	NULL	NULL	NULL	NULL	LD/HP	08/23/12
75	Mass Uncert	1sigma grams	1.18E-02	1.83E-09	5.20E-03	1.32E-06	NULL	NULL	NULL	NULL	NULL	NULL		
76	calc Tru Alpha Act	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NULL	NULL	NULL	NULL	NULL	NULL		
77	calc Tru Alpha Act Conc	nCi/g	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NULL	NULL	NULL	NULL	NULL	NULL		
78	calc Act	Ci	3.62E+00	3.42E+00	2.32E+00	2.32E+00	NULL	NULL	NULL	NULL	NULL	NULL		
79	calc Act Conc	nCi/g	1.44E+05	1.36E+05	9.24E+04	9.24E+04	NULL	NULL	NULL	NULL	NULL	NULL		
80	calc Pu239 FGE	g	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NULL	NULL	NULL	NULL	NULL	NULL		
81	calc Pu239 Eq Act	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NULL	NULL	NULL	NULL	NULL	NULL		
82	calc Decay Heat	watts	4.01E-03	1.35E-02	2.69E-03	1.28E-02	NULL	NULL	NULL	NULL	NULL	NULL		
83	uncert Tru Alpha Act	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NULL	NULL	NULL	NULL	NULL	NULL		
84	uncert Tru Alpha Act Conc	nCi/g	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NULL	NULL	NULL	NULL	NULL	NULL		
85	uncert Act	Ci	1.04E+00	9.87E-01	7.18E-01	7.18E-01	NULL	NULL	NULL	NULL	NULL	NULL		
86	uncert Act Conc	nCi/g	4.14E+04	3.93E+04	2.86E+04	2.86E+04	NULL	NULL	NULL	NULL	NULL	NULL		
87	uncert Pu239 FGE	g	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NULL	NULL	NULL	NULL	NULL	NULL		
88	uncert Pu239 Eq Act	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NULL	NULL	NULL	NULL	NULL	NULL		
89	uncert Decay Heat	watts	1.15E-03	3.89E-03	8.32E-04	3.97E-03	NULL	NULL	NULL	NULL	NULL	NULL		
90	Shipping Calcs		2.68E-01	0.00E+00	8.59E-01	4.29E-01	NULL	NULL	NULL	NULL	NULL	NULL		
91	49CFR173.433f		0.29%	0.00%	0.94%	0.47%	NULL	NULL	NULL	NULL	NULL	NULL		
92	Waste Material Parameter		PW											
93	Wgt of Mat Parms (kg or lbs)	kg	25.1										LD/HP	08/23/12
94	Radio Assay Method		8DTC1										LD/HP	08/23/12
95	Data Package Number		ANLRHDTC12007										LD/HP	08/23/12
96	Assay Date		8/8/2012					kg					LD/HP	08/23/12
97	Charz Method ID		8RHVE2				lbs	0.4536					LD/HP	08/23/12
98	Data Package Number		ANLRHVE12014				kg	1.0000					LD/HP	08/23/12
99	Charz Method Date		5/9/2012										LD/HP	08/23/12
100	Haz Codes		D004	D005	D006	D007	D008	D009	D010	D011	D019	D028	LD/HP	08/23/12
101	Haz Codes		D029	F002	F005								LD/HP	08/23/12
102	Haz Codes												LD/HP	08/23/12
103	Haz Codes													
104	Sample ID	Headspace Gas H/M	NULL											
105	Sample Type			HGHM									LD/HP	08/23/12
106	Layer No. Sampled				0								LD/HP	08/23/12
107	Date Sampled				Sample Site								LD/HP	08/23/12
108	Method ID			DTP-1.2-041									LD/HP	08/23/12
109	Data Package Number												LD/HP	08/23/12
110	CAS #		NULL	NULL									LD/HP	08/23/12
111	Analyte													
112	Concentration												LD/HP	08/23/12
113	units	%vol											LD/HP	08/23/12
114	Date Analyzed			NULL									LD/HP	08/23/12
115	B Detectable Flag												LD/HP	08/23/12
116	D Detectable Flag													
117	E Detectable Flag													
118	J Detectable Flag													
119	U Detectable Flag													
120	NA Detectable Flag		NA	NA									LD/HP	08/23/12
121														
122	Sample ID	Headspace Gas VOC												
123	Sample Type			HGVO									LD/HP	08/23/12
124	Layer No. Sampled												LD/HP	08/23/12
125	Date Sampled				SARP-Flammable VOCs (ppmv)			0					LD/HP	08/23/12

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	A	B	C	D	E	F	G	H	I	J	K	L	M	N
126	Method ID			DTP-1.2-041										
127	Data Package Number												LD/HP	08/23/12
128	Methanol Method ID												LD/HP	08/23/12
129	CAS #													
130	Analyte		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL			LD/HP	08/23/12
131	Concentration													
132	units	ppmv											LD/HP	08/23/12
133	Date Analyzed		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL			LD/HP	08/23/12
134	B Detectable Flag												LD/HP	08/23/12
135	D Detectable Flag													
136	E Detectable Flag													
137	J Detectable Flag													
138	U Detectable Flag													
139	NA Detectable Flag		NA	NA	NA	NA	NA	NA	NA	NA			LD/HP	08/23/12
140	SARP-Flammable Calc		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
141	CAS #													
142	Analyte		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL			LD/HP	08/23/12
143	Concentration													
144	units	ppmv											LD/HP	08/23/12
145	Date Analyzed		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL			LD/HP	08/23/12
146	B Detectable Flag												LD/HP	08/23/12
147	D Detectable Flag													
148	E Detectable Flag													
149	J Detectable Flag													
150	U Detectable Flag													
151	NA Detectable Flag		NA	NA	NA	NA	NA	NA	NA	NA			LD/HP	08/23/12
152	SARP-Flammable Calc		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
153	CAS #													
154	Analyte		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL			LD/HP	08/23/12
155	Concentration													
156	units	ppmv											LD/HP	08/23/12
157	Date Analyzed		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL			LD/HP	08/23/12
158	B Detectable Flag												LD/HP	08/23/12
159	D Detectable Flag													
160	E Detectable Flag													
161	J Detectable Flag													
162	U Detectable Flag													
163	NA Detectable Flag		NA	NA	NA	NA	NA	NA	NA	NA			LD/HP	08/23/12
164	SARP-Flammable Calc		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
165	CAS #													
166	Analyte		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL			LD/HP	08/23/12
167	Concentration													
168	units	ppmv											LD/HP	08/23/12
169	Date Analyzed		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL			LD/HP	08/23/12
170	B Detectable Flag												LD/HP	08/23/12
171	D Detectable Flag													
172	E Detectable Flag													
173	J Detectable Flag													
174	U Detectable Flag													
175	NA Detectable Flag		NA	NA	NA	NA	NA	NA	NA	NA			LD/HP	08/23/12
176	SARP-Flammable Calc		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
177	CAS #													
178	Analyte		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
179	Concentration													
180	units	ppmv												
181	Date Analyzed		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
182	B Detectable Flag													
183	D Detectable Flag													
184	E Detectable Flag													
185	J Detectable Flag													
186	U Detectable Flag													
187	NA Detectable Flag		NA	NA	NA	NA	NA	NA	NA	NA				

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	A	B	C	D	E	F	G	H	I	J	K	L	M	N
188	SARP-Flammable Calc		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
189			type	comment										
190	Comment													
191	Comment													
192	Comment													
193	Comment													
194	Comment													
195	Comment													
196	Comment													
197	Comment													
198	Comment													
199	Comment													
200														
201			Requirements Met?											
202	Free liquids <1% by volume		YES											
203	No non-rad. pyrophorics		YES											
204	Chemical compatability		YES											
205	No explosives		YES											
206	No corrosives		YES											
207	No pressurized containers		YES											
208	No sealed Containers >4 liters		YES											
209	Liner punctured/ filtered		YES											
210	Flammable VOCs <500ppmv		YES											
211	Container is in Approved Waste Stream Profile Form?	AERHDM	YES											
212	Can it be established through Process Knowledge that the concentration of flammable VOCs present in the headspace of the container is <= 500 ppm?.		YES											
213														
214														
215														
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CCP Certification Official

8/24/12
Date

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Lot #

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Attachment 2 – Container Data Sheet

BDR Number: ANLRH DTC 12007

Date:	8-8-12
Container No.:	1122
Probe Position:	30 Gallon
Instrument No.:	XCO 433
Probe No.:	XCO 434
Measured Background Dose Rate (mR/hr):	10
Gross Weight (kg):	48.6
Dose Rate 1 (mR/hr):	602
Dose Rate 2 (mR/hr):	660
Dose Rate 3 (mR/hr):	574
Dose Rate 4 (mR/hr):	542
Highest measured dose rate is greater than three times the measured background.	YES NO

Monty Harris	Monterry Harris	8-8-12
Printed Name	Signature	Date

Waste Container Dose-to-Curie Conversion Record

SCO 697 AERHDM Dose-to-Curie Spreadsheet Rev. 2 Addendum 3 Microsoft Excel 2003 and 2007; Microsoft Windows XP Professional 2002 and 2003

Operating Procedure		CCP-TP-504 REV 12		
Date of Survey		8/812		
Waste Stream Designation		AERHDM		
Container Number		1122		
Container Gross Weight		48.6	kg	
Waste Cans	Can #1	Can #2	Can #3	
Can Sizes	7	7		gallons
Estimate Fill Percentages	80	90		%
Container Net Weight		25.1		
Measured Container Dose Rate				
Quadrant #1		602	mR/hr	
Quadrant #2		660	mR/hr	
Quadrant #3		574	mR/hr	
Quadrant #4		542	mR/hr	
Average Dose Rate Minus Background		584.5	mR/hr	

Background 10 mR/hr

Nuclide	Curie Scaling Factors	Activity (Ci)	Grams	FGE	PECi	Watts	Uncertainty	Uncertainty in Curies	Uncertainty in Grams
U-233	2.59E-09	9.38E-09	9.62E-07	8.65E-07	2.41E-09	2.73E-10	80.58%	7.56E-09	7.75E-07
U-234	6.48E-05	2.35E-04	3.71E-02	0.00E+00	0.00E+00	6.76E-06	59.21%	1.39E-04	2.20E-02
U-235	1.99E-06	7.19E-06	3.28E+00	2.11E+00	0.00E+00	1.98E-07	63.94%	4.60E-06	2.10E+00
U-238	2.32E-06	8.41E-06	2.47E+01	0.00E+00	0.00E+00	2.13E-07	49.67%	4.17E-06	1.23E+01
Pu-238	5.70E-02	2.06E-01	1.19E-02	1.35E-03	1.88E-01	6.83E-03	59.33%	1.22E-01	7.07E-03
Pu-239	1.80E-02	6.51E-02	1.03E+00	1.03E+00	6.51E-02	2.02E-03	78.32%	5.10E-02	8.10E-01
Pu-240	1.23E-02	4.47E-02	1.94E-01	4.37E-03	4.47E-02	1.39E-03	74.75%	3.34E-02	1.45E-01
Pu-241	8.11E-01	2.93E+00	2.82E-02	6.35E-02	5.75E-02	9.34E-05	54.15%	1.59E+00	1.53E-02
Pu-242	3.01E-05	1.09E-04	2.74E-02	2.06E-04	9.90E-05	3.21E-06	55.02%	5.99E-05	1.51E-02
Am-241	3.11E-02	1.13E-01	3.25E-02	6.07E-04	1.13E-01	3.77E-03	68.78%	7.75E-02	2.23E-02
Cs-137	1.00E+00	3.62E+00	4.11E-02	0.00E+00	0.00E+00	4.01E-03	28.82%	1.04E+00	1.19E-02
Ba-137m	9.46E-01	3.42E+00	6.37E-09	0.00E+00	0.00E+00	1.35E-02	28.82%	9.87E-01	1.84E-09
Sr-90	6.40E-01	2.32E+00	1.68E-02	0.00E+00	0.00E+00	2.68E-03	31.01%	7.18E-01	5.20E-03
Y-90	6.40E-01	2.32E+00	4.26E-06	0.00E+00	0.00E+00	1.28E-02	31.01%	7.18E-01	1.32E-06
Totals		1.50E+01	2.94E+01	3.22E+00	4.68E-01	4.71E-02			

	Value	(one Sigma)	
TRU Alpha Activity Concentration	1.71E+04	7.44E+03	nCi/g
TRU Alpha Activity	4.29E-01	1.87E-01	Ci
Total Pu-239 Equiv Activity	4.68E-01	1.91E-01	Ci
Total Pu-239 Fissile Gram Equiv	3.22E+00	1.70E+00	g
Total Decay Heat	4.71E-02	1.47E-02	W
Volume Activity	1.32E-01	4.03E-02	Ci/L

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 5-9-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☒N/A		Final Container ☐ N/A	
Container or Package ID Number:		Container or Package ID Number: 1122	
Container Type:		Container Type: 30 GALLON CONTAINER	
Waste Matrix Code:		Waste Matrix Code: S5400	
Waste Stream:		Waste Stream: AEGHDM	
		Rigid Liner: ☒Y ☐N Type: 140 MIL	Rigid Liner Lid: ☐ Y ☒N
		Rigid Liner Vented or Hole Size: NA	
Percent Fill:	Percent Organic Waste:	Percent Fill: 85%	Percent Organic Waste: 10%
Layers of Confinement:	Closure Method:	Layers of Confinement: 1	Closure Method: HEAT SEALED FIBERBOARD
Comments (e.g., filter information, NCRs): NA			

Waste Description:

BOTTOM CAN: 984

TOP CAN: 999

07

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1122

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH-TRU Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
ERIC BOND (Print Name) — [signature] (Signature) — 5-9-12 (Date)

Visual Examination Operator 2:
GLORIA RUPPERT (Print Name) — Gloria Ruppert (Signature) — 5-9-12 (Date)

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 04-26-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒N/A	
Container or Package ID Number: 984		Container or Package ID Number:	
Container Type: 7-Gallon Container		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 80%	Percent Organic Waste: 10%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description: 7-Gallon Container-(IM)
Metal Pieces-(IM)
Empty Cans-(AM)
Metal Cable-(IM)
Metal Hardware-(IM)(AM)
Metal tubing-(AM)
Empty Plastic bottles-(P)
Metal clip-(IM)
Metal Rods-(IM)
Rubber Pieces-(R)
Paper-(C)
Saw blade-(IM)
Tape-(C)
Met-Mount Pieces-(IM)(P)
04-26-12 WMK
Cut up Boron ~~Carbide~~ carbide Control Rods-(IM)(OIM)

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Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 984

	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
[illegible]			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
William H. Riley — Print Name
Signature — 04-26-12 Date

Visual Examination Operator 2:
ERIC BOND — Print Name
Signature — 4-26-12 Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 5-2-12		Batch Number: N/A	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: N/A
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: N/A	Recording Stop: N/A
Initial Container ☐ N/A		Final Container ☒N/A	
Container or Package ID Number: 999		Container or Package ID Number:	
Container Type: 7 gallon container		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 90%	Percent Organic Waste: 10%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: N/A	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): N/A			

Waste Description: 7 gallon container (IM)
Metal hardware (AM) (IM)
Aluminum Can (AM)
wires (IM)
Plastic Labware (P)
Empty Metal Tubes (AM)
copper Tube (OM)
Metal Pieces (IM) (AM) (OM)
Metal Shavings (IM) (AM)
Plastic cap (P)
Aluminum Grating (AM)
Empty Plastic bottle (P)

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 999

Prohibited Items Summary	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
TP-128 Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: N/A

Visual Examination Operator 1:
Pat Beallis — Print Name
Pat Beallis — Signature
5-2-12 — Date

Visual Examination Operator 2:
William H. Riley — Print Name
Will-H-Ri — Signature
05-02-12 — Date

14

AGHCF RH-TRU 30-Gallon Waste Drum Datasheet

(The bracketed numbers in the left margin refer to the corresponding procedure step number.)

AGHCF Drum No. 1122

Section 1 — Fill out in accordance with NOD-AGHCF-OPS-303

[8.2.1] AGHCF Drum No. 1122

[8.2.14] Requisition Number: RW – 88006

[8.2.2] Drum Is Type A [ISI][1]: YES ☒ NO ☐

[8.2.5] Drum Inspection [ISI][1]: SAT ☒ UNSAT ☐

[8.2.6] Drum Vent Model No. [ISI][1]: NUCFIL-013

[8.2.6] Drum Vent Serial No. [ISI][1]: AL-1171

[8.2.7] Torque Wrench for Drum Vent
ID Number: ARG 218670
Calibration Due Date: 10-1-12

[8.2.21] Acceptance Criteria Met: YES ☒ NO ☐

ROBERT LEPPINK — FM Print Name
Robert Leppink — FM Sign Name
4/13/12 — Date

1 [ISI] identifies an In-Service Inspection specified in the Technical Safety Requirements

Section 2 — Fill out in accordance with NOD-AGHCF-OPS-305

[37] Top Waste Can No. 999

[37] Bottom Waste Can No. 984

[59] GLORIA RUPPERT — VEO Print Name
Gloria Ruppert — VEO Sign Name
5-9-12 — Date

[59] ERIC BOND — VEO Print Name
VEO Sign Name
5-9-12 — Date

[80.2] Torque Wrench for Ring Bolt
ID Number: 88733
Calibration Due Date: 6/23/12

[86] Date Loaded: 5/9/12

[86] Tamper Seal 1 No.: 6683

[86] Tamper Seal 2 No.: 6684

[89.2] Total Wt. Loaded Drum: 105 lbs

[Step 89.3] Spring Scale for Drum Weight
ID Number: 10759-2
Calibration Due Date: 9/30/2012

RH-TRU Dose to Curie Survey Log for 331 Shell

RWP # 2012-331-005

Drum # 1122_____

Instrument	Set Number	Cal. Due Date	Verify Daily Source Check Initials
RO-7	1267	Jan 31 2013	
ASP2 w NRD	2248	Jan 31 2013	
NE Electra	3865	Nov 30 2012	
Ludlum Mod.77-3	3766	Jan 31 2013	
RO-20	1701	Feb 28 2013	
DABRAS	2029	Feb 28 2013	

Instrument	Set #	Efficiency Alpha/Beta	Count Time	Type of Radiation	Type of Contamination
NE Electra	3865	0.199/0.309	2 min.	Alpha / Beta	Removable
DABRAS	2029	0.29/0.53	2 min.	Alpha / Beta	Removable

Instrument	Set #	Background -Alpha	Background -Beta
NE Electra	3865	0	357

Lv 4 Radiation Monitors	Turn Off (~~start of day~~)	Turn On (~~end of day~~)
Initials		

Smear – I/S Cask Lid: __N/A dpm/100cm²α _N/A____dpm/100cm² βγ (field check)

_N/A___ dpm/100cm²α N/A_____dpm/100cm² βγ (DABRAS)

Neutron Measurement: mrem/h (n)

(1) __<0.5____
(2) __<0.5__
(3) _<0.5____
(4) __<0.5_____

RO-7 Measurement: mrem/h (γ)

(1) 4800___
(2) 4500 ____
(3) 2900 ____
(4) 2400 ____

Smear –Vac-U-Lift Pad: BKGD__ dpm/100cm²α BKGD__dpm/100cm² βγ (field check)

_BKGD dpm/100cm²α BKGD___dpm/100cm² βγ (DABRAS)

Smear –Turntable: BKGD_ dpm/100cm²α BKGD_dpm/100cm² βγ (field check)

_BKGD__ dpm/100cm²α BKGD_dpm/100cm² βγ (DABRAS)

Name(s) / Signature(s): _J.Reed/ _____

Date / Time: 8/8/2012_____/ _14:57_____

Supervisor: _____

Waste Isolation Pilot Plant
Container Data Report

Report Statistics

Report Version:	**2.3**
WDS Instance:	**prd05.wipp.carlsbad.nm.us**
Generated on:	**August 19, 2013 10:44 AM**
Generated by:	**KIRKES, CRETA**
Total Pages:	**7**

Selection Criteria

Container Number:	**1123**

Container: 1123
Type: 40 - RH 30 gal TBO

Extended Status: APPROVED CERT IN APPROVED CERT CANISTER EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 08/24/2012
Waste Handling Code: RH
Disposal Date: 09/19/2012

Current Location Site: WI
Generator Site: AE
Destination Site ID: WI

Certification Program ID: C2
Shipping Program ID: C2

Overpack Container: AE0130
Overpack Type: REMOVABLE-LID 72-B CANISTER
Overpack Status: CERTIFICATION DATA APPROVED

Neutron Dose Rate (mrem/hr): 0.5
Beta Gamma Dose Rate (mrem/hr): 1900.0
Total Dose Rate (mrem/hr): 1900.5

FGE (g): 1.52E00
FGE Uncertainty (g): 8.1E-01
Gross Weight (kg): 53.20
Gross Weight Uncert (kg): 0.50
Decay Heat (W): 2.22E-02
Decay Heat Uncertainty (W): 7.14E-03

Shipment Data

Payload ID: **AE0130** Assembly ID: AE118788 Payload Complete? Y
Shipment Number: AER12023 Send Date: 09/10/2012 Receipt Date: 09/11/2012
Shipment Status: SHIPMENT RECEIVED AT DESTINATION

Emplacement Location

Panel: 6 Room: 2 Borehole: 019

Certification Data Values

Waste Stream Profile Code: AERHDM
Waste Type Code: MTRU
IDC Code: 001
Waste Matrix Code: S5400
WAC Revision Number: 7.2
Fill Factor (%): 85.00
Waste Stream BIR ID: AE-T009
Waste Stream MWIR ID: NONE

TRU Alpha Activity (Ci): 2.03E-01
TRU Alpha Activity Uncertainty (Ci): 8.96E-02
TRU Alpha Activity Concentration (Ci/g): 6.82E-06
PU-239 Equivalent Activity (PE-Ci): 2.21E-01
Alpha Surface Contamination (dpm/cm^2): 0.0
Beta/Gamma Surface Contamination (dpm/cm^2): 0.0

Transportation Data Values

Closure Date: 05/10/2012
Vent Date: 05/10/2012
Process Knowledge? Y
Waste Gen Date:
Content Code: AE321C
U-235 FEM (g):
U-235 FEM Uncert (g):
Be chemically/ mechanically bound:

Shipment Purpose: DISPOSAL
Machine Compacted? N
Liner Exists? Y
Liner Hole Size(mm):
Liner Lid Present? N
Layers of Packaging 2
Aqueous Material? N

Gas Generation Data Values

Measured FGGR (mol/s)	Measured TGRR (mol/s)	Truncated FGGR Test (Y/N)	Truncated FGGR Test Period (days)

Container: 1123
Type: 40 - RH 30 gal TBO

Extended Status: APPROVED CERT IN APPROVED CERT CANISTER EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 08/24/2012
Waste Handling Code: RH
Disposal Date: 09/19/2012

PCB Waste? N
PCB Mass (kg):
PCB Concentration (ppm):
PCB Out of Service Date:
Be Present? Y
Be <= 1% by weight? Y
Be mass <= 100kg? Y
Separation OK? Y
Packing Fraction (compaction level): non-compacted

Filters

Filter Model Number	Filter Diffusivity (mol/s/ml)	Quantity	Install Date
NF013	3.7E-06	1	05/10/2012

Certification Comments

Radionuclides

Radionuclide	Activity (Ci)	Activity Uncert (Ci)	Mass (g)	Mass Uncert (g)
AM-241	5.320E-02	3.680E-02	1.533E-02	1.061E-02
BA-137M	1.620E00	4.830E-01	3.011E-09	8.978E-10
CS-137	1.710E00	5.100E-01	1.943E-02	5.795E-03
PU-238	9.740E-02	5.830E-02	5.630E-03	3.370E-03
PU-239	3.070E-02	2.420E-02	4.881E-01	3.847E-01
PU-240	2.110E-02	1.590E-02	9.174E-02	6.913E-02
PU-241	1.390E00	7.580E-01	1.337E-02	7.288E-03
PU-242	5.140E-05	2.860E-05	1.295E-02	7.204E-03
SR-90	1.090E00	3.490E-01	7.899E-03	2.529E-03
U-233	4.430E-09	3.590E-09	4.539E-07	3.678E-07
U-234	1.110E-04	6.620E-05	1.756E-02	1.047E-02
U-235	3.390E-06	2.190E-06	1.548E00	1.000E00

Container: 1123
Type: 40 - RH 30 gal TBO

Extended Status: APPROVED CERT IN APPROVED CERT CANISTER EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 08/24/2012
Waste Handling Code: RH
Disposal Date: 09/19/2012

Radionuclides

Radionuclide	Activity (Ci)	Activity Uncert (Ci)	Mass (g)	Mass Uncert (g)
U-238	3.940E-06	2.000E-06	1.159E01	5.882E00
Y-90	1.090E00	3.490E-01	2.004E-06	6.415E-07

Material Parameters

Material Parameter	Description	Weight (kg)
8	PLASTICS	29.70
13	STEEL CONTAINER MATERIALS	16.36
14	PLASTIC/LINERS CONTAINER MATERIALS	7.14
	Waste Weight:	29.70
	Packaging Weight:	23.50
	Total Material Weight:	53.20

Hazardous Codes

Hazardous Code	Description
D004	ARSENIC
D005	BARIUM
D006	CADMIUM
D007	CHROMIUM
D008	LEAD
D009	MERCURY
D010	SELENIUM
D011	SILVER

Container: 1123
Type: 40 - RH 30 gal TBO

Extended Status: APPROVED CERT IN APPROVED CERT CANISTER EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 08/24/2012
Waste Handling Code: RH
Disposal Date: 09/19/2012

Hazardous Codes

Hazardous Code	Description
D019	CARBON TETRACHLORIDE
D028	1,2-DICHLOROETHANE
D029	1,1-DICHLOROETHYLENE
F002	SPENT HALOGENATED SOLVENTS
F005	SPENT NON-HALOGENATED SOLVENTS

Assay Methods

Labor Code	Assay Method	Description	Assay Date
C2	8DTC1	RH DOSE TO CURIE	08/08/2012

Non-Destructive Examination (NDE)

Labor Code	NDE Method	Description	Examination Date
C2	8RHVE2	VE OF NEWLY PACKAGED RH WASTE	05/10/2012

Edit Limit Check Results

Evaluation Date: 08/24/2012 13:30:28 Overall Status: PASS

Evaluation Code	Status	Return Code	Detailed Description
DI_CERT_ALL	PASS		
DI_CERT_BE	PASS		
DI_CERT_CERT	PASS		
DI_CERT_CHARZ	PASS		
DI_CERT_ED	PASS		
DI_CERT_EPA	PASS		

Container: 1123
Type: 40 - RH 30 gal TBO

Extended Status: APPROVED CERT IN APPROVED CERT CANISTER EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 08/24/2012
Waste Handling Code: RH
Disposal Date: 09/19/2012

Edit Limit Check Results

Evaluation Date: 08/24/2012 13:30:28 Overall Status: PASS

Evaluation Code	Status
DI_CERT_PCB	PASS
DI_CERT_PERC	PASS
DI_CERT_TRAMPAC	PASS
DSA	PASS
WAC	PASS
WAP_CERT	PASS

TRAMPAC Evaluation Results

Evaluation Date: Overall Status:

Evaluation Code	Status	Return Code	Detailed Description

History

Event Date/Time	Event Description	Reason
08/24/2012 13:30:28	INSERT DATA INTO THE DATABASE	
08/24/2012 13:30:28	SUCCESSFUL SUBMISSION FOR CERT	
08/24/2012 14:20:27	ASSIGNED TO OVERPACK	
08/24/2012 14:20:53	ASSIGNED TO OVERPACK	
08/24/2012 14:21:05	ASSIGNED TO OVERPACK	
08/24/2012 15:02:08	APPROVED FOR CERT	
08/27/2012 16:47:47	ASSIGNED TO OVERPACK	

Container: 1123

Type: 40 - RH 30 gal TBO

Extended Status: APPROVED CERT IN APPROVED CERT CANISTER EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 08/24/2012
Waste Handling Code: RH
Disposal Date: 09/19/2012

History

Event Date/Time	Event Description	Reason
08/27/2012 16:48:01	ASSIGNED TO OVERPACK	

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	RH WDS Master Template.xls Rev. 4 Addendum #4, SCO #1066 Excel 2003/2007 Microsoft Windows XP	Units	data										initial	date
2	Shipper Site ID		C2	Location ID	Dest Program ID	Shipping Purpose	comments				1123			
3	Waste Stream Profile		AERHDM	AE	WI	D							LD/HP	08/23/12
4	Container Number		1123										LD/HP	08/23/12
5	Container Type		RH drum-30 tbo	drum, swb, tdop, etc., see WWIS labels for valid types.									LD/HP	08/23/12
6	WAC Rev #		7.2	0					U-235 FEM	U-235 FEM Uncert	FGGR Flag	FGGR Test Period	LD/HP	08/23/12
7	WAC Ex. #								NULL	NULL	NULL	NULL	LD/HP	08/23/12
8	Cert Site		C2				Be <=100 kg	Be <= 1%	Be Present	Aqueous Material	Be Chem/Mech Bound	Compacted Wst		
9	Cert Date		8/23/12				Y	Y	Y	N	N	N	LD/HP	08/23/12
10	Waste Handling Code		RH	CH, RH										
11	Waste Type Code		MTRU	TRU, MTRU									LD/HP	08/23/12
12	Waste Stream BIR ID		AE-T009										LD/HP	08/23/12
13	Waste Stream MWIR ID		NONE				p(CI)	choose	1sigma	2sigma	95%CI		LD/HP	08/23/12
14	Generator Site ID		AE	default to 0 for TRU			0.6827	1sigma	1.0000	0.5000	0.5102		LD/HP	08/23/12
15	IDC Code		001				0.9545	2sigma	2.0000	1.0000	1.0204		LD/HP	08/23/12
16	Matrix Code		S5400				0.9500	95%CI	1.9600	0.9800	1.0000		LD/HP	08/23/12
17	Trucon Code		AE321C										LD/HP	08/23/12
18	Shipping Category						WWIS Req'd CI:	1sigma	1.0000	0.5000	0.5102		LD/HP	08/23/12
19	Tru Alpha Act	Ci	2.03E-01		2.025E-01		Fraction of MDL Reported on HGAS		1.0000					
20	Tru Alpha Act Uncert	1sigma Ci	8.96E-02	3.822E-01	Tru Alpha Act + 2sigma (Ci)								LD/HP	08/23/12
21	Tru Alpha Act Conc	nCi/g	6.82E+03		6.82E+03								LD/HP	08/23/12
22	Tru Alpha Act Conc Uncert	1sigma nCi/g	3.02E+03	1.286E+04	Tru Alpha Act Conc + 2sigma (Ci)								LD/HP	08/23/12
23	Pu239 Fiss Gm Eq	g	1.52E+00		1.517E+00								LD/HP	08/23/12
24	Pu239 Fiss Gm Eq Uncert	1sigma g	8.10E-01	3.140E+00	Pu239 Fiss Gm Eq + 2sigma (Ci)								LD/HP	08/23/12
25	Pu239 Eq Act	Ci	2.21E-01		2.208E-01								LD/HP	08/23/12
26	Decay Heat	watts	2.22E-02		2.223E-02								LD/HP	08/23/12
27	Decay Heat Uncert	1sigma watts	7.14E-03	2.93E-02	Decay Heat + 1sigma (watts)								LD/HP	08/23/12
28	Layers of Packaging		2										LD/HP	08/23/12
29	Fill Factor		85	percentage	Liner Lid Present	N							LD/HP	08/23/12
30	Liner Type		1	1 = plastic drum liner									LD/HP	08/23/12
31	Liner Punctured		Y		Liner Hole Size	457.2	(mm)						LD/HP	08/23/12
32	PCB Conc						PCB Waste	PCB Mass (kg)	Out of Service				LD/HP	08/23/12
33	Closure Date		5/10/2012	Watt-years	Waste Gen Date		N	NULL	NULL				LD/HP	08/23/12
34	Vent Date		5/10/2012	0.006									LD/HP	08/23/12
35	Filter Install Date		5/10/2012										LD/HP	08/23/12
36	Filter Manufacturer		NFT										LD/HP	08/23/12
37	Filter Serial Number(s)												LD/HP	08/23/12
38	Filter Model Number	NF012,NF013,NF020,NF9026	NF013										LD/HP	08/23/12
39	Number of Filters Installed		1										LD/HP	08/23/12
40	Aspiration Method ID		3										LD/HP	08/23/12
41	Gas Gen Rate			#VALUE!	<<Gas Gen Rate Calculated.		Avagdro's Number:	6.022142E+23		NIST			LD/HP	08/23/12
42	Hydrogen/Methane Gen Rate						Electron Charge	1.602176E-19	V	NIST				
43	Gas Gen Comp Date				Waste (kg)	Packaging (kg)	Total (kg)							
44	Gross Weight	kg	53.200		29.7	23.50	53.20							
45	Gross Weight Uncert	1sigma kg	0.5		max. reported	mda							LD/HP	08/23/12
46	Alpha Surf Cont	dpm/100 cm^2	0		0		Minimum Detectable Activity						LD/HP	08/23/12
47	Beta/Gamma Surf Cont	dpm/100 cm^2	0		0		Minimum Detectable Activity			Shipping Calcs			LD/HP	08/23/12
48	Neutron Dose Rate	mrem/hr	0.5		0.5		Minimum Detectable Activity			Total TBq	2.63E-01		LD/HP	08/23/12
49	Beta/Gamma Dose Rate	mrem/hr	1900		1900		Minimum Detectable Activity			Fraction	1.44E-02		LD/HP	08/23/12
50	Radionuclide		U-233	U-234	U-235	U-238	Pu-238	Pu-239	Pu-240	Highway Route Control?	No	Am-241	LD/HP	08/23/12
51	Activity	Ci	4.43E-09	1.11E-04	3.39E-06	3.94E-06	9.74E-02	3.07E-02	2.11E-02	1.39E+00	5.14E-05	5.32E-02	LD/HP	08/23/12
52	Activity Uncert	1sigma Ci	3.59E-09	6.62E-05	2.19E-06	2.00E-06	5.83E-02	2.42E-02	1.59E-02	7.58E-01	2.86E-05	3.68E-02	LD/HP	08/23/12
53	Mass	grams	4.54E-07	1.76E-02	1.55E+00	1.16E+01	5.63E-03	4.88E-01	9.17E-02	1.34E-02	1.29E-02	1.53E-02		
54	Mass Uncert	1sigma grams	3.68E-07	1.05E-02	1.00E+00	5.88E+00	3.37E-03	3.85E-01	6.91E-02	7.29E-03	7.20E-03	1.06E-02		
55	calc Tru Alpha Act	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.74E-02	3.07E-02	2.11E-02	0.00E+00	5.14E-05	5.32E-02		
56	calc Tru Alpha Act Conc	nCi/g	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.28E+03	1.03E+03	7.10E+02	0.00E+00	1.73E+00	1.79E+03		
57	calc Act	Ci	4.43E-09	1.11E-04	3.39E-06	3.94E-06	9.74E-02	3.07E-02	2.11E-02	1.39E+00	5.14E-05	5.32E-02		
58	calc Act Conc	nCi/g	1.49E-04	3.74E+00	1.14E-01	1.33E-01	3.28E+03	1.03E+03	7.10E+02	4.68E+04	1.73E+00	1.79E+03		

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	A	B	C	D	E	F	G	H	I	J	K	L	M	N
59	calc Pu239 FGE	g	4.09E-07	0.00E+00	9.95E-01	0.00E+00	6.36E-04	4.88E-01	2.06E-03	3.01E-02	9.71E-05	2.87E-04		
60	calc Pu239 Eq Act	Ci	1.14E-09	0.00E+00	0.00E+00	0.00E+00	8.85E-02	3.07E-02	2.11E-02	2.73E-02	4.67E-05	5.32E-02		
61	calc Decay Heat	watts	1.29E-10	3.20E-06	9.35E-08	9.99E-08	3.23E-03	9.52E-04	6.57E-04	4.42E-05	1.51E-06	1.78E-03		
62	uncert Tru Alpha Act	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.83E-02	2.42E-02	1.59E-02	0.00E+00	2.86E-05	3.68E-02		
63	uncert Tru Alpha Act Conc	nCi/g	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.96E+03	8.15E+02	5.35E+02	0.00E+00	9.63E-01	1.24E+03		
64	uncert Act	Ci	3.59E-09	6.62E-05	2.19E-06	2.00E-06	5.83E-02	2.42E-02	1.59E-02	7.58E-01	2.86E-05	3.68E-02		
65	uncert Act Conc	nCi/g	1.21E-04	2.23E+00	7.37E-02	6.73E-02	1.96E+03	8.15E+02	5.35E+02	2.55E+04	9.63E-01	1.24E+03		
66	uncert Pu239 FGE	g	3.31E-07	0.00E+00	6.43E-01	0.00E+00	3.81E-04	3.85E-01	1.56E-03	1.64E-02	5.40E-05	1.98E-04		
67	uncert Pu239 Eq Act	Ci	9.21E-10	0.00E+00	0.00E+00	0.00E+00	5.30E-02	2.42E-02	1.59E-02	1.49E-02	2.60E-05	3.68E-02		
68	uncert Decay Heat	watts	1.04E-10	1.91E-06	6.04E-08	5.07E-08	1.93E-03	7.50E-04	4.95E-04	2.41E-05	8.43E-07	1.23E-03		
69	Shipping Calcs	4.33E+01	1.64E-07	4.11E-03	0.00E+00	0.00E+00	1.80E+01	5.67E+00	3.90E+00	5.15E+00	9.50E-03	9.83E+00		
70	49CFR173.433f		0.00%	0.01%	0.00%	0.00%	41.57%	13.10%	9.01%	11.89%	0.02%	22.71%		
71	Radionuclide		Cs-137	Ba-137m	Sr-90	Y-90								
72	Activity	Ci	1.71E+00	1.62E+00	1.09E+00	1.09E+00							LD/HP	08/23/12
73	Activity Uncert	1sigma Ci	5.10E-01	4.83E-01	3.49E-01	3.49E-01							LD/HP	08/23/12
74	Mass	grams	1.94E-02	3.01E-09	7.90E-03	2.00E-06	NULL	NULL	NULL	NULL	NULL	NULL	LD/HP	08/23/12
75	Mass Uncert	1sigma grams	5.80E-03	8.98E-10	2.53E-03	6.42E-07	NULL	NULL	NULL	NULL	NULL	NULL		
76	calc Tru Alpha Act	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NULL	NULL	NULL	NULL	NULL	NULL		
77	calc Tru Alpha Act Conc	nCi/g	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NULL	NULL	NULL	NULL	NULL	NULL		
78	calc Act	Ci	1.71E+00	1.62E+00	1.09E+00	1.09E+00	NULL	NULL	NULL	NULL	NULL	NULL		
79	calc Act Conc	nCi/g	5.76E+04	5.45E+04	3.67E+04	3.67E+04	NULL	NULL	NULL	NULL	NULL	NULL		
80	calc Pu239 FGE	g	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NULL	NULL	NULL	NULL	NULL	NULL		
81	calc Pu239 Eq Act	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NULL	NULL	NULL	NULL	NULL	NULL		
82	calc Decay Heat	watts	1.89E-03	6.38E-03	1.26E-03	6.03E-03	NULL	NULL	NULL	NULL	NULL	NULL		
83	uncert Tru Alpha Act	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NULL	NULL	NULL	NULL	NULL	NULL		
84	uncert Tru Alpha Act Conc	nCi/g	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NULL	NULL	NULL	NULL	NULL	NULL		
85	uncert Act	Ci	5.10E-01	4.83E-01	3.49E-01	3.49E-01	NULL	NULL	NULL	NULL	NULL	NULL		
86	uncert Act Conc	nCi/g	1.72E+04	1.63E+04	1.18E+04	1.18E+04	NULL	NULL	NULL	NULL	NULL	NULL		
87	uncert Pu239 FGE	g	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NULL	NULL	NULL	NULL	NULL	NULL		
88	uncert Pu239 Eq Act	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NULL	NULL	NULL	NULL	NULL	NULL		
89	uncert Decay Heat	watts	5.64E-04	1.90E-03	4.05E-04	1.93E-03	NULL	NULL	NULL	NULL	NULL	NULL		
90	Shipping Calcs		1.27E-01	0.00E+00	4.04E-01	2.01E-01	NULL	NULL	NULL	NULL	NULL	NULL		
91	49CFR173.433f		0.29%	0.00%	0.93%	0.47%	NULL	NULL	NULL	NULL	NULL	NULL		
92	Waste Material Parameter		PW											
93	Wgt of Mat Parms (kg or lbs)	kg	29.7										LD/HP	08/23/12
94	Radio Assay Method		8DTC1										LD/HP	08/23/12
95	Data Package Number		ANLRHDTC12007										LD/HP	08/23/12
96	Assay Date		8/8/2012					kg					LD/HP	08/23/12
97	Charz Method ID		8RHVE2				lbs	0.4536					LD/HP	08/23/12
98	Data Package Number		ANLRHVE12014				kg	1.0000					LD/HP	08/23/12
99	Charz Method Date		5/10/2012										LD/HP	08/23/12
100	Haz Codes		D004	D005	D006	D007	D008	D009	D010	D011	D019	D028	LD/HP	08/23/12
101	Haz Codes		D029	F002	F005								LD/HP	08/23/12
102	Haz Codes												LD/HP	08/23/12
103	Haz Codes													
104	Sample ID	Headspace Gas H/M	NULL											
105	Sample Type			HGHM									LD/HP	08/23/12
106	Layer No. Sampled				0								LD/HP	08/23/12
107	Date Sampled					Sample Site							LD/HP	08/23/12
108	Method ID			DTP-1.2-041									LD/HP	03/23/12
109	Data Package Number												LD/HP	08/23/12
110	CAS #		NULL	NULL									LD/HP	08/23/12
111	Analyte													
112	Concentration												LD/HP	08/23/12
113	units	%vol											LD/HP	08/23/12
114	Date Analyzed			NULL									LD/HP	08/23/12
115	B Detectable Flag												LD/HP	08/23/12
116	D Detectable Flag													
117	E Detectable Flag													
118	J Detectable Flag													
119	U Detectable Flag													
120	NA Detectable Flag		NA	NA									LD/HP	08/23/12
121														
122	Sample ID	Headspace Gas VOC												
123	Sample Type			HGVO									LD/HP	08/23/12
124	Layer No. Sampled												LD/HP	08/23/12
125	Date Sampled					SARP-Flammable VOCs (ppmv)		0					LD/HP	08/23/12

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Excel 2003/2007 Microsoft Windows XP

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
126	Method ID			DTP-1.2-041										
127	Data Package Number												LD/HP	08/23/12
128	Methanol Method ID												LD/HP	08/23/12
129	CAS #													
130	Analyte		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL			LD/HP	08/23/12
131	Concentration													
132	units	ppmv											LD/HP	08/23/12
133	Date Analyzed		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL			LD/HP	08/23/12
134	B Detectable Flag												LD/HP	08/23/12
135	D Detectable Flag													
136	E Detectable Flag													
137	J Detectable Flag													
138	U Detectable Flag													
139	NA Detectable Flag		NA	NA	NA	NA	NA	NA	NA	NA			LD/HP	08/23/12
140	SARP-Flammable Calc		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
141	CAS #													
142	Analyte		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL			LD/HP	08/23/12
143	Concentration													
144	units	ppmv											LD/HP	08/23/12
145	Date Analyzed		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL			LD/HP	08/23/12
146	B Detectable Flag												LD/HP	08/23/12
147	D Detectable Flag													
148	E Detectable Flag													
149	J Detectable Flag													
150	U Detectable Flag													
151	NA Detectable Flag		NA	NA	NA	NA	NA	NA	NA	NA			LD/HP	08/23/12
152	SARP-Flammable Calc		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
153	CAS #													
154	Analyte		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL			LD/HP	08/23/12
155	Concentration													
156	units	ppmv											LD/HP	08/23/12
157	Date Analyzed		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL			LD/HP	08/23/12
158	B Detectable Flag												LD/HP	08/23/12
159	D Detectable Flag													
160	E Detectable Flag													
161	J Detectable Flag													
162	U Detectable Flag													
163	NA Detectable Flag		NA	NA	NA	NA	NA	NA	NA	NA			LD/HP	08/23/12
164	SARP-Flammable Calc		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
165	CAS #													
166	Analyte		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL			LD/HP	08/23/12
167	Concentration													
168	units	ppmv											LD/HP	08/23/12
169	Date Analyzed		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL			LD/HP	08/23/12
170	B Detectable Flag												LD/HP	08/23/12
171	D Detectable Flag													
172	E Detectable Flag													
173	J Detectable Flag													
174	U Detectable Flag													
175	NA Detectable Flag		NA	NA	NA	NA	NA	NA	NA	NA			LD/HP	08/23/12
176	SARP-Flammable Calc		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
177	CAS #													
178	Analyte		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
179	Concentration													
180	units	ppmv												
181	Date Analyzed		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
182	B Detectable Flag													
183	D Detectable Flag													
184	E Detectable Flag													
185	J Detectable Flag													
186	U Detectable Flag													
187	NA Detectable Flag		NA	NA	NA	NA	NA	NA	NA	NA				

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Addendum #4. SCO #1066
Excel 2003/2007 Microsoft Windows XP

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	A	B	C	D	E	F	G	H	I	J	K	L	M	N
188	SARP-Flammable Calc		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
189			type	comment										
190	Comment													
191	Comment													
192	Comment													
193	Comment													
194	Comment													
195	Comment													
196	Comment													
197	Comment													
198	Comment													
199	Comment													
200														
201			Requirements Met?											
202	Free liquids <1% by volume		YES											
203	No non-rad. pyrophorics		YES											
204	Chemical compatability		YES											
205	No explosives		YES											
206	No corrosives		YES											
207	No pressurized containers		YES											
208	No sealed Containers >4 liters		YES											
209	Liner punctured/ filtered		YES											
210	Flammable VOCs <500ppmv		YES											
211	Container is in Approved Waste Stream Profile Form?	AERHDM	YES											
212	Can it be established through Process Knowledge that the concentration of flammable VOCs present in the headspace of the container is <= 500 ppm?.		YES											
213														
214														
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CCP Certification Official

Date

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Lot #

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Attachment 2 – Container Data Sheet

BDR Number: ANLRHDTC12007

Date:	8-8-12
Container No.:	1123
Probe Position:	30 Gallon
Instrument No.:	XC0433
Probe No.:	XC0434
Measured Background Dose Rate (mR/hr):	10
Gross Weight (kg):	53.2
Dose Rate 1 (mR/hr):	283
Dose Rate 2 (mR/hr):	258
Dose Rate 3 (mR/hr):	249
Dose Rate 4 (mR/hr):	289
Highest measured dose rate is greater than three times the measured background.	YES NO

Monty Harris — Monterry Harris — 8-8-12

Printed Name — Signature — Date

Waste Container Dose-to-Curie Conversion Record

SCO 697 AERHDM Dose-to-Curie Spreadsheet Rev. 2 Addendum 3 Microsoft Excel 2003 and 2007; Microsoft Windows XP Professional 2002 and 2003

Operating Procedure	CCP-TP-504 REV 12			
Date of Survey	8/8/2012			
Waste Stream Designation	AERHDM			
Container Number	1123			
Container Gross Weight	53.2	kg		
Waste Cans	Can #1	Can #2	Can #3	
Can Sizes	7	7		gallons
Estimate Fill Percentages	80	80		%
Container Net Weight		29.7		

Measured Container Dose Rate			Background	
Quadrant #1	283	mR/hr	10	mR/hr
Quadrant #2	258	mR/hr		
Quadrant #3	249	mR/hr		
Quadrant #4	289	mR/hr		
Average Dose Rate Minus Background	259.75	mR/hr		

Nuclide	Curie Scaling Factors	Activity (Ci)	Grams	FGE	PECi	Watts	Uncertainty	Uncertainty in Curies	Uncertainty in Grams
U-233	2.59E-09	4.43E-09	4.54E-07	4.09E-07	1.14E-09	1.29E-10	80.95%	3.59E-09	3.68E-07
U-234	6.48E-05	1.11E-04	1.75E-02	0.00E+00	0.00E+00	3.19E-06	59.72%	6.62E-05	1.05E-02
U-235	1.99E-06	3.39E-06	1.55E+00	9.97E-01	0.00E+00	9.36E-08	64.41%	2.19E-06	9.98E-01
U-238	2.32E-06	3.97E-06	1.17E+01	0.00E+00	0.00E+00	1.01E-07	50.27%	2.00E-06	5.87E+00
Pu-238	5.70E-02	9.74E-02	5.63E-03	6.36E-04	8.86E-02	3.23E-03	59.83%	5.83E-02	3.37E-03
Pu-239	1.80E-02	3.07E-02	4.89E-01	4.89E-01	3.07E-02	9.53E-04	78.70%	2.42E-02	3.84E-01
Pu-240	1.23E-02	2.11E-02	9.17E-02	2.06E-03	2.11E-02	6.57E-04	75.15%	1.59E-02	6.89E-02
Pu-241	8.11E-01	1.39E+00	1.33E-02	3.00E-02	2.72E-02	4.41E-05	54.70%	7.58E-01	7.29E-03
Pu-242	3.01E-05	5.14E-05	1.30E-02	9.71E-05	4.67E-05	1.52E-08	55.56%	2.86E-05	7.20E-03
Am-241	3.11E-02	5.32E-02	1.53E-02	2.87E-04	5.32E-02	1.78E-03	69.21%	3.68E-02	1.06E-02
Cs-137	1.00E+00	1.71E+00	1.94E-02	0.00E+00	0.00E+00	1.89E-03	29.84%	5.10E-01	5.80E-03
Ba-137m	9.46E-01	1.62E+00	3.01E-09	0.00E+00	0.00E+00	6.38E-03	29.84%	4.83E-01	8.97E-10
Sr-90	6.40E-01	1.09E+00	7.92E-03	0.00E+00	0.00E+00	1.27E-03	31.96%	3.49E-01	2.53E-03
Y-90	6.40E-01	1.09E+00	2.01E-06	0.00E+00	0.00E+00	6.05E-03	31.96%	3.49E-01	6.42E-07
Totals		7.10E+00	1.39E+01	1.52E+00	2.21E-01	2.22E-02			

	Value	(one Sigma)	
TRU Alpha Activity Concentration	6.82E+03	3.02E+03	nCi/g
TRU Alpha Activity	2.03E-01	8.96E-02	Ci
Total Pu-239 Equiv Activity	2.21E-01	9.18E-02	Ci
Total Pu-239 Fissile Gram Equiv	1.52E+00	8.10E-01	g
Total Decay Heat	2.22E-02	7.14E-03	W
Volume Activity	6.26E-02	1.96E-02	Ci/L

Originator Monty Harris (Print Name)

Signed Monty Harris Date 8/14/12

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 5-10-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☒ N/A		Final Container ☐ N/A	
Container or Package ID Number:		Container or Package ID Number: 1123	
Container Type:		Container Type: 30 GALLON CONTAINER	
Waste Matrix Code:		Waste Matrix Code: S5400	
Waste Stream:		Waste Stream: AERHDM	
		Rigid Liner: ☒Y ☐N Type: 140 MIL	Rigid Liner Lid: ☐ Y ☒N
		Rigid Liner Vented or Hole Size: NA	
Percent Fill:	Percent Organic Waste:	Percent Fill: 85%	Percent Organic Waste: 40%
Layers of Confinement:	Closure Method:	Layers of Confinement: 1	Closure Method: HEAT SEALED FILTERED
Comments (e.g., filter information, NCRs): NA			

Waste Description:

BOTTOM CAN: 997

TOP CAN: 945

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1123

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
ERIC BOMA (Print Name) — Signature — 5-10-12 (Date)

Visual Examination Operator 2:
GLORIA RUPPERT (Print Name) — Gloria Ruppert (Signature) — 5-10-12 (Date)

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 4-27-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 997		Container or Package ID Number:	
Container Type: 7 GALLON CONTAINER		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 80%	Percent Organic Waste: 50%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7 GALLON CONTAINER (IM) FIBER INSULATION (OIM)
LIGHT FIXTURE (AM) (IM) EMPTY CANS (AM)
CAPS (P)
BROKEN GLASS (OIM) ORINGS (R)
EMPTY TUBES (AM) (IM) (R) COPPER SIFTER (OM)
METAL LABWARE (IM) DRY RAGS (C)
PAPER (C)
PLASTIC PIECES (P)

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 997

Additional Visual Examination	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
ERIC BOND — Print Name
Eric Bond — Signature
4-27-12 — Date

Visual Examination Operator 2:
William H. Riley — Print Name
William H. Riley — Signature
04-27-12 — Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 4-24-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: N/A	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 945		Container or Package ID Number:	
Container Type: 7 GALLON CONTAINER		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 80%	Percent Organic Waste: 60%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7 GALLON CONTAINER (IM) EB 4-24-12 ~~EMPTY~~ DRY RAGS (C)

CUT UP ELECTRICAL CORD (R) (OM) (IM) GLOVES (R)

PLASTIC LABWARE (P)

ELECTRIC DRILL (IM) (OM) (R)

BROKEN GLASS (OIM)

MET MOUNT FRAGMENTS (IM) (P)

PAPER (C)

TAPE (C)

CAPS (P)

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 945

	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
TRU 226 Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
ERIC BOND — Print Name
Eric Bond — Signature
4-24-12 — Date

Visual Examination Operator 2:
William H. Riley — Print Name
Will. H. Ri — Signature
04-24-12 — Date

AGHCF RH-TRU 30-Gallon Waste Drum Datasheet

(The bracketed numbers in the left margin refer to the corresponding procedure step number.)

AGHCF Drum No. 1123

Section 1 — Fill out in accordance with NOD-AGHCF-OPS-303

[8.2.1] AGHCF Drum No. 1123

[8.2.14] Requisition Number: RW – 88007

[8.2.2] Drum Is Type A [ISI][1]: YES ☒ NO ☐

[8.2.5] Drum Inspection [ISI][1]: SAT ☒ UNSAT ☐

[8.2.6] Drum Vent Model No. [ISI][1]: NUCFIL-013

[8.2.6] Drum Vent Serial No. [ISI][1]: AL-1167

[8.2.7] Torque Wrench for Drum Vent
ID Number: ARG 218670
Calibration Due Date: 10-1-12

[8.2.21] Acceptance Criteria Met: YES ☒ NO ☐

ROBERT LEPPINK — FM Print Name
Robert Leppink — FM Sign Name
4/13/12 — Date

1 [ISI] identifies an In-Service Inspection specified in the Technical Safety Requirements

Section 2 — Fill out in accordance with NOD-AGHCF-OPS-305

[37] Top Waste Can No. 945

[37] Bottom Waste Can No. 997

[59] ERIC BOND — VEO Print Name
[signature] — VEO Sign Name
5-10-12 — Date

[59] GLORIA RUPPERT — VEO Print Name
Gloria Ruppert — VEO Sign Name
5-10-12 — Date

[80.2] Torque Wrench for Ring Bolt
ID Number: 88733
Calibration Due Date: 6/23/12

[86] Date Loaded: 5/10/12

[86] Tamper Seal 1 No.: 6685

[86] Tamper Seal 2 No.: 6686

[89.2] Total Wt. Loaded Drum: 120 lbs

[Step 89.3] Spring Scale for Drum Weight
ID Number: 10759-2
Calibration Due Date: 9/30/2012

RH-TRU Dose to Curie Survey Log for 331 Shell

RWP # 2012-331-005

Drum # 1123_____

Instrument	Set Number	Cal. Due Date	Verify Daily Source Check Initials
RO-7	1267	Jan 31 2013	
ASP2 w NRD	2248	Jan 31 2013	
NE Electra	3865	Nov 30 2012	
Ludlum Mod.77-3	3766	Jan 31 2013	
RO-20	1701	Feb 28 2013	
DABRAS	2029	Feb 28 2013	

Instrument	Set #	Efficiency Alpha/Beta	Count Time	Type of Radiation	Type of Contamination
NE Electra	3865	0.199/0.309	2 min.	Alpha / Beta	Removable
DABRAS	2029	0.29/0.53	2 min.	Alpha / Beta	Removable

Instrument	Set #	Background -Alpha	Background -Beta
NE Electra	3865	0	357

Lv 4 Radiation Monitors	Turn Off (start of day)	Turn On (end of day)
Initials		

Smear – I/S Cask Lid: __N/A dpm/100cm²α _N/A____dpm/100cm² βγ (field check)

_N/A___ dpm/100cm²α N/A_____dpm/100cm² βγ (DABRAS)

Neutron Measurement: mrem/h (n)

(1) __<0.5____
(2) __<0.5__
(3) _<0.5____
(4) __<0.5_____

RO-7 Measurement: mrem/h (γ)

(1) 1600___
(2) 1200 ____
(3) 1600 ____
(4) 1900 ____

Smear –Vac-U-Lift Pad: BKGD__ dpm/100cm²α BKGD__dpm/100cm² βγ (field check)

_BKGD dpm/100cm²α BKGD___dpm/100cm² βγ (DABRAS)

Smear –Turntable: BKGD_ dpm/100cm²α BKGD_dpm/100cm² βγ (field check)

_BKGD__ dpm/100cm²α BKGD_dpm/100cm² βγ (DABRAS)

Name(s) / Signature(s): _J.Reed/ _____

Date / Time: 8/8/2012_____/ _15:15_____

Supervisor: _____

2. Canister AE0150 – which contains drums 1148, 1150 and 1153
   a. Waste Container Data Report from WDS for Canister AE0150
   b. Build Sheet
   c. TCO Load Sheet
   d. CIS for Lot 41
   e. AK Tracking Spreadsheet Vent/Closure Dates
   f. NCR/CAR check for Lot 41
   g. DRUM 1148
      i. Waste Container Data Report from WDS for drum 1148
      ii. WWIS/WDS Data Entry Spreadsheet
      iii. DTC BDR Data Sheets
      iv. VE BDR Data Sheets
      v. Filter Data
      vi. Surface Dose Rate Calculation Report
   h. DRUM 1150
      i. Waste Container Data Report from WDS for drum 1150
      ii. WWIS/WDS Data Entry Spreadsheet
      iii. DTC BDR Data Sheets
      iv. VE BDR Data Sheets
      v. Filter Data
      vi. Surface Dose Rate Calculation Report
   F. DRUM 1153
      vii. Waste Container Data Report from WDS for drum 1153
      viii. WWIS/WDS Data Entry Spreadsheet
      ix. DTC BDR Data Sheets
      x. VE BDR Data Sheets
      xi. Filter Data
      xii. Surface Dose Rate Calculation Report

Waste Isolation Pilot Plant
Canister Data Report

Report Statistics

Report Version:	**2.3**
WDS Instance:	**prd05.wipp.carlsbad.nm.us**
Generated on:	**August 19, 2013 10:29 AM**
Generated by:	**KIRKES, CRETA**
Total Pages:	**7**

Selection Criteria

Container Number: **AE0150**

Container: AE0150
Type: 11 - 72-B Removable Lid OP

Extended Status: APPROVED CERT EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 04/16/2013

Waste Handling Code: RH
Disposal Date: 05/01/2013

Current Location Site: WI
Generator Site: AE
Destination Site ID: WI

Certification Program ID: C2
Shipping Program ID: C2

Neutron Dose Rate (mrem/hr): 0.0
Beta Gamma Dose Rate (mrem/hr): 1300.0
Total Dose Rate (mrem/hr): 1300.0

FGE (g): 2.414E02
FGE Uncertainty (g): 7.449E00

Gross Weight (kg): 830.27
Gross Weight Uncert (kg): 25.86

Decay Heat (W): 6.7E-01
Decay Heat Uncertainty (W): 2.707E-02

Shipment Data

Payload ID: **AE0150** Assembly ID: AE128421 Payload Complete? Y
Shipment Number: AER13007 Send Date: 04/22/2013 Receipt Date: 04/23/2013
Shipment Status: SHIPMENT RECEIVED AT DESTINATION

Emplacement Location

Panel: 6 Room: 1 Borehole: 047

Certification Data Values

Waste Stream Profile Code: AERHDM
Waste Type Code: MTRU
IDC Code: 001
Waste Matrix Code: S5400
WAC Revision Number: 7.3
Fill Factor (%): 31.52

TRU Alpha Activity (Ci): 6.92E00
TRU Alpha Activity Uncertainty (Ci): 4.03E-01
TRU Alpha Activity Concentration (Ci/g): 9.733E-05
PU-239 Equivalent Activity (PE-Ci): 6.96E00
Alpha Surface Contamination (dpm/cm^2): 19.0
Beta/Gamma Surface Contamination (dpm/cm^2): 199.0

Transportation Data Values

Closure Date: 04/16/2013 Shipment Purpose: DISPOSAL
Vent Date: 04/16/2013 Machine Compacted? N

Waste Gen Date:
Content Code: AE322E
U-235 FEM (g):
U-235 FEM Uncert (g):
Be chemically/ mechanically bound:

Filters

Filter Model Number	Filter Diffusivity (mol/s/ml)	Quantity	Install Date

Container: AE0150

Type: 11 - 72-B Removable Lid OP

Extended Status: APPROVED CERT EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 04/16/2013

Waste Handling Code: RH
Disposal Date: 05/01/2013

PCB Waste? N
PCB Mass (kg):
PCB Concentration (ppm):
PCB Out of Service Date:
Be Present? Y
Be <= 1% by weight? Y

Governing Packing Fraction (compaction level): non-compacted

Filters

Filter Model Number	Filter Diffusivity (mol/s/ml)	Quantity	Install Date
NF019D	1.85E-05	1	04/16/2013

Certification Comments

Radionuclides

Radionuclide	Activity (Ci)	Activity Uncert (Ci)	Mass (g)	Mass Uncert (g)
AM-241	9.170E-01	3.448E-01	2.643E-01	9.937E-02
BA-137M	4.260E01	3.561E00	7.918E-08	6.618E-09
CM-244	3.336E-04	2.125E-04	4.078E-06	2.598E-06
CM-245	5.490E-08	3.491E-08	3.155E-07	2.006E-07
CS-134	9.190E-06	7.675E-07	7.015E-09	5.859E-10
CS-137	4.500E01	3.758E00	5.114E-01	4.271E-02
EU-154	2.694E-02	2.248E-03	1.009E-04	8.419E-06
PU-238	2.126E-01	9.537E-02	1.229E-02	5.513E-03
PU-239	4.250E00	1.466E-01	6.757E01	2.331E00
PU-240	1.545E00	1.075E-01	6.717E00	4.674E-01
PU-241	3.661E00	1.375E00	3.520E-02	1.322E-02
PU-242	1.517E-04	3.049E-05	3.821E-02	7.680E-03

Container: AE0150
Type: 11 - 72-B Removable Lid OP

Extended Status: APPROVED CERT EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 04/16/2013

Waste Handling Code: RH
Disposal Date: 05/01/2013

Radionuclides

Radionuclide	Activity (Ci)	Activity Uncert (Ci)	Mass (g)	Mass Uncert (g)
SR-90	3.510E01	2.929E00	2.543E-01	2.122E-02
U-233	8.680E-07	1.600E-07	8.893E-05	1.640E-05
U-234	2.048E-02	3.766E-03	3.241E00	5.959E-01
U-235	5.910E-04	2.306E-05	2.699E02	1.053E01
U-238	6.100E-06	1.521E-06	1.794E01	4.473E00
Y-90	3.510E01	2.929E00	6.452E-05	5.384E-06

Material Parameters

Material Parameter	Description	Weight (kg)
1	IRON BASE METAL ALLOYS	237.78
8	PLASTICS	71.10
13	STEEL CONTAINER MATERIALS	517.01
14	PLASTIC/LINERS CONTAINER MATERIALS	4.26
	Waste Weight:	308.88
	Packaging Weight:	521.27
	Total Material Weight:	830.15

Hazardous Codes

Hazardous Code	Description
D004	ARSENIC
D005	BARIUM
D006	CADMIUM

Container: AE0150
Type: 11 - 72-B Removable Lid OP

Extended Status: APPROVED CERT EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 04/16/2013

Waste Handling Code: RH
Disposal Date: 05/01/2013

Hazardous Codes

Hazardous Code	Description
D007	CHROMIUM
D008	LEAD
D009	MERCURY
D010	SELENIUM
D011	SILVER
D019	CARBON TETRACHLORIDE
D028	1,2-DICHLOROETHANE
D029	1,1-DICHLOROETHYLENE
F002	SPENT HALOGENATED SOLVENTS
F005	SPENT NON-HALOGENATED SOLVENTS

Edit Limit Check Results

Evaluation Date: 04/16/2013 10:07:28 Overall Status: PASS

Evaluation Code	Status	Return Code	Detailed Description
DI_CERT_ALL	PASS		
DI_CERT_BE	PASS		
DI_CERT_CERT	PASS		
DI_CERT_CHARZ	PASS		
DI_CERT_ED	PASS		
DI_CERT_EPA	PASS		
DI_CERT_PCB	PASS		

Container: AE0150

Type: 11 - 72-B Removable Lid OP

Extended Status: APPROVED CERT EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 04/16/2013

Waste Handling Code: RH
Disposal Date: 05/01/2013

Edit Limit Check Results

Evaluation Date: 04/16/2013 10:07:28 Overall Status: PASS

Evaluation Code	Status
DI_CERT_PERC	PASS
DI_CERT_TRAMPAC	PASS
DSA	PASS
WAC	PASS
WAP_CERT	PASS

TRAMPAC Evaluation Results

Evaluation Date: 04/16/2013 10:07:28 Overall Status: PASS

Evaluation Code	Status	Return Code	Detailed Description
CANISTER_72B_ALL	PASS		
CANISTER_72B_ASP	PASS		
CANISTER_72B_CONT	PASS		
CANISTER_72B_FIL	PASS		
CANISTER_72B_GVE	PASS		
CANISTER_72B_NUC	PASS		
CANISTER_72B_PDH	PASS		
CANISTER_72B_RDR	PASS		
CANISTER_72B_WGT	PASS		

Inner Containers

Container Number	Type Code	Content Code	Gross Weight + Error	FGE + 2x Error	Waste Stream
1148	40 - RH 30 gal TBO	AE322E	104.50	8.096E01	AERHDM
1150	40 - RH 30 gal TBO	AE322E	105.50	1.021E02	AERHDM

Container: AE0150

Type: 11 - 72-B Removable Lid OP

Extended Status: APPROVED CERT EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 04/16/2013

Waste Handling Code: RH
Disposal Date: 05/01/2013

Inner Containers

Container Number	Type Code	Content Code	Gross Weight + Error	FGE + 2x Error	Waste Stream
1153	40 - RH 30 gal TBO	AE322E	100.50	8.398E01	AERHDM

History

Event Date/Time	Event Description	Reason
04/16/2013 10:07:30	SUCCESSFUL SUBMISSION FOR CERT	
04/16/2013 10:36:06	APPROVED FOR CERT	
04/16/2013 10:36:19	ASSIGNED TO PAYLOAD	

Generated: 4/10/2013 10:29

Canister #: AE0150

Canister Gross Weight + Error

856.13 kg

1,887.78 lbs

Canister Content

Code/Governing Shipping Period (days): AE322E / 60

Canister Filters

Filter Model	Quantity
NF019D	1

Inner Containers

Container Number	Gross (kg)	Wgt+Err (lbs)	PCB Waste?	Be Present?	Total Dose Rate (mrem/hr)	Content Code	Waste Stream Profile	Filter Model	Qty
1150	105.5	232.63	N	Y	41860	AE322E	AERHDM	NF013	1
1148	104.5	230.42	N	Y	54740	AE322E	AERHDM	NF013	1
1153	100.5	221.6	N	Y	34800	AE322E	AERHDM	NF013	1

Attachment 1 – RLC Loading Form

RLC Inspection

RLC Canister ID: AE0150
RLC Serial Number: 110070

Filter Type Number	Filter Serial Numbers	Date Filter Installed
1 NUCFIL-019DS	1 DL-448	1 4-16-13
2 N/A	2 N/A	2 N/A
3 N/A	3 N/A	3 N/A
4 N/A	4 N/A	4 N/A

Pintle Cap Screws
Torque Wrench Serial Number: N/A Cal Due Date: N/A

Filters/Pipe Plugs
Torque Wrench Serial Number: X60502 Cal Due Date: 7-16-13

Maintenance/Inspections Complete
Canister Loading Operator
Printed Name Mike Tyson Signature [signature] Date 4-16-13

Dunnage Container is empty? YES ☐ NO ☐ NA ☒

Dunnage Container is dry? YES ☐ NO ☐ NA ☒

Dunnage Container vent port plug removed? YES ☐ NO ☐ NA ☒

Dunnage Container Weight in pounds (lbs) : N/A

RH Waste Container Numbers	Operator Initials	Peer Verifier Initials
1148	[initials]	RY
1150	[initials]	RY
1153	[initials]	RY

Peer Verifier – Waste containers loaded into RLC match RH Waste Container Numbers listed above.
Printed Name Ronnie York Signature [signature] Date 4-16-13

RLC Closure Date: 4-16-13

Gross Weight in pounds (lbs) : 1860
Load Cell Serial Number: XC0525 Calibration Due Date: 2-13-14

Canister Loading Operator
Printed Name Mike Tyson Signature [signature] Date 4-16-13

Supervisor
Printed Name Ronnie York Signature [signature] Date 4-16-13

Argonne Radiological Survey Report

Survey #:	20130416 M_W 331 JSS 02
Date / Time:	04/16/2013 10:10:00 AM
Status:	Approved

Description:	Removable Lid Canister Survey				
Survey Purpose:	Job Specific Survey (e.g.for RWP)			Cross Ref #:	
Survey Requestor:	Dukes, Jeffrey D.	Division:	NWM	Department:	
Building:	331	Room:	YARD	Technicians:	
Location:		RWP #:	2013-331-001 R.01	HPT	Wilkins, Marlen (212835)
Submitter:	Wilkins, Marlen	Submit Date:	04/16/2013		
Reviewer:	Cooney, Joseph, Jr.	Review Date	04/16/2013		

Survey Instrument Summary

2029:	ANL: DABRAS, GATE: GP7-600, BERTH: MZ200
Calibration Date:	February 28, 2014
Efficiency:	High Efficiency

Value Type	Value	Unit of Measure
Bkgd β	282.98	cpm
Bkgd α	2.3	cpm
Eff β high	0.531	cpm/dpm
Eff β mid	0.334	cpm/dpm
Eff α	0.299	cpm/dpm
MDA β	77	dpm/100cm²
MDA α	16.4	dpm/100cm²
Ts	2	min
Tb	100	min

3764:	LUD: 78
Calibration Date:	August 31, 2013
Efficiency:	Mid Efficiency

Value Type	Value	Unit of Measure
Bkgd Dose	< 0.1	mR/h

Survey Comments

Comment	Commenter	Comment Date
RLC AE0150 contains (3) drums- #1148, #1150 and #1153.	Wilkins, Marlen(212835)	Apr 16, 2013 10:22 AM

Printed or electronically downloaded copies may be obsolete. Before using such a copy for work direction, employees must verify that it is current by comparing its revision number to that shown in the on-line version.

Survey Points

Survey Point: 1	RLC #AE0150 Highest noted (Smears 1-4) See attachment.		
Instr. Set #: 2029 **ANL: DABRAS, GATE: GP7-600, BERTH: MZ200**	**Value Type**	**Value**	**Distance**
	Removable β (Use Beta High)	23.6 dpm/100cm²	N/A
	Removable α	0 dpm/100cm²	N/A
	Gross Removable β (Use Beta High)	295.5 cpm/100cm²	N/A
	Gross Removable α	2 cpm/100cm²	N/A
Instr. Set #: 3764 **LUD: 78**	**Value Type**	**Value**	**Distance**
	Gross γ	1300 mR/h	0 cm

Survey Point: 2	Highest general area dose rate around loaded silo.		
Instr. Set #: 3764 **LUD: 78**	**Value Type**	**Value**	**Distance**
	Gross γ	26.3 mR/h	30 cm

Survey Point: 3	Highest general area dose rate on platform after RLC loaded.		
Instr. Set #: 3764 **LUD: 78**	**Value Type**	**Value**	**Distance**
	Gross γ	7.2 mR/h	

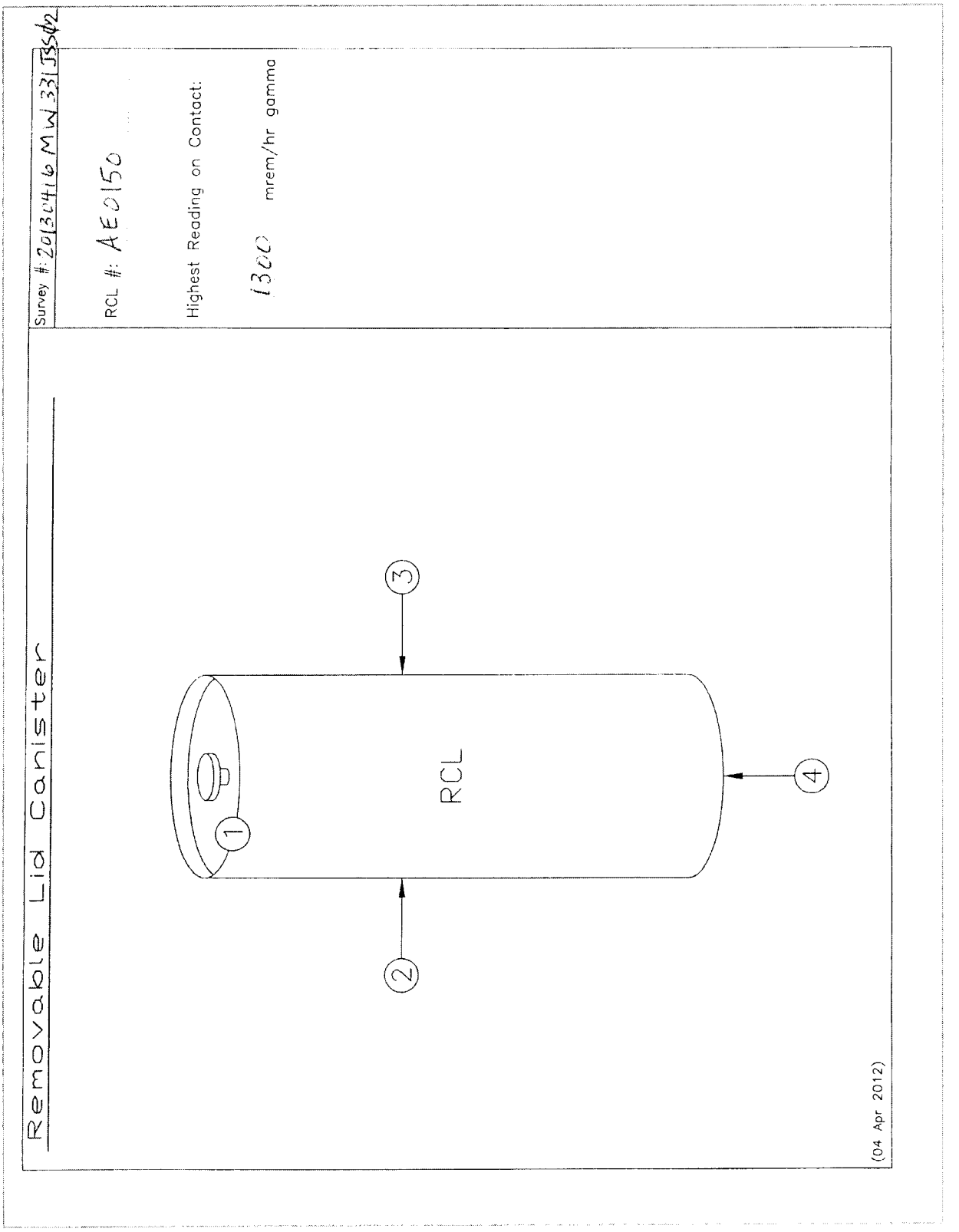
Survey Attachments

Attachment Type	Filename	Content Length	Last Update Date
image/jpeg	RLC AE0150_04-16-2013 .jpg	150375	Apr 16, 2013 10:24 AM

Printed or electronically downloaded copies may be obsolete. Before using such a copy for work direction, employees must verify that it is current by comparing its revision number to that shown in the on-line version.

Appendix: Attached Survey Photos

RLC AE0150 04-16-2013 .jpg



Printed or electronically downloaded copies may be obsolete. Before using such a copy for work direction, employees must verify that it is current by comparing its revision number to that shown in the on-line version.

CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

Waste Stream: # AERHDM

Lot # 41

Container ID Number	Historical Container ID	NDA BDR or Radiological Characterization BDR (CH only)	VE BDR	RTR BDR	Solids Sampling BDR	Solids Analytical BDR	Load Management/ Overpack Yes	Permit Required Headspace Gas BDR			
								Sample	Analysis		
1146	NA	ANLE-RH-50-62	ANLRHVE12019	NA	NA	NA		NA	NA	NA	NA
1148	NA	ANLE-RH-50-63	ANLRHVE12019	NA	NA	NA		NA	NA	NA	NA
1150	NA	ANLE-RH-50-64	ANLRHVE12019	NA	NA	NA		NA	NA	NA	NA
1153	NA	ANLE-RH-50-67	ANLRHVE12019	NA	NA	NA		NA	NA	NA	NA
1154	NA	ANLE-RH-50-68	ANLRHVE12019	NA	NA	NA		NA	NA	NA	NA

Laura Nelson
Signature of Site Project Manager

Laura Nelson
Printed Name

4-17-13
Date

CIS-001

AK VENT/CLOSURE DATES FOR INNER DRUMS OF CANISTER AE0150 - AUDIT PURPOSES ONLY

CONTAINER ID	WASTE STREAM	AK REPORT	WASTE MATRIX CODE	VENT DATE	CLOSURE DATE
1150	AERHDM	CCP-AK-ANLE-500	S5400	8/15/2012	8/15/2012
1148	AERHDM	CCP-AK-ANLE-500	S5400	8/15/2012	8/15/2012
1153	AERHDM	CCP-AK-ANLE-500	S5400	8/17/2012	8/17/2012

Dominguez, Lena - NWP

From: Mueller, Terry - NWP
Sent: Thursday, April 04, 2013 9:17 AM
To: Dominguez, Lena - NWP; Pettus, Helen - NWP; Soaterna, Carolina - NWP; Valenzuela, Bobbie - NWP
Cc: Walker, Mak (Maryann) - NWP; Jones, Laura - NWP
Subject: FW: NCR/CAR check for ANL RH AERHDM Lot 41
Attachments: NCR_BDR_CONTAINER_CHECK_ANL RH AERHDM Lot 41.xls

There are no NCR or CAR dispositions that impact the acceptability of these containers, alternate container IDs, and associated BDRs for certification and shipping as listed on the attached. This check was verified independently.

Thanks!

TERRY L. MUELLER
Assurance Programs
MS GS-103
work (575)-234-7016
fax (575)-234-7042

Nuclear Waste Partnership LLC

A URS-led partnership with B&W and AREVA
Contractor to the Department of Energy

From: Pettus, Helen - NWP
Sent: Thursday, April 04, 2013 9:02 AM
To: Gomez, Chris - NWP; Jones, Laura - NWP; Kantrowitz, Rich - NWP; Klingler, Larry - NWP; Mueller, Terry - NWP; Walker, Mak (Maryann) - NWP
Cc: Kirkes, Creta - NWP
Subject: NCR/CAR check for ANL RH AERHDM Lot 41

Please do an NCR/CAR check for ANL RH AERHDM Lot 41.

Thanks,

Helen Pettus
Central Characterization Program
Nuclear Waste Partnership LLC
Contractor for the U.S. Department of Energy
Waste Isolation Pilot Plant
575-234-7696 (W)
helen.pettus@wipp.ws

Waste Isolation Pilot Plant
Container Data Report

Report Statistics

Report Version:	**2.3**
WDS Instance:	**prd05.wipp.carlsbad.nm.us**
Generated on:	**August 19, 2013 10:29 AM**
Generated by:	**KIRKES, CRETA**
Total Pages:	**7**

Selection Criteria

Container Number: **1148**

Container: 1148
Type: 40 - RH 30 gal TBO

Extended Status: APPROVED CERT IN APPROVED CERT CANISTER EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 04/05/2013
Waste Handling Code: RH
Disposal Date: 05/01/2013

Current Location Site: WI
Generator Site: AE
Destination Site ID: WI

Certification Program ID: C2
Shipping Program ID: C2

Overpack Container: AE0150
Overpack Type: REMOVABLE-LID 72-B CANISTER
Overpack Status: CERTIFICATION DATA APPROVED

Neutron Dose Rate (mrem/hr): 0.0
Beta Gamma Dose Rate (mrem/hr): 54740.0
Total Dose Rate (mrem/hr): 54740.0

FGE (g): 7.32E01
FGE Uncertainty (g): 3.88E00

Gross Weight (kg): 104.00
Gross Weight Uncert (kg): 0.50

Decay Heat (W): 1.99E-01
Decay Heat Uncertainty (W): 1.35E-02

Shipment Data

Payload ID: **AE0150** Assembly ID: AE128421 Payload Complete? Y
Shipment Number: AER13007 Send Date: 04/22/2013 Receipt Date: 04/23/2013
Shipment Status: SHIPMENT RECEIVED AT DESTINATION

Emplacement Location

Panel: 6 Room: 1 Borehole: 047

Certification Data Values

Waste Stream Profile Code: AERHDM
Waste Type Code: MTRU
IDC Code: 001
Waste Matrix Code: S5400
WAC Revision Number: 7.3
Fill Factor (%): 85.00
Waste Stream BIR ID: AE-T009
Waste Stream MWIR ID: NONE

TRU Alpha Activity (Ci): 1.99E00
TRU Alpha Activity Uncertainty (Ci): 1.69E-01
TRU Alpha Activity Concentration (Ci/g): 8.4E-05
PU-239 Equivalent Activity (PE-Ci): 2.0E00
Alpha Surface Contamination (dpm/cm^2): 0.0
Beta/Gamma Surface Contamination (dpm/cm^2): 0.0

Transportation Data Values

Closure Date: 08/15/2012
Vent Date: 08/15/2012
Process Knowledge? Y
Waste Gen Date:
Content Code: AE322E
U-235 FEM (g):
U-235 FEM Uncert (g):
Be chemically/ mechanically bound:

Shipment Purpose: DISPOSAL
Machine Compacted? N
Liner Exists? Y
Liner Hole Size(mm):
Liner Lid Present? N
Layers of Packaging 1
Aqueous Material? N

Gas Generation Data Values

Measured FGGR (mol/s)	Measured TGRR (mol/s)	Truncated FGGR Test (Y/N)	Truncated FGGR Test Period (days)

Container: 1148
Type: 40 - RH 30 gal TBO

Extended Status: APPROVED CERT IN APPROVED CERT CANISTER EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 04/05/2013
Waste Handling Code: RH
Disposal Date: 05/01/2013

PCB Waste? N
PCB Mass (kg):
PCB Concentration (ppm):
PCB Out of Service Date:
Be Present? Y
Be <= 1% by weight? Y
Be mass <= 100kg? Y
Separation OK? Y
Packing Fraction (compaction level): non-compacted

Filters

Filter Model Number	Filter Diffusivity (mol/s/ml)	Quantity	Install Date
NF013	3.7E-06	1	08/15/2012

Certification Comments

Radionuclides

Radionuclide	Activity (Ci)	Activity Uncert (Ci)	Mass (g)	Mass Uncert (g)
AM-241	2.230E-01	1.350E-01	6.427E-02	3.890E-02
BA-137M	1.290E01	1.850E00	2.398E-08	3.439E-09
CM-244	6.660E-05	6.300E-05	8.142E-07	7.702E-07
CM-245	1.090E-08	1.030E-08	6.264E-08	5.920E-08
CS-134	2.770E-06	3.980E-07	2.115E-09	3.038E-10
CS-137	1.360E01	1.950E00	1.545E-01	2.216E-02
EU-154	8.120E-03	1.170E-03	3.041E-05	4.382E-06
PU-238	5.380E-02	3.960E-02	3.110E-03	2.289E-03
PU-239	1.310E00	7.800E-02	2.083E01	1.240E00
PU-240	4.060E-01	4.680E-02	1.765E00	2.035E-01
PU-241	8.920E-01	5.400E-01	8.577E-03	5.192E-03
PU-242	3.100E-05	9.400E-06	7.809E-03	2.368E-03

Container: 1148
Type: 40 - RH 30 gal TBO

Extended Status: APPROVED CERT IN APPROVED CERT CANISTER EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 04/05/2013
Waste Handling Code: RH
Disposal Date: 05/01/2013

Radionuclides

Radionuclide	Activity (Ci)	Activity Uncert (Ci)	Mass (g)	Mass Uncert (g)
SR-90	1.060E01	1.520E00	7.681E-02	1.101E-02
U-233	2.610E-07	8.270E-08	2.674E-05	8.473E-06
U-234	6.170E-03	1.950E-03	9.763E-01	3.085E-01
U-235	1.780E-04	1.200E-05	8.128E01	5.479E00
U-238	1.850E-06	7.940E-07	5.441E00	2.335E00
Y-90	1.060E01	1.520E00	1.949E-05	2.794E-06

Material Parameters

Material Parameter	Description	Weight (kg)
8	PLASTICS	23.70
13	STEEL CONTAINER MATERIALS	16.36
14	PLASTIC/LINERS CONTAINER MATERIALS	0.00
21	STEEL LINER MATERIALS	64.40
	Waste Weight:	23.70
	Packaging Weight:	80.76
	Total Material Weight:	104.46

Hazardous Codes

Hazardous Code	Description
D004	ARSENIC
D005	BARIUM
D006	CADMIUM

Container: 1148
Type: 40 - RH 30 gal TBO

Extended Status: APPROVED CERT IN APPROVED CERT CANISTER EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 04/05/2013
Waste Handling Code: RH
Disposal Date: 05/01/2013

Hazardous Codes

Hazardous Code	Description
D007	CHROMIUM
D008	LEAD
D009	MERCURY
D010	SELENIUM
D011	SILVER
D019	CARBON TETRACHLORIDE
D028	1,2-DICHLOROETHANE
D029	1,1-DICHLOROETHYLENE
F002	SPENT HALOGENATED SOLVENTS
F005	SPENT NON-HALOGENATED SOLVENTS

Assay Methods

Labor Code	Assay Method	Description	Assay Date
C2	8RHGM1	GRAVIMETRIC OR DIMENSIONAL MEASUREMENTS	03/15/2013

Non-Destructive Examination (NDE)

Labor Code	NDE Method	Description	Examination Date
C2	8RHVE2	VE OF NEWLY PACKAGED RH WASTE	08/15/2012

Edit Limit Check Results

Evaluation Date: 04/05/2013 13:22:36 Overall Status: PASS

Evaluation Code	Status	Return Code	Detailed Description

Container: 1148
Type: 40 - RH 30 gal TBO

Extended Status: APPROVED CERT IN APPROVED CERT CANISTER EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 04/05/2013
Waste Handling Code: RH
Disposal Date: 05/01/2013

Edit Limit Check Results

Evaluation Date: 04/05/2013 13:22:36 Overall Status: PASS

Evaluation Code	Status
DI_CERT_ALL	PASS
DI_CERT_BE	PASS
DI_CERT_CERT	PASS
DI_CERT_CHARZ	PASS
DI_CERT_ED	PASS
DI_CERT_EPA	PASS
DI_CERT_PCB	PASS
DI_CERT_PERC	PASS
DI_CERT_TRAMPAC	PASS
DSA	PASS
WAC	PASS
WAP_CERT	PASS

TRAMPAC Evaluation Results

Evaluation Date: Overall Status:

Evaluation Code	Status	Return Code	Detailed Description

History

Event Date/Time	Event Description	Reason
04/05/2013 13:22:36	INSERT DATA INTO THE DATABASE	
04/05/2013 13:22:36	SUCCESSFUL SUBMISSION FOR CERT	

Container: 1148

Type: 40 - RH 30 gal TBO

Extended Status: APPROVED CERT IN APPROVED CERT CANISTER EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 04/05/2013
Waste Handling Code: RH
Disposal Date: 05/01/2013

History

Event Date/Time	Event Description	Reason
04/05/2013 13:26:57	APPROVED FOR CERT	
04/16/2013 10:07:30	ASSIGNED TO OVERPACK	

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	RH WDS Master Template.xls Rev. 4 Addendum #4, SCO #1066 Excel 2003/2007 Microsoft Windows XP	Units	data				comments						Initial	date
2	Shipper Site ID		C2	Location ID	Dest Program ID	Shipping Purpose					1148		HP/BV	04/04/13
3	Waste Stream Profile		AERHDM	AE	WI	D							HP/BV	04/04/13
4	Container Number		1148										HP/BV	04/04/13
5	Container Type		RH drum-30 tbo	drum, swb, tdop, etc., see WWIS labels for valid types.					U-235 FEM	U-235 FEM Uncert	FGGR Flag	FGGR Test Period	HP/BV	04/04/13
6	WAC Rev #		7.3	0					NULL	NULL	NULL	NULL	HP/BV	04/04/13
7	WAC Ex. #						Be <=100 kg	Be <= 1%	Be Present	Aqueous Material	Be Chem/Mech Bound	Compacted Wst		
8	Cert Site		C2				Y	Y	Y	N	NULL	N	HP/BV	04/04/13
9	Cert Date		4/5/2013											
10	Waste Handling Code		RH	CH, RH									HP/BV	04/04/13
11	Waste Type Code		MTRU	TRU, MTRU									HP/BV	04/04/13
12	Waste Stream BIR ID		AE-T009				p(CI):	choose	1sigma	2sigma	95%CI		HP/BV	04/04/13
13	Waste Stream MWIR ID		NONE		default to 0 for TRU		0.6827	1sigma	1.0000	0.5000	0.5102		HP/BV	04/04/13
14	Generator Site ID		AE				0.9545	2sigma	2.0000	1.0000	1.0204		HP/BV	04/04/13
15	IDC Code		001				0.9500	95%CI	1.9600	0.9800	1.0000		HP/BV	04/04/13
16	Matrix Code		S5400										HP/BV	04/04/13
17	Trucon Code		AE322E										HP/BV	04/04/13
18	Shipping Category						WWIS Req'd CI:	1sigma	1.0000	0.5000	0.5102			
19	Tru Alpha Act	Ci	1.99E+00		1.993E+00		Fraction of MDL Reported on HGAS		1.0000				HP/BV	04/04/13
20	Tru Alpha Act Uncert	1sigma Ci	1.69E-01	2.328E+00	Tru Alpha Act + 2sigma (Ci)								HP/BV	04/04/13
21	Tru Alpha Act Conc	nCi/g	8.40E+04		8.41E+04								HP/BV	04/04/13
22	Tru Alpha Act Conc Uncert	1sigma nCi/g	7.13E+03	9.826E+04	Tru Alpha Act Conc + 2sigma (Ci)								HP/BV	04/04/13
23	Pu239 Fiss Gm Eq	g	7.32E+01		7.315E+01								HP/BV	04/04/13
24	Pu239 Fiss Gm Eq Uncert	1sigma g	3.88E+00	8.096E+01	Pu239 Fiss Gm Eq + 2sigma (Ci)								HP/BV	04/04/13
25	Pu239 Eq Act	Ci	2.00E+00		2.005E+00								HP/BV	04/04/13
26	Decay Heat	watts	1.99E-01		1.996E-01								HP/BV	04/04/13
27	Decay Heat Uncert	1sigma watts	1.35E-02	2.13E-01	Decay Heat + 1sigma (watts)								HP/BV	04/04/13
28	Layers of Packaging		1										HP/BV	04/04/13
29	Fill Factor		85	percentage	Liner Lid Present	N							HP/BV	04/04/13
30	Liner Type		1	1 = plastic drum liner									HP/BV	04/04/13
31	Liner Punctured		Y		Liner Hole Size	457.2	(mm)						HP/BV	04/04/13
32	PCB Conc		NULL				PCB Waste	PCB Mass (kg)	Out of Service				HP/BV	04/04/13
33	Closure Date		8/15/2012	Watt-years	Waste Gen Date		N	NULL	NULL				HP/BV	04/04/13
34	Vent Date		8/15/2012	0.126									HP/BV	04/04/13
35	Filter Install Date		8/15/2012										HP/BV	04/04/13
36	Filter Manufacturer		NFT										HP/BV	04/04/13
37	Filter Serial Number(s)												HP/BV	04/04/13
38	Filter Model Number	NF012,NF013,NF020,NF9026	NF013										HP/BV	04/04/13
39	Number of Filters Installed		1										HP/BV	04/04/13
40	Aspiration Method ID		3										HP/BV	04/04/13
41	Gas Gen Rate			#VALUE!	<<Gas Gen Rate Calculated.		Avagdro's Number:	6.022142E+23	NIST					
42	Hydrogen/Methane Gen Rate						Electron Charge	1.602176E-19	V NIST					
43	Gas Gen Comp Date				Waste (kg)	Packaging (kg)	Total (kg)							
44	Gross Weight	kg	104.000		23.7	80.76	104.46						HP/BV	04/04/13
45	Gross Weight Uncert	1sigma kg	0.5		max. reported	mda							HP/BV	04/04/13
46	Alpha Surf Cont	dpm/100 cm^2	0		0		Minimum Detectable Activity			Shipping Calcs			HP/BV	04/04/13
47	Beta/Gamma Surf Cont	dpm/100 cm^2	0		0		Minimum Detectable Activity			Total TBq	1.87E+00		HP/BV	04/04/13
48	Neutron Dose Rate	mrem/hr	0		0		Minimum Detectable Activity			Fraction	1.26E-01		HP/BV	04/04/13
49	Beta/Gamma Dose Rate	mrem/hr	54740		54740		Minimum Detectable Activity			Highway Route Control?	No		HP/BV	04/04/13
50	Radionuclide		U-233	U-234	U-235	U-238	Pu-238	Pu-239	Pu-240	Pu-241	Pu-242	Am-241	HP/BV	04/04/13
51	Activity	Ci	2.61E-07	6.17E-03	1.78E-04	1.85E-06	5.38E-02	1.31E+00	4.06E-01	8.92E-01	3.10E-05	2.23E-01	HP/BV	04/04/13
52	Activity Uncert	1sigma Ci	8.27E-08	1.95E-03	1.20E-05	7.94E-07	3.96E-02	7.80E-02	4.68E-02	5.40E-01	9.40E-06	1.35E-01	HP/BV	04/04/13
53	Mass	grams	2.67E-05	9.76E-01	8.13E+01	5.44E+00	3.11E-03	2.08E+01	1.77E+00	8.58E-03	7.81E-03	6.43E-02		
54	Mass Uncert	1sigma grams	8.47E-06	3.09E-01	5.48E+00	2.34E+00	2.29E-03	1.24E+00	2.03E-01	5.19E-03	2.37E-03	3.89E-02		
55	calc Tru Alpha Act	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.38E-02	1.31E+00	4.06E-01	0.00E+00	3.10E-05	2.23E-01		
56	calc Tru Alpha Act Conc	nCi/g	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.27E+03	5.53E+04	1.71E+04	0.00E+00	1.31E+00	9.41E+03		
57	calc Act	Ci	2.61E-07	6.17E-03	1.78E-04	1.85E-06	5.38E-02	1.31E+00	4.06E-01	8.92E-01	3.10E-05	2.23E-01		
58	calc Act Conc	nCi/g	1.10E-02	2.60E+02	7.51E+00	7.81E-02	2.27E+03	5.53E+04	1.71E+04	3.76E+04	1.31E+00	9.41E+03		

CK 4/5/13

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
59	calc Pu239 FGE	g	2.41E-05	0.00E+00	5.23E+01	0.00E+00	3.51E-04	2.08E+01	3.97E-02	1.93E-02	5.86E-05	1.20E-03		
60	calc Pu239 Eq Act	Ci	6.69E-08	0.00E+00	0.00E+00	0.00E+00	4.89E-02	1.31E+00	4.06E-01	1.75E-02	2.82E-05	2.23E-01		
61	calc Decay Heat	watts	7.59E-09	1.78E-04	4.91E-06	4.69E-08	1.78E-03	4.06E-02	1.26E-02	2.84E-05	9.14E-07	7.45E-03		
62	uncert Tru Alpha Act	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.96E-02	7.80E-02	4.68E-02	0.00E+00	9.40E-06	1.35E-01		
63	uncert Tru Alpha Act Conc	nCi/g	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.67E+03	3.29E+03	1.97E+03	0.00E+00	3.97E-01	5.70E+03		
64	uncert Act	Ci	8.27E-08	1.95E-03	1.20E-05	7.94E-07	3.96E-02	7.80E-02	4.68E-02	5.40E-01	9.40E-06	1.35E-01		
65	uncert Act Conc	nCi/g	3.49E-03	8.23E+01	5.06E-01	3.35E-02	1.67E+03	3.29E+03	1.97E+03	2.28E+04	3.97E-01	5.70E+03		
66	uncert Pu239 FGE	g	7.63E-06	0.00E+00	3.52E+00	0.00E+00	2.59E-04	1.24E+00	4.58E-03	1.17E-02	1.78E-05	7.28E-04		
67	uncert Pu239 Eq Act	Ci	2.12E-08	0.00E+00	0.00E+00	0.00E+00	3.60E-02	7.80E-02	4.68E-02	1.06E-02	8.55E-06	1.35E-01		
68	uncert Decay Heat	watts	2.41E-09	5.62E-05	3.31E-07	2.01E-08	1.31E-03	2.42E-03	1.46E-03	1.72E-05	2.77E-07	4.51E-03		
69	Shipping Calcs	3.79E+02	9.67E-06	2.29E-01	0.00E+00	0.00E+00	9.94E+00	2.42E+02	7.50E+01	3.30E+00	5.73E-03	4.12E+01		
70	49CFR173.433f		0.00%	0.06%	0.00%	0.00%	2.63%	63.93%	19.81%	0.87%	0.00%	10.88%		
71	Radionuclide		Cm-244	Cm-245	Sr-90	Cs-134	Cs-137	Eu-154	Y-90	Ba-137M			HP/BV	04/04/13
72	Activity	Ci	6.66E-05	1.09E-08	1.06E+01	2.77E-03	1.36E+01	8.12E-03	1.06E+01	1.29E+01			HP/BV	04/04/13
73	Activity Uncert	1sigma Ci	6.30E-05	1.03E-08	1.52E+00	3.98E-07	1.95E+00	1.17E-03	1.52E+00	1.85E+00			HP/BV	04/04/13
74	Mass	grams	8.14E-07	6.26E-08	7.68E-02	2.11E-06	1.55E-01	3.04E-05	1.95E-05	2.40E-08	NULL	NULL		
75	Mass Uncert	1sigma grams	7.70E-07	5.92E-08	1.10E-02	3.04E-10	2.22E-02	4.38E-06	2.79E-06	3.44E-09	NULL	NULL		
76	calc Tru Alpha Act	Ci	0.00E+00	1.09E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NULL	NULL		
77	calc Tru Alpha Act Conc	nCi/g	0.00E+00	4.60E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NULL	NULL		
78	calc Act	Ci	6.66E-05	1.09E-08	1.06E+01	2.77E-03	1.36E+01	8.12E-03	1.06E+01	1.29E+01	NULL	NULL		
79	calc Act Conc	nCi/g	2.81E+00	4.60E-04	4.47E+05	1.17E+02	5.74E+05	3.43E+02	4.47E+05	5.44E+05	NULL	NULL		
80	calc Pu239 FGE	g	7.33E-08	9.40E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NULL	NULL		
81	calc Pu239 Eq Act	Ci	3.51E-05	1.15E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NULL	NULL		
82	calc Decay Heat	watts	2.33E-06	3.61E-10	1.23E-02	2.81E-05	1.51E-02	7.27E-05	5.87E-02	5.08E-02	NULL	NULL		
83	uncert Tru Alpha Act	Ci	0.00E+00	1.03E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NULL	NULL		
84	uncert Tru Alpha Act Conc	nCi/g	0.00E+00	4.35E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NULL	NULL		
85	uncert Act	Ci	6.30E-05	1.03E-08	1.52E+00	3.98E-07	1.95E+00	1.17E-03	1.52E+00	1.85E+00	NULL	NULL		
86	uncert Act Conc	nCi/g	2.66E+00	4.35E-04	6.41E+04	1.68E-02	8.23E+04	4.94E+01	6.41E+04	7.81E+04	NULL	NULL		
87	uncert Pu239 FGE	g	6.93E-08	8.88E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NULL	NULL		
88	uncert Pu239 Eq Act	Ci	3.32E-05	1.09E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NULL	NULL		
89	uncert Decay Heat	watts	2.20E-06	3.42E-10	1.76E-03	4.04E-09	2.16E-03	1.05E-05	8.41E-03	7.29E-03	NULL	NULL		
90	Shipping Calcs		6.17E-03	2.01E-06	3.93E+00	2.05E-04	1.01E+00	6.01E-04	1.96E+00	0.00E+00	NULL	NULL		
91	49CFR173.433f		0.00%	0.00%	1.04%	0.00%	0.27%	0.00%	0.52%	0.00%	NULL	NULL		
92	Waste Material Parameter		PW	SL									HP/BV	04/04/13
93	Wgt of Mat Parms (kg or lbs)	kg	23.7	64.4									HP/BV	04/04/13
94	Radio Assay Method		8RHGM1										HP/BV	04/04/13
95	Data Package Number		ANLE-RH-50-63					kg					HP/BV	04/04/13
96	Assay Date		3/15/2013				lbs	0.4536					HP/BV	04/04/13
97	Charz Method ID		8RHVE2				kg	1.0000					HP/BV	04/04/13
98	Data Package Number		ANLRHVE12019										HP/BV	04/04/13
99	Charz Method Date		8/15/2012										HP/BV	04/04/13
100	Haz Codes		D004	D005	D006	D007	D008	D009	D010	D011	D019	D028	HP/BV	04/04/13
101	Haz Codes		D029	F002	F005								HP/BV	04/04/13
102	Haz Codes													
103	Haz Codes													
104	Sample ID	Headspace Gas H/M	NULL										HP/BV	04/04/13
105	Sample Type			HGHM									HP/BV	04/04/13
106	Layer No. Sampled				0								HP/BV	04/04/13
107	Date Sampled					Sample Site							HP/BV	04/04/13
108	Method ID			DTP-1.2-041									HP/BV	04/04/13
109	Data Package Number												HP/BV	04/04/13
110	CAS #		NULL	NULL										
111	Analyte												HP/BV	04/04/13
112	Concentration												HP/BV	04/04/13
113	units	%vol											HP/BV	04/04/13
114	Date Analyzed			NULL									HP/BV	04/04/13
115	B Detectable Flag													
116	D Detectable Flag													
117	E Detectable Flag													
118	J Detectable Flag													
119	U Detectable Flag												HP/BV	04/04/13
120	NA Detectable Flag		NA	NA										
121														
122	Sample ID	Headspace Gas VOC											HP/BV	04/04/13
123	Sample Type			HGVO									HP/BV	04/04/13
124	Layer No. Sampled					SARP-Flammable VOCs (ppmv)		0					HP/BV	04/04/13
125	Date Sampled												HP/BV	04/04/13

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	A	B	C	D	E	F	G	H	I	J	K	L	M	N
126	Method ID			DTP-1.2-041									HP/BV	04/04/13
127	Data Package Number												HP/BV	04/04/13
128	Methanol Method ID													
129	CAS #												HP/BV	04/04/13
130	Analyte		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
131	Concentration												HP/BV	04/04/13
132	units	ppmv											HP/BV	04/04/13
133	Date Analyzed		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL			HP/BV	04/04/13
134	B Detectable Flag													
135	D Detectable Flag													
136	E Detectable Flag													
137	J Detectable Flag													
138	U Detectable Flag												HP/BV	04/04/13
139	NA Detectable Flag		NA	NA	NA	NA	NA	NA	NA	NA				
140	SARP-Flammable Calc		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
141	CAS #												HP/BV	04/04/13
142	Analyte		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
143	Concentration												HP/BV	04/04/13
144	units	ppmv											HP/BV	04/04/13
145	Date Analyzed		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL			HP/BV	04/04/13
146	B Detectable Flag													
147	D Detectable Flag													
148	E Detectable Flag													
149	J Detectable Flag													
150	U Detectable Flag												HP/BV	04/04/13
151	NA Detectable Flag		NA	NA	NA	NA	NA	NA	NA	NA				
152	SARP-Flammable Calc		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
153	CAS #												HP/BV	04/04/13
154	Analyte		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
155	Concentration												HP/BV	04/04/13
156	units	ppmv											HP/BV	04/04/13
157	Date Analyzed		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL			HP/BV	04/04/13
158	B Detectable Flag													
159	D Detectable Flag													
160	E Detectable Flag													
161	J Detectable Flag													
162	U Detectable Flag												HP/BV	04/04/13
163	NA Detectable Flag		NA	NA	NA	NA	NA	NA	NA	NA				
164	SARP-Flammable Calc		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
165	CAS #												HP/BV	04/04/13
166	Analyte		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
167	Concentration												HP/BV	04/04/13
168	units	ppmv											HP/BV	04/04/13
169	Date Analyzed		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL			HP/BV	04/04/13
170	B Detectable Flag													
171	D Detectable Flag													
172	E Detectable Flag													
173	J Detectable Flag													
174	U Detectable Flag												HP/BV	04/04/13
175	NA Detectable Flag		NA	NA	NA	NA	NA	NA	NA	NA				
176	SARP-Flammable Calc		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
177	CAS #													
178	Analyte		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
179	Concentration													
180	units	ppmv												
181	Date Analyzed		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
182	B Detectable Flag													
183	D Detectable Flag													
184	E Detectable Flag													
185	J Detectable Flag													
186	U Detectable Flag													
187	NA Detectable Flag		NA	NA	NA	NA	NA	NA	NA	NA				

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XP

	A	B	C	D	E	F	G	H	I	J
188	SARP-Flammable Calc		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
189			type	comment						
190	Comment									
191	Comment									
192	Comment									
193	Comment									
194	Comment									
195	Comment									
196	Comment									
197	Comment									
198	Comment									
199	Comment									
200										
201			Requirements Met?							
202	Free liquids <1% by volume		YES							
203	No non-rad. pyrophonics		YES							
204	Chemical compatability		YES							
205	No explosives		YES							
206	No corrosives		YES							
207	No pressurized containers		YES							
208	No sealed Containers >4 liters		YES							
209	Liner punctured/ filtered		YES							
210	Flammable VOCs <500ppmv		YES							
211	Container is in Approved Waste Stream Profile Form?	AERHDM	YES							
212	Can it be established through Process Knowledge that the concentration of flammable VOCs present in the headspace of the container is <= 500 ppm?.		YES							
213										
214										
215										
216										
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236										

Cheta Kimtho
CCP Certification Official

4-5-2013
Date

Lot #

RH WDS Master Template.xls Rev. 4
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Attachment 3

Waste Container Radiological Characterization Record

Operating Procedure	CCP-TP-513, Rev. ~~1~~ 2 JN 3-20-13
Date of Characterization	3/15/2013
Waste Stream Designation	AERHDM
Container Number	1148
# of 1-inch Shield Pots	2
# of 3/4-inch Shield Pots	0
Container Gross Weight	1.04E+02 kg 104
Waste Weight	2.37E+01 kg 23.7
Waste Material Type	Steel
Calculation Number	ANLE-RH-50-63 Rev. 0

161.4 = 51

Nuclide	Activity (Ci)	Grams	FGE	PECi	Watts	Uncertainty	Uncertainty in Curies	Uncertainty in Grams
U-233	2.61E-07	2.68E-05	2.41E-05	6.70E-08	7.60E-09	31.7%	8.27E-08	8.48E-06
U-234	6.17E-03	9.77E-01	0.00E+00	0.00E+00	1.78E-04	31.7%	1.95E-03	3.09E-01
U-235	1.78E-04	8.14E+01	5.24E+01	0.00E+00	4.92E-06	6.7%	1.20E-05	5.46E+00
U-238	1.85E-06	5.43E+00	0.00E+00	0.00E+00	4.68E-08	43.0%	7.94E-07	2.33E+00
Pu-238	5.38E-02	3.11E-03	3.51E-04	4.89E-02	1.78E-03	73.5%	3.96E-02	2.29E-03
Pu-239	1.31E+00	2.08E+01	2.08E+01	1.31E+00	4.05E-02	6.0%	7.80E-02	1.24E+00
Pu-240	4.06E-01	1.76E+00	3.97E-02	4.06E-01	1.26E-02	11.5%	4.68E-02	2.03E-01
Pu-241	8.92E-01	8.58E-03	1.93E-02	1.75E-02	2.84E-05	60.5%	5.40E-01	5.19E-03
Pu-242	3.10E-05	7.82E-03	5.87E-05	2.82E-05	9.15E-07	30.3%	9.40E-06	2.37E-03
Am-241	2.23E-01	6.41E-02	1.20E-03	2.23E-01	7.44E-03	60.5%	1.35E-01	3.88E-02
Cm-244	6.66E-05	8.14E-07	7.33E-08	3.51E-05	2.33E-06	94.6%	6.30E-05	7.71E-07
Cm-246	1.09E-08	6.26E-08	9.39E-07	1.16E-08	3.61E-10	94.6%	1.03E-08	5.92E-08
Sr-90	1.06E+01	7.68E-02	0.00E+00	0.00E+00	1.23E-02	14.4%	1.52E+00	1.10E-02
Cs-134	2.77E-06	2.11E-09	0.00E+00	0.00E+00	2.81E-08	14.4%	3.98E-07	3.04E-10
Cs-137	1.36E+01	1.54E-01	0.00E+00	0.00E+00	1.50E-02	14.4%	1.95E+00	2.22E-02
Eu-154	8.12E-03	3.04E-05	0.00E+00	0.00E+00	7.27E-05	14.4%	1.17E-03	4.38E-06
Y-90	1.06E+01	1.94E-05	0.00E+00	0.00E+00	5.85E-02	14.4%	1.52E+00	2.79E-06
Ba-137m	1.29E+01	2.39E-08	0.00E+00	0.00E+00	5.07E-02	14.4%	1.85E+00	3.44E-09
Totals	5.05E+01	1.11E+02	7.32E+01	2.00E+00	1.99E-01			

	Value	(one Sigma)	
TRU Alpha Activity Concentration	8.40E+04	7.13E+03	nCi/g
TRU Alpha Activity	1.99E+00	1.69E-01	Ci
Total Pu-239 Equiv Activity	2.00E+00	1.68E-01	Ci
Total Pu-239 Fissile Gram Equiv	7.32E+01	3.88E+00	g
Total Decay Heat	1.99E-01	1.35E-02	W
Volume Activity	4.45E-01	3.22E-02	Ci/L

Originator Derek Ott Date 3/15/2013

Independent Technical Reviewer Jene Vance Date 3/15/2013

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Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 08-15-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☒N/A		Final Container ☐ N/A	
Container or Package ID Number:		Container or Package ID Number: 1148	
Container Type:		Container Type: 30-Gallon Container	
Waste Matrix Code:		Waste Matrix Code: S5400	
Waste Stream:		Waste Stream: AERHDM	
		Rigid Liner: ☒Y ☐N Type: 140 MIL	Rigid Liner Lid: ☐ Y ☒N
		Rigid Liner Vented or Hole Size: NA	
Percent Fill:	Percent Organic Waste:	Percent Fill 85%	Percent Organic Waste: 0%
Layers of Confinement:	Closure Method:	Layers of Confinement: 1	Closure Method: Heat Sealed filtered
Comments (e.g., filter information, NCRs): NA			

Waste Description:

Bottom Can: 1013

Top Can: 970

Attachment 1 – Visual Examination Data Form

Site ID: RHAML			
Examination Date: 6-6-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 1013		Container or Package ID Number:	
Container Type: 7 GALLON CONTAINER		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHAM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 85	Percent Organic Waste: 0	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7 GALLON CONTAINER (IM)
SHIELD POT CENTERING RING (IM)
SHIELD POT #7171

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 6-6-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 7171		Container or Package ID Number:	
Container Type: 1 GALLON SHIELD POT		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 0	Percent Organic Waste: 0	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NO WASTE HAS BEEN ADDED TO SHIELD POT			

Waste Description:

VENTED 1 GALLON 1 INCH THICK LEAD LINED SHIELD POT (OM)(TM)

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Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 5-24-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 970		Container or Package ID Number:	
Container Type: 7 GALLON CONTAINER		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: A B H D M		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 85% Percent Organic Waste: 0%		Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7 GALLON CONTAINER (IM)
SHIELD POT CENTERING RING (IM)
SHIELD POT # 7167

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 09-26-11		Batch Number: NA	
Procedure # CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒N/A	
Container or Package ID Number: 7167		Container or Package ID Number:	
Container Type: 1-Gallon Container		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner ☐Y ☐N Type:	Rigid Liner Lid: ☐Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 40%	Percent Organic Waste: 0%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description: Vented 1-Gallon 1-INCH thick lead Lined Shield Pot - (OM) (IM)

Fuel Specimen - (074F3) - (OM)
Fuel Specimen - (074F4) - (OM)
Fuel Specimen - (074F2) - (OM)

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AGHCF RH-TRU 30-Gallon Waste Drum Datasheet

(The bracketed numbers in the left margin refer to the corresponding procedure step number.)

AGHCF Drum No. 1148

Section 1 — Fill out in accordance with NOD-AGHCF-OPS-303

[8.2.1] AGHCF Drum No. 1148

[8.2.14] Requisition Number: RW – 88032

[8.2.2] Drum Is Type A [ISI][1]: YES ☑ NO ☐

[8.2.5] Drum Inspection [ISI][1]: SAT ☑ UNSAT ☐

[8.2.6] Drum Vent Model No. [ISI][1]: NUCFIL-013

[8.2.6] Drum Vent Serial No. [ISI][1]: AL-1170

[8.2.21] Acceptance Criteria Met: YES ☒ NO ☐

[8.2.7] Torque Wrench for Drum Vent
ID Number: ARG 04110162 57
Calibration Due Date: 9/02/2012

FM Print Name	FM Sign Name	Date
ROBERT LEPPINK	Robert Leppink	6/27/12

1 [ISI] identifies an In-Service Inspection specified in the Technical Safety Requirements

Section 2 — Fill out in accordance with NOD-AGHCF-OPS-305

[37] Top Waste Can No. 970

[37] Bottom Waste Can No. 1013

	VEO Print Name	VEO Sign Name	Date
[59]	ERIC BOND	[signature]	8-15-12
[59]	William H. Riley	[signature]	08-15-12

[80.2] Torque Wrench for Ring Bolt
ID Number: 88733
Calibration Due Date: 6/21/2013

[86] Date Loaded: 8/15/12

[86] Tamper Seal 1 No.: 6792

[86] Tamper Seal 2 No.: 6793

[89.2] Total Wt. Loaded Drum: 235 lbs

[Step 89.3] Spring Scale for Drum Weight
ID Number: 16759
Calibration Due Date: 5/7/2013

Surface Dose-Rate Calculation Worksheet for RH-TRU FEW Drums

(This worksheet is to be completed under the direction of the PIC for each 30-gallon drum of FEW out-loaded from the AGHCF in accordance with NOD-AGHCF-OPS-305, *RH-TRU 30-Gallon Waste Drum Out-Loading.* The bracketed numbers in the left margin refer to the corresponding procedure step number.)

[96.1] Drum Number 1148 Survey date 8/15/12

[96.1] Inner shield pot configuration (circle one):

(a.) 1 in. top + 1 in. bottom
b. ¾ in. top + 1 in. bottom
c. 1 in. top + ¾ in. bottom
d. ¾ in. top + ¾ in. bottom

Maximum dose rate (R/hr) as recorded on the 30-gallon drum 1.7 R/hr

The following table will be used to determine the multiplier for generating the calculated surface dose rate for the unshielded FEW in this container, based on the location of the maximum measured dose rate

Multiplier Factors for Various Placements of 1 in. and ¾ in. Shield Pots in Drums

Configuration of shield pots in drum	Bottom	Side	Top
a. Two 1 in. shield pots	27.9	(32.2)	33.6
b. One of each type – ¾ in. shield pot on top and 1 in. shield pot on bottom	27.8	17.4	16.6
c. One of each type – 1 in. shield pot on top and ¾ in. shield pot on bottom	14.2	16.9	33.7
d. Two ¾ in. shield pots	14.1	15.9	16.5

[96.1] Calculate the FEW surface dose rate:

Maximum dose rate on drum (R/hr) x Multiplier factor = FEW surface dose rate (R/hr)

1.7 R/hr x 32.2 = 54.74 54,740 mrem

(Enter actual values on the lines above to perform and document the calculation)

[96.2] Calculated by: LEE ESSENMACHER / Lee Essenmacher / ~~8/15/12~~ DCP 4/3/13
Print name / Signature / Date

[97.2] IV done by: Kyle Haske / Kyle Haske / ~~8/15/12~~ DCP 4/3/13
Print name / Signature / Date

[98] Based on the above calculations, PIC makes the following determination, checks the appropriate box, and signs off below.

The FEW surface dose rate is between 0.2 R/hr and 1,000 R/hr ☒ Yes ☐ No

If Yes, continue outloading

If No, notify FM.

[122] LEE ESSENMACHER / Lee Essenmacher / ~~8/15/12~~ DCP 4/3/13
PIC Print Name / PIC Signature / Date

Waste Isolation Pilot Plant
Container Data Report

Report Statistics

Report Version:	**2.3**
WDS Instance:	**prd05.wipp.carlsbad.nm.us**
Generated on:	**August 19, 2013 10:30 AM**
Generated by:	**KIRKES, CRETA**
Total Pages:	**7**

Selection Criteria

Container Number: **1150**

Container: 1150
Type: 40 - RH 30 gal TBO

Extended Status: APPROVED CERT IN APPROVED CERT CANISTER EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 04/05/2013
Waste Handling Code: RH
Disposal Date: 05/01/2013

Current Location Site: WI
Generator Site: AE
Destination Site ID: WI

Neutron Dose Rate (mrem/hr): 0.0
Beta Gamma Dose Rate (mrem/hr): 41860.0
Total Dose Rate (mrem/hr): 41860.0

FGE (g): 9.23E01
FGE Uncertainty (g): 4.91E00

Gross Weight (kg): 105.00
Gross Weight Uncert (kg): 0.50

Decay Heat (W): 2.66E-01
Decay Heat Uncertainty (W): 1.89E-02

Certification Program ID: C2
Shipping Program ID: C2

Overpack Container: AE0150
Overpack Type: REMOVABLE-LID 72-B CANISTER
Overpack Status: CERTIFICATION DATA APPROVED

Shipment Data

Payload ID: **AE0150** Assembly ID: AE128421 Payload Complete? Y
Shipment Number: AER13007 Send Date: 04/22/2013 Receipt Date: 04/23/2013
Shipment Status: SHIPMENT RECEIVED AT DESTINATION

Emplacement Location

Panel: 6 Room: 1 Borehole: 047

Certification Data Values

Waste Stream Profile Code: AERHDM
Waste Type Code: MTRU
IDC Code: 001
Waste Matrix Code: S5400
WAC Revision Number: 7.3
Fill Factor (%): 85.00
Waste Stream BIR ID: AE-T009
Waste Stream MWIR ID: NONE

TRU Alpha Activity (Ci): 2.9E00
TRU Alpha Activity Uncertainty (Ci): 3.25E-01
TRU Alpha Activity Concentration (Ci/g): 1.22E-04
PU-239 Equivalent Activity (PE-Ci): 2.92E00
Alpha Surface Contamination (dpm/cm^2): 0.0
Beta/Gamma Surface Contamination (dpm/cm^2): 0.0

Transportation Data Values

Closure Date: 08/15/2012
Vent Date: 08/15/2012
Process Knowledge? Y
Waste Gen Date:
Content Code: AE322E
U-235 FEM (g):
U-235 FEM Uncert (g):
Be chemically/ mechanically bound:

Shipment Purpose: DISPOSAL
Machine Compacted? N
Liner Exists? Y
Liner Hole Size(mm):
Liner Lid Present? N
Layers of Packaging 1
Aqueous Material? N

Gas Generation Data Values

Measured FGGR (mol/s)	Measured TGRR (mol/s)	Truncated FGGR Test (Y/N)	Truncated FGGR Test Period (days)

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Waste Handling Code: RH
Disposal Date: 05/01/2013

PCB Waste? N
PCB Mass (kg):
PCB Concentration (ppm):
PCB Out of Service Date:
Be Present? Y
Be <= 1% by weight? Y
Be mass <= 100kg? Y
Separation OK? Y
Packing Fraction (compaction level): non-compacted

Filters

Filter Model Number	Filter Diffusivity (mol/s/ml)	Quantity	Install Date
NF013	3.7E-06	1	08/15/2012

Certification Comments

Radionuclides

Radionuclide	Activity (Ci)	Activity Uncert (Ci)	Mass (g)	Mass Uncert (g)
AM-241	4.770E-01	2.890E-01	1.375E-01	8.329E-02
BA-137M	1.640E01	2.360E00	3.048E-08	4.387E-09
CM-244	2.040E-04	1.940E-04	2.494E-06	2.372E-06
CM-245	3.370E-08	3.190E-08	1.937E-07	1.833E-07
CS-134	3.550E-06	5.100E-07	2.710E-09	3.893E-10
CS-137	1.730E01	2.490E00	1.966E-01	2.830E-02
EU-154	1.040E-02	1.490E-03	3.895E-05	5.581E-06
PU-238	1.050E-01	7.720E-02	6.069E-03	4.462E-03
PU-239	1.580E00	9.370E-02	2.512E01	1.490E00
PU-240	7.380E-01	8.500E-02	3.209E00	3.696E-01
PU-241	1.900E00	1.150E00	1.827E-02	1.106E-02
PU-242	9.130E-05	2.760E-05	2.300E-02	6.952E-03

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Waste Handling Code: RH
Disposal Date: 05/01/2013

Radionuclides

Radionuclide	Activity (Ci)	Activity Uncert (Ci)	Mass (g)	Mass Uncert (g)
SR-90	1.360E01	1.950E00	9.855E-02	1.413E-02
U-233	3.370E-07	1.070E-07	3.453E-05	1.096E-05
U-234	7.920E-03	2.510E-03	1.253E00	3.972E-01
U-235	2.280E-04	1.530E-05	1.041E02	6.986E00
U-238	2.320E-06	9.960E-07	6.824E00	2.929E00
Y-90	1.360E01	1.950E00	2.500E-05	3.585E-06

Material Parameters

Material Parameter	Description	Weight (kg)
8	PLASTICS	23.70
13	STEEL CONTAINER MATERIALS	16.36
14	PLASTIC/LINERS CONTAINER MATERIALS	0.00
21	STEEL LINER MATERIALS	64.40
	Waste Weight:	23.70
	Packaging Weight:	80.76
	Total Material Weight:	104.46

Hazardous Codes

Hazardous Code	Description
D004	ARSENIC
D005	BARIUM
D006	CADMIUM

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Hazardous Codes

Hazardous Code	Description
D007	CHROMIUM
D008	LEAD
D009	MERCURY
D010	SELENIUM
D011	SILVER
D019	CARBON TETRACHLORIDE
D028	1,2-DICHLOROETHANE
D029	1,1-DICHLOROETHYLENE
F002	SPENT HALOGENATED SOLVENTS
F005	SPENT NON-HALOGENATED SOLVENTS

Assay Methods

Labor Code	Assay Method	Description	Assay Date
C2	8RHGM1	GRAVIMETRIC OR DIMENSIONAL MEASUREMENTS	03/15/2013

Non-Destructive Examination (NDE)

Labor Code	NDE Method	Description	Examination Date
C2	8RHVE2	VE OF NEWLY PACKAGED RH WASTE	08/15/2012

Edit Limit Check Results

Evaluation Date: 04/05/2013 13:22:37 Overall Status: PASS

Evaluation Code	Status	Return Code	Detailed Description

Container: 1150
Type: 40 - RH 30 gal TBO

Extended Status: APPROVED CERT IN APPROVED CERT CANISTER EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 04/05/2013
Waste Handling Code: RH
Disposal Date: 05/01/2013

Edit Limit Check Results

Evaluation Date: 04/05/2013 13:22:37 Overall Status: PASS

Evaluation Code	Status
DI_CERT_ALL	PASS
DI_CERT_BE	PASS
DI_CERT_CERT	PASS
DI_CERT_CHARZ	PASS
DI_CERT_ED	PASS
DI_CERT_EPA	PASS
DI_CERT_PCB	PASS
DI_CERT_PERC	PASS
DI_CERT_TRAMPAC	PASS
DSA	PASS
WAC	PASS
WAP_CERT	PASS

TRAMPAC Evaluation Results

Evaluation Date: Overall Status:

Evaluation Code	Status	Return Code	Detailed Description

History

Event Date/Time	Event Description	Reason
04/05/2013 13:22:37	INSERT DATA INTO THE DATABASE	
04/05/2013 13:22:37	SUCCESSFUL SUBMISSION FOR CERT	

Container: 1150

Type: 40 - RH 30 gal TBO

Extended Status: APPROVED CERT IN APPROVED CERT CANISTER EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 04/05/2013
Waste Handling Code: RH
Disposal Date: 05/01/2013

History

Event Date/Time	Event Description	Reason
04/05/2013 13:26:58	APPROVED FOR CERT	
04/16/2013 10:07:30	ASSIGNED TO OVERPACK	

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	RH WDS Master Template.xls Rev. 4 Addendum #4, SCO #1066 Excel 2003/2007 Microsoft Windows XP	Units	data				comments						Initial	date
2	Shipper Site ID		C2	Location ID	Dest Program ID	Shipping Purpose					1150		BV/HP	04/04/13
3	Waste Stream Profile		AERHDM	AE	WI	D							BV/HP	04/04/13
4	Container Number		1150										BV/HP	04/04/13
5	Container Type		RH drum-30 tbo	drum, swb, tdop, etc., see WWIS labels for valid types					U-235 FEM	U-235 FEM Uncert	FGGR Flag	FGGR Test Period	BV/HP	04/04/13
6	WAC Rev #		7.3	0					NULL	NULL	NULL	NULL	BV/HP	04/04/13
7	WAC Ex. #						Be <=100 kg	Be <= 1%	Be Present	Aqueous Material	Be Chem/Mech Bound	Compacted Wst		
8	Cert Site		C2				Y	Y	Y	N	NULL	N	BV/HP	04/04/13
9	Cert Date		4/5/2013											
10	Waste Handling Code		RH	CH, RH									BV/HP	04/04/13
11	Waste Type Code		MTRU	TRU, MTRU									BV/HP	04/04/13
12	Waste Stream BIR ID		AE-T009				p(CI)	choose	1sigma	2sigma	95%CI		BV/HP	04/04/13
13	Waste Stream MWIR ID		NONE		default to 0 for TRU		0.6827	1sigma	1.0000	0.5000	0.5102		BV/HP	04/04/13
14	Generator Site ID		AE				0.9545	2sigma	2.0000	1.0000	1.0204		BV/HP	04/04/13
15	IDC Code		001				0.9500	95%CI	1.9600	0.9800	1.0000		BV/HP	04/04/13
16	Matrix Code		S5400										BV/HP	04/04/13
17	Trucon Code		AE322E										BV/HP	04/04/13
18	Shipping Category						WWIS Req'd CI:	1sigma	1.0000	0.5000	0.5102			
19	Tru Alpha Act	Ci	2.90E+00		2.900E+00		Fraction of MDL Reported on HGAS		1.0000				BV/HP	04/04/13
20	Tru Alpha Act Uncert	1sigma Ci	3.25E-01	3.550E+00	Tru Alpha Act + 2sigma (Ci)								BV/HP	04/04/13
21	Tru Alpha Act Conc	nCi/g	1.22E+05		1.22E+05								BV/HP	04/04/13
22	Tru Alpha Act Conc Uncert	1sigma nCi/g	1.37E+04	1.494E+05	Tru Alpha Act Conc + 2sigma (Ci)								BV/HP	04/04/13
23	Pu239 Fiss Gm Eq	g	9.23E+01		9.218E+01								BV/HP	04/04/13
24	Pu239 Fiss Gm Eq Uncert	1sigma g	4.91E+00	1.021E+02	Pu239 Fiss Gm Eq + 2sigma (Ci)								BV/HP	04/04/13
25	Pu239 Eq Act	Ci	2.92E+00		2.928E+00								BV/HP	04/04/13
26	Decay Heat	watts	2.66E-01		2.666E-01								BV/HP	04/04/13
27	Decay Heat Uncert	1sigma watts	1.89E-02	2.85E-01	Decay Heat + 1sigma (watts)								BV/HP	04/04/13
28	Layers of Packaging		1										BV/HP	04/04/13
29	Fill Factor		85	percentage	Liner Lid Present	N							BV/HP	04/04/13
30	Liner Type		1	1 = plastic drum liner									BV/HP	04/04/13
31	Liner Punctured		Y		Liner Hole Size	457.2	(mm)						BV/HP	04/04/13
32	PCB Conc		NULL				PCB Waste	PCB Mass (kg)	Out of Service				BV/HP	04/04/13
33	Closure Date		8/15/2012	Watt-years	Waste Gen Date		N	NULL	NULL				BV/HP	04/04/13
34	Vent Date		8/15/2012	0.169									BV/HP	04/04/13
35	Filter Install Date		8/15/2012										BV/HP	04/04/13
36	Filter Manufacturer		NFT										BV/HP	04/04/13
37	Filter Serial Number(s)												BV/HP	04/04/13
38	Filter Model Number	NF012,NF013,NF020,NF9026	NF013										BV/HP	04/04/13
39	Number of Filters Installed		1										BV/HP	04/04/13
40	Aspiration Method ID		3										BV/HP	04/04/13
41	Gas Gen Rate			#VALUE!	<<Gas Gen Rate Calculated.		Avagdro's Number:	6.022142E+23	N!ST					
42	Hydrogen/Methane Gen Rate						Electron Charge	1.602176E-19	V NIST					
43	Gas Gen Comp Date				Waste (kg)	Packaging (kg)	Total (kg)							
44	Gross Weight	kg	105.000		23.7	80.76	104.46						BV/HP	04/04/13
45	Gross Weight Uncert	1sigma kg	0.5		max. reported	mda							BV/HP	04/04/13
46	Alpha Surf Cont	dpm/100 cm^2	0		0		Minimum Detectable Activity			Shipping Calcs			BV/HP	04/04/13
47	Beta/Gamma Surf Cont	dpm/100 cm^2	0		0		Minimum Detectable Activity				Total TBq	2.43E+00	BV/HP	04/04/13
48	Neutron Dose Rate	mrem/hr	0		0		Minimum Detectable Activity				Fraction	1.84E-01	BV/HP	04/04/13
49	Beta/Gamma Dose Rate	mrem/hr	41860		41860		Minimum Detectable Activity				Highway Route Control?	No	BV/HP	04/04/13
50	Radionuclide		U-233	U-234	U-235	U-238	Pu-238	Pu-239	Pu-240	Pu-241	Pu-242	Am-241	BV/HP	04/04/13
51	Activity	Ci	3.37E-07	7.92E-03	2.28E-04	2.32E-06	1.05E-01	1.58E+00	7.38E-01	1.90E+00	9.13E-05	4.77E-01	BV/HP	04/04/13
52	Activity Uncert	1sigma Ci	1.07E-07	2.51E-03	1.53E-05	9.96E-07	7.72E-02	9.37E-02	8.50E-02	1.15E+00	2.76E-05	2.89E-01	BV/HP	04/04/13
53	Mass	grams	3.45E-05	1.25E+00	1.04E+02	6.82E+00	6.07E-03	2.51E+01	3.21E+00	1.83E-02	2.30E-02	1.37E-01		
54	Mass Uncert	1sigma grams	1.10E-05	3.97E-01	6.99E+00	2.93E+00	4.46E-03	1.49E+00	3.70E-01	1.11E-02	6.95E-03	8.33E-02		
55	calc Tru Alpha Act	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.05E-01	1.58E+00	7.38E-01	0.00E+00	9.13E-05	4.77E-01		
56	calc Tru Alpha Act Conc	nCi/g	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.43E+03	6.67E+04	3.11E+04	0.00E+00	3.85E+00	2.01E+04		
57	calc Act	Ci	3.37E-07	7.92E-03	2.28E-04	2.32E-06	1.05E-01	1.58E+00	7.38E-01	1.90E+00	9.13E-05	4.77E-01		
58	calc Act Conc	nCi/g	1.42E-02	3.34E+02	9.62E+00	9.79E-02	4.43E+03	6.67E+04	3.11E+04	8.02E+04	3.85E+00	2.01E+04		

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
59	calc Pu239 FGE	g	3.11E-05	0.00E+00	6.69E+01	0.00E+00	6.86E-04	2.51E+01	7.22E-02	4.11E-02	1.72E-04	2.57E-03		
60	calc Pu239 Eq Act	Ci	8.64E-08	0.00E+00	0.00E+00	0.00E+00	9.55E-02	1.58E+00	7.38E-01	3.73E-02	8.30E-05	4.77E-01		
61	calc Decay Heat	watts	9.81E-09	2.28E-04	6.29E-06	5.88E-08	3.48E-03	4.90E-02	2.30E-02	6.05E-05	2.69E-06	1.59E-02		
62	uncert Tru Alpha Act	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.72E-02	9.37E-02	8.50E-02	0.00E+00	2.76E-05	2.89E-01		
63	uncert Tru Alpha Act Conc	nCi/g	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.26E+03	3.95E+03	3.59E+03	0.00E+00	1.16E+00	1.22E+04		
64	uncert Act	Ci	1.07E-07	2.51E-03	1.53E-05	9.96E-07	7.72E-02	9.37E-02	8.50E-02	1.15E+00	2.76E-05	2.89E-01		
65	uncert Act Conc	nCi/g	4.51E-03	1.06E+02	6.46E-01	4.20E-02	3.26E+03	3.95E+03	3.59E+03	4.85E+04	1.16E+00	1.22E+04		
66	uncert Pu239 FGE	g	9.87E-06	0.00E+00	4.49E+00	0.00E+00	5.04E-04	1.49E+00	8.32E-03	2.49E-02	5.21E-05	1.56E-03		
67	uncert Pu239 Eq Act	Ci	2.74E-08	0.00E+00	0.00E+00	0.00E+00	7.02E-02	9.37E-02	8.50E-02	2.25E-02	2.51E-05	2.89E-01		
68	uncert Decay Heat	watts	3.11E-09	7.23E-05	4.22E-07	2.53E-08	2.56E-03	2.90E-03	2.65E-03	3.66E-05	8.13E-07	9.66E-03		
69	Shipping Calcs	5.52E+02	1.25E-05	2.93E-01	0.00E+00	0.00E+00	1.94E+01	2.92E+02	1.36E+02	7.04E+00	1.69E-02	8.82E+01		
70	49CFR173.433f		0.00%	0.05%	0.00%	0.00%	3.51%	52.88%	24.70%	1.27%	0.00%	15.97%		
71	Radionuclide		Cm-244	Cm-245	Sr-90	Cs-134	Cs-137	Eu-154	Y-90	Ba-137M			BV/HP	04/04/13
72	Activity	Ci	2.04E-04	3.37E-08	1.36E+01	3.55E-06	1.73E+01	1.04E-02	1.36E+01	1.64E+01			BV/HP	04/04/13
73	Activity Uncert	1sigma Ci	1.94E-04	3.19E-08	1.95E+00	5.10E-07	2.49E+00	1.49E-03	1.95E+00	2.36E+00			BV/HP	04/04/13
74	Mass	grams	2.49E-06	1.94E-07	9.86E-02	2.71E-09	1.97E-01	3.90E-05	2.50E-05	3.05E-08	NULL	NULL		
75	Mass Uncert	1sigma grams	2.37E-06	1.83E-07	1.41E-02	3.89E-10	2.83E-02	5.58E-06	3.58E-06	4.39E-09	NULL	NULL		
76	calc Tru Alpha Act	Ci	0.00E+00	3.37E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NULL	NULL		
77	calc Tru Alpha Act Conc	nCi/g	0.00E+00	1.42E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NULL	NULL		
78	calc Act	Ci	2.04E-04	3.37E-08	1.36E+01	3.55E-06	1.73E+01	1.04E-02	1.36E+01	1.64E+01	NULL	NULL		
79	calc Act Conc	nCi/g	8.61E+00	1.42E-03	5.74E+05	1.50E-01	7.30E+05	4.39E+02	5.74E+05	6.92E+05	NULL	NULL		
80	calc Pu239 FGE	g	2.24E-07	2.91E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NULL	NULL		
81	calc Pu239 Eq Act	Ci	1.07E-04	3.57E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NULL	NULL		
82	calc Decay Heat	watts	7.13E-06	1.12E-09	1.58E-02	3.60E-08	1.91E-02	9.31E-05	7.53E-02	6.46E-02	NULL	NULL		
83	uncert Tru Alpha Act	Ci	0.00E+00	3.19E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NULL	NULL		
84	uncert Tru Alpha Act Conc	nCi/g	0.00E+00	1.35E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NULL	NULL		
85	uncert Act	Ci	1.94E-04	3.19E-08	1.95E+00	5.10E-07	2.49E+00	1.49E-03	1.95E+00	2.36E+00	NULL	NULL		
86	uncert Act Conc	nCi/g	8.19E+00	1.35E-03	8.23E+04	2.15E-02	1.05E+05	6.29E+01	8.23E+04	9.96E+04	NULL	NULL		
87	uncert Pu239 FGE	g	2.13E-07	2.75E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NULL	NULL		
88	uncert Pu239 Eq Act	Ci	1.02E-04	3.38E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NULL	NULL		
89	uncert Decay Heat	watts	6.78E-06	1.06E-09	2.26E-03	5.18E-09	2.76E-03	1.33E-05	1.08E-02	9.30E-03	NULL	NULL		
90	Shipping Calcs		1.89E-02	6.23E-06	5.04E+00	2.63E-07	1.28E+00	7.70E-04	2.51E+00	0.00E+00	NULL	NULL		
91	49CFR173.433f		0.00%	0.00%	0.91%	0.00%	0.23%	0.00%	0.46%	0.00%	NULL	NULL		
92	Waste Material Parameter		PW	SL									BV/HP	04/04/13
93	Wgt of Mat Parms (kg or lbs)	kg	23.7	64.4									BV/HP	04/04/13
94	Radio Assay Method		8RHGM1										BV/HP	04/04/13
95	Data Package Number		ANLE-RH-50-64					kg					BV/HP	04/04/13
96	Assay Date		3/15/2013				lbs	0.4536					BV/HP	04/04/13
97	Charz Method ID		8RHVE2				kg	1.0000					BV/HP	04/04/13
98	Data Package Number		ANLRHVE12019										BV/HP	04/04/13
99	Charz Method Date		8/15/2012										BV/HP	04/04/13
100	Haz Codes		D004	D005	D006	D007	D008	D009	D010	D011	D019	D028	BV/HP	04/04/13
101	Haz Codes		D029	F002	F005								BV/HP	04/04/13
102	Haz Codes													
103	Haz Codes													
104	Sample ID	Headspace Gas H/M	NULL										BV/HP	04/04/13
105	Sample Type			HGHM									BV/HP	04/04/13
106	Layer No. Sampled				0								BV/HP	04/04/13
107	Date Sampled					Sample Site							BV/HP	04/04/13
108	Method ID			DTP-1.2-041									BV/HP	04/04/13
109	Data Package Number												BV/HP	04/04/13
110	CAS #		NULL	NULL										
111	Analyte												BV/HP	04/04/13
112	Concentration												BV/HP	04/04/13
113	units	%vol											BV/HP	04/04/13
114	Date Analyzed			NULL									BV/HP	04/04/13
115	B Detectable Flag													
116	D Detectable Flag													
117	E Detectable Flag													
118	J Detectable Flag													
119	U Detectable Flag												BV/HP	04/04/13
120	NA Detectable Flag		NA	NA										
121											RH WDS Master Template.xls Rev. 4			
122	Sample ID	Headspace Gas VOC									Addendum #4, SCO #1066		BV/HP	04/04/13
123	Sample Type			HGVO							Excel 2003/2007 Microsoft Windows		BV/HP	04/04/13
124	Layer No. Sampled					SARP-Flammable VOCs (ppmv)		0			XP		BV/HP	04/04/13
125	Date Sampled												BV/HP	04/04/13

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
126	Method ID			DTP-1.2-041									BV/HP	04/04/13
127	Data Package Number												BV/HP	04/04/13
128	Methanol Method ID													
129	CAS #												BV/HP	04/04/13
130	Analyte		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
131	Concentration												BV/HP	04/04/13
132	units	ppmv											BV/HP	04/04/13
133	Date Analyzed		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL			BV/HP	04/04/13
134	B Detectable Flag													
135	D Detectable Flag													
136	E Detectable Flag													
137	J Detectable Flag													
138	U Detectable Flag												BV/HP	04/04/13
139	NA Detectable Flag		NA	NA	NA	NA	NA	NA	NA	NA				
140	SARP-Flammable Calc		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
141	CAS #												BV/HP	04/04/13
142	Analyte		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
143	Concentration												BV/HP	04/04/13
144	units	ppmv											BV/HP	04/04/13
145	Date Analyzed		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL			BV/HP	04/04/13
146	B Detectable Flag													
147	D Detectable Flag													
148	E Detectable Flag													
149	J Detectable Flag													
150	U Detectable Flag												BV/HP	04/04/13
151	NA Detectable Flag		NA	NA	NA	NA	NA	NA	NA	NA				
152	SARP-Flammable Calc		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
153	CAS #												BV/HP	04/04/13
154	Analyte		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
155	Concentration												BV/HP	04/04/13
156	units	ppmv											BV/HP	04/04/13
157	Date Analyzed		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL			BV/HP	04/04/13
158	B Detectable Flag													
159	D Detectable Flag													
160	E Detectable Flag													
161	J Detectable Flag													
162	U Detectable Flag												BV/HP	04/04/13
163	NA Detectable Flag		NA	NA	NA	NA	NA	NA	NA	NA				
164	SARP-Flammable Calc		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
165	CAS #												BV/HP	04/04/13
166	Analyte		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
167	Concentration												BV/HP	04/04/13
168	units	ppmv											BV/HP	04/04/13
169	Date Analyzed		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL			BV/HP	04/04/13
170	B Detectable Flag													
171	D Detectable Flag													
172	E Detectable Flag													
173	J Detectable Flag													
174	U Detectable Flag												BV/HP	04/04/13
175	NA Detectable Flag		NA	NA	NA	NA	NA	NA	NA	NA				
176	SARP-Flammable Calc		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
177	CAS #													
178	Analyte		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
179	Concentration													
180	units	ppmv												
181	Date Analyzed		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
182	B Detectable Flag													
183	D Detectable Flag										RH WDS Master Template.xls Rev. 4			
184	E Detectable Flag										Addendum #4, SCO #1066			
185	J Detectable Flag										Excel 2003/2007 Microsoft Windows			
186	U Detectable Flag										XP			
187	NA Detectable Flag		NA	NA	NA	NA	NA	NA	NA	NA				

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
188	SARP-Flammable Calc		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
189			type	comment										
190	Comment													
191	Comment													
192	Comment													
193	Comment													
194	Comment													
195	Comment													
196	Comment													
197	Comment													
198	Comment													
199	Comment													
200														
201			Requirements Met?											
202	Free liquids <1% by volume		YES											
203	No non-rad. pyrophorics		YES											
204	Chemical compatability		YES											
205	No explosives		YES											
206	No corrosives		YES											
207	No pressurized containers		YES											
208	No sealed Containers >4 liters		YES											
209	Liner punctured/ filtered		YES											
210	Flammable VOCs <500ppmv		YES											
211	Container is in Approved Waste Stream Profile Form?	AERHDM	YES											
212	Can it be established through Process Knowledge that the concentration of flammable VOCs present in the headspace of the container is <= 500 ppm?.		YES											
213														
214														
215														
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Creta Hinkes
CCP Certification Official

4-5-2013
Date

Lot #

RH WDS Master Template.xls Rev. 4
Addendum #4, SCO #1066
Excel 2003/2007 Microsoft Windows XP

Attachment 3

Waste Container Radiological Characterization Record

Operating Procedure	CCP-TP-513, Rev. 72	JN 3-26-13
Date of Characterization	3/15/2013	
Waste Stream Designation	AERHDM	
Container Number	1150	
# of 1-Inch Shield Pots	2	
# of 3/4-Inch Shield Pots	0	
Container Gross Weight	1.05E+02	kg 105
Waste Weight	2.37E+01	kg 23.7
Waste Material Type	Steel	
Calculation Number	ANLE-RH-50-64 Rev. 0	

64.4 = Ci

Nuclide	Activity (Ci)	Grams	FGE	PECI	Watts	Uncertainty	Uncertainty in Curies	Uncertainty in Grams
U-233	3.37E-07	3.45E-05	3.11E-05	8.63E-08	9.80E-09	31.7%	1.07E-07	1.09E-05
U-234	7.92E-03	1.25E+00	0.00E+00	0.00E+00	2.28E-04	31.7%	2.51E-03	3.97E-01
U-235	2.28E-04	1.04E+02	6.71E+01	0.00E+00	6.30E-06	6.7%	1.53E-05	6.98E+00
U-238	2.32E-06	6.82E+00	0.00E+00	0.00E+00	5.88E-08	43.0%	9.98E-07	2.93E+00
Pu-238	1.05E-01	6.07E-03	6.86E-04	9.55E-02	3.48E-03	73.5%	7.72E-02	4.46E-03
Pu-239	1.58E+00	2.51E+01	2.51E+01	1.58E+00	4.89E-02	5.9%	9.37E-02	1.49E+00
Pu-240	7.38E-01	3.21E+00	7.22E-02	7.38E-01	2.30E-02	11.5%	8.50E-02	3.69E-01
Pu-241	1.90E+00	1.83E-02	4.12E-02	3.73E-02	6.06E-05	60.5%	1.15E+00	1.11E-02
Pu-242	9.13E-05	2.30E-02	1.72E-04	8.30E-05	2.69E-06	30.3%	2.76E-05	6.96E-03
Am-241	4.77E-01	1.37E-01	2.57E-03	4.77E-01	1.59E-02	60.5%	2.89E-01	8.31E-02
Cm-244	2.04E-04	2.50E-06	2.25E-07	1.08E-04	7.15E-06	94.6%	1.94E-04	2.37E-06
Cm-245	3.37E-08	1.94E-07	2.91E-06	3.59E-08	1.12E-09	94.6%	3.19E-08	1.83E-07
Sr-90	1.36E+01	9.82E-02	0.00E+00	0.00E+00	1.57E-02	14.4%	1.95E+00	1.41E-02
Cs-134	3.55E-06	2.71E-09	0.00E+00	0.00E+00	3.61E-08	14.4%	5.10E-07	3.90E-10
Cs-137	1.73E+01	1.97E-01	0.00E+00	0.00E+00	1.92E-02	14.4%	2.49E+00	2.83E-02
Eu-154	1.04E-02	3.88E-05	0.00E+00	0.00E+00	9.27E-05	14.4%	1.49E-03	5.57E-06
Y-90	1.36E+01	2.49E-05	0.00E+00	0.00E+00	7.50E-02	14.4%	1.95E+00	3.58E-06
Ba-137m	1.64E+01	3.05E-08	0.00E+00	0.00E+00	6.46E-02	14.4%	2.36E+00	4.38E-09
Totals	6.56E+01	1.41E+02	9.23E+01	2.92E+00	2.66E-01			

	Value	(one Sigma)	
TRU Alpha Activity Concentration	1.22E+05	1.37E+04	nCi/g
TRU Alpha Activity	2.90E+00	3.25E-01	Ci
Total Pu-239 Equiv Activity	2.92E+00	3.24E-01	Ci
Total Pu-239 Fissile Gram Equiv	9.23E+01	4.91E+00	g
Total Decay Heat	2.66E-01	1.89E-02	W
Volume Activity	5.78E-01	4.20E-02	Ci/L

Originator Derek Ott Date 3/15/2013

Independent Technical Reviewer Jene Vance Date 3/15/2013

3

HNLRHVE12019

Attachment 1 – Visual Examination Data Form

Site ID: RHANL	
Examination Date: 08-15-12	Batch Number: NA
Procedure #: CCP-TP-500	Revision #: 11 / Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A	Recording Start: NA / Recording Stop: NA
Initial Container ☒N/A	Final Container ☐ N/A
Container or Package ID Number:	Container or Package ID Number: 1150
Container Type:	Container Type: 30-Gallon Container
Waste Matrix Code:	Waste Matrix Code: S5400
Waste Stream:	Waste Stream: AERHDM
	Rigid Liner: ☒Y ☐N Type: 140 mil / Rigid Liner Lid: ☐ Y ☒N
	Rigid Liner Vented or Hole Size: NA
Percent Fill: / Percent Organic Waste:	Percent Fill: 85% / Percent Organic Waste: 0%
Layers of Confinement: / Closure Method:	Layers of Confinement: 1 / Closure Method: Heat sealed filtered
Comments (e.g., filter information, NCRs): NA	

Waste Description:

Bottom Can: 1007

Top Can: 1057

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 6-5-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 1007		Container or Package ID Number:	
Container Type: 7 GALLON CONTAINER		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 85	Percent Organic Waste: 0	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7 GALLON CONTAINER (IM)

SHIELD POT CENTERING RING (IM)

SHIELD POT #7172

Attachment 1 – Visual Examination Data Form

Site ID: RHANU			
Examination Date: 6-5-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 7172		Container or Package ID Number:	
Container Type: 1 GALLON SHIELD POT		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 0	Percent Organic Waste: 0	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NO WASTE WAS ADDED TO SHIELD POT			
Waste Description: VENTED 1 GALLON "1" INCH THICK LEAD LINED SHIELD POT (OM) (Em)			

27

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 06-07-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number NA
Recording Equipment Check: ☐SAT ☐UNSAT ☑N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☑N/A	
Container or Package ID Number: 1057		Container or Package ID Number:	
Container Type: 7-Gallon Container		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 85%	Percent Organic Waste: 0%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7-Gallon Container-(IM)
Shield Pot Centering Ring-(IM)
Shield Pot # 7168

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 09-27-11		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒N/A	
Container or Package ID Number: 7168		Container or Package ID Number:	
Container Type: 1-Gallon Container		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 45%	Percent Organic Waste: 0%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description: Vented 1-Gallon 1-INCH Thick Lead Lined Shield Pot-(OM)(IM)
Fuel Specimen-074B2-(OM)
Fuel Specimen-074B3-(OM)
Fuel Specimen-074B4-(OM)
Fuel Specimen-074B1-(OM)

AGHCF RH-TRU 30-Gallon Waste Drum Datasheet

(The bracketed numbers in the left margin refer to the corresponding procedure step number.)

AGHCF Drum No. 1150

Section 1 — Fill out in accordance with NOD-AGHCF-OPS-303

[8.2.1] AGHCF Drum No. 1150

[8.2.14] Requisition Number: RW – 88034

[8.2.2] Drum Is Type A [ISI][1]: YES ☑ NO ☐

[8.2.5] Drum Inspection [ISI][1]: SAT ☑ UNSAT ☐

[8.2.6] Drum Vent Model No. [ISI][1]: NUCFIL-013

[8.2.6] Drum Vent Serial No. [ISI][1]: AL-1178

[8.2.21] Acceptance Criteria Met: YES ☑ NO ☐

[8.2.7] Torque Wrench for Drum Vent
ID Number: ARG 0411016257
Calibration Due Date: 09/02/2012

ROBERT LEPPINK — FM Print Name
Robert Leppink — FM Sign Name
6/27/12 — Date

1 [ISI] identifies an In-Service Inspection specified in the Technical Safety Requirements

Section 2 — Fill out in accordance with NOD-AGHCF-OPS-305

[37] Top Waste Can No. 1057

[37] Bottom Waste Can No. 1007

[59] William H. Riley — VEO Print Name
William H. Riley — VEO Sign Name
08-15-12 — Date

[59] ERIC BOND — VEO Print Name
Eric Bond — VEO Sign Name
8-15-12 — Date

[80.2] Torque Wrench for Ring Bolt
ID Number: 88733
Calibration Due Date: 6/21/2013

[86] Date Loaded: 8/15/12

[86] Tamper Seal 1 No.: 6794

[86] Tamper Seal 2 No.: 6795

[89.2] Total Wt. Loaded Drum: 235 lbs

[Step 89.3] Spring Scale for Drum Weight
ID Number: 10759
Calibration Due Date: 5/7/2013

Surface Dose-Rate Calculation Worksheet for RH-TRU FEW Drums

(This worksheet is to be completed under the direction of the PIC for each 30-gallon drum of FEW out-loaded from the AGHCF in accordance with NOD-AGHCF-OPS-305, *RH-TRU 30-Gallon Waste Drum Out-Loading.* The bracketed numbers in the left margin refer to the corresponding procedure step number.)

[96.1] Drum Number 1150 Survey date 8/15/12

[96.1] Inner shield pot configuration (circle one):

(a.) 1 in. top + 1 in. bottom
b. ¾ in. top + 1 in. bottom
c. 1 in. top + ¾ in. bottom
d. ¾ in. top + ¾ in. bottom

Maximum dose rate (R/hr) as recorded on the 30-gallon drum 1.3 R/hr

The following table will be used to determine the multiplier for generating the calculated surface dose rate for the unshielded FEW in this container, based on the location of the maximum measured dose rate

Multiplier Factors for Various Placements of 1 in. and ¾ in. Shield Pots in Drums

Configuration of shield pots in drum	Bottom	Side	Top
a. Two 1 in. shield pots	27.9	(32.2)	33.6
b. One of each type – ¾ in. shield pot on top and 1 in. shield pot on bottom	27.8	17.4	16.6
c. One of each type – 1 in. shield pot on top and ¾ in. shield pot on bottom	14.2	16.9	33.7
d. Two ¾ in. shield pots	14.1	15.9	16.5

[96.1] Calculate the FEW surface dose rate:

Maximum dose rate on drum (R/hr) x Multiplier factor = FEW surface dose rate (R/hr)

1.3 R/hr x 32.2 = 41.86 41,860 mrem

(Enter actual values on the lines above to perform and document the calculation)

[96.2] Calculated by: LEE ESSENMACHER (Print name) / Lee Essenmacher (Signature) / ~~8/15/12~~ DCP 4/3/13 (Date)

[97.2] IV done by: Kyle Hash (Print name) / (Signature) / ~~8/15/12~~ DCP 4/3/13 (Date)

[98] Based on the above calculations, PIC makes the following determination, checks the appropriate box, and signs off below.

The FEW surface dose rate is between 0.2 R/hr and 1,000 R/hr ☒ **Yes** ☐ **No**

If Yes, continue outloading

If No, notify FM.

[122] LEE ESSENMACHER (PIC Print Name) / Lee Essenmacher (PIC Signature) / ~~8/15/12~~ DCP 4/3/13 (Date)

Report Statistics

Report Version:	**2.3**
WDS Instance:	**prd05.wipp.carlsbad.nm.us**
Generated on:	**August 19, 2013 10:30 AM**
Generated by:	**KIRKES, CRETA**
Total Pages:	**7**

Selection Criteria

Container Number: **1153**

Container: 1153
Type: 40 - RH 30 gal TBO

Extended Status: APPROVED CERT IN APPROVED CERT CANISTER EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 04/05/2013
Waste Handling Code: RH
Disposal Date: 05/01/2013

Current Location Site: WI
Generator Site: AE
Destination Site ID: WI

Certification Program ID: C2
Shipping Program ID: C2

Overpack Container: AE0150
Overpack Type: REMOVABLE-LID 72-B CANISTER
Overpack Status: CERTIFICATION DATA APPROVED

Neutron Dose Rate (mrem/hr): 0.0
Beta Gamma Dose Rate (mrem/hr): 34800.0
Total Dose Rate (mrem/hr): 34800.0

FGE (g): 7.59E01
FGE Uncertainty (g): 4.04E00
Gross Weight (kg): 100.00
Gross Weight Uncert (kg): 0.50
Decay Heat (W): 2.05E-01
Decay Heat Uncertainty (W): 1.39E-02

Shipment Data

Payload ID: **AE0150** Assembly ID: AE128421 Payload Complete? Y
Shipment Number: AER13007 Send Date: 04/22/2013 Receipt Date: 04/23/2013
Shipment Status: SHIPMENT RECEIVED AT DESTINATION

Emplacement Location

Panel: 6 Room: 1 Borehole: 047

Certification Data Values

Waste Stream Profile Code: AERHDM
Waste Type Code: MTRU
IDC Code: 001
Waste Matrix Code: S5400
WAC Revision Number: 7.3
Fill Factor (%): 85.00
Waste Stream BIR ID: AE-T009
Waste Stream MWIR ID: NONE

TRU Alpha Activity (Ci): 2.03E00
TRU Alpha Activity Uncertainty (Ci): 1.68E-01
TRU Alpha Activity Concentration (Ci/g): 8.68E-05
PU-239 Equivalent Activity (PE-Ci): 2.04E00
Alpha Surface Contamination (dpm/cm^2): 0.0
Beta/Gamma Surface Contamination (dpm/cm^2): 0.0

Transportation Data Values

Closure Date: 08/17/2012
Vent Date: 08/17/2012
Process Knowledge? Y
Waste Gen Date:
Content Code: AE322E
U-235 FEM (g):
U-235 FEM Uncert (g):
Be chemically/ mechanically bound:

Shipment Purpose: DISPOSAL
Machine Compacted? N
Liner Exists? Y
Liner Hole Size(mm):
Liner Lid Present? N
Layers of Packaging 1
Aqueous Material? N

Gas Generation Data Values

Measured FGGR (mol/s)	Measured TGRR (mol/s)	Truncated FGGR Test (Y/N)	Truncated FGGR Test Period (days)

Container: 1153
Type: 40 - RH 30 gal TBO

Extended Status: APPROVED CERT IN APPROVED CERT CANISTER EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 04/05/2013
Waste Handling Code: RH
Disposal Date: 05/01/2013

PCB Waste? N
PCB Mass (kg):
PCB Concentration (ppm):
PCB Out of Service Date:
Be Present? Y
Be <= 1% by weight? Y
Be mass <= 100kg? Y
Separation OK? Y
Packing Fraction (compaction level): non-compacted

Filters

Filter Model Number	Filter Diffusivity (mol/s/ml)	Quantity	Install Date
NF013	3.7E-06	1	08/17/2012

Certification Comments

Radionuclides

Radionuclide	Activity (Ci)	Activity Uncert (Ci)	Mass (g)	Mass Uncert (g)
AM-241	2.170E-01	1.310E-01	6.254E-02	3.775E-02
BA-137M	1.330E01	1.920E00	2.472E-08	3.569E-09
CM-244	6.300E-05	5.960E-05	7.702E-07	7.286E-07
CM-245	1.030E-08	9.730E-09	5.920E-08	5.592E-08
CS-134	2.870E-06	4.130E-07	2.191E-09	3.153E-10
CS-137	1.410E01	2.030E00	1.602E-01	2.307E-02
EU-154	8.420E-03	1.210E-03	3.154E-05	4.532E-06
PU-238	5.380E-02	3.960E-02	3.110E-03	2.289E-03
PU-239	1.360E00	8.150E-02	2.162E01	1.296E00
PU-240	4.010E-01	4.630E-02	1.743E00	2.013E-01
PU-241	8.690E-01	5.260E-01	8.356E-03	5.058E-03
PU-242	2.940E-05	8.910E-06	7.406E-03	2.244E-03

Container: 1153
Type: 40 - RH 30 gal TBO

Extended Status: APPROVED CERT IN APPROVED CERT CANISTER EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 04/05/2013
Waste Handling Code: RH
Disposal Date: 05/01/2013

Radionuclides

Radionuclide	Activity (Ci)	Activity Uncert (Ci)	Mass (g)	Mass Uncert (g)
SR-90	1.090E01	1.570E00	7.899E-02	1.138E-02
U-233	2.700E-07	8.560E-08	2.766E-05	8.770E-06
U-234	6.390E-03	2.020E-03	1.011E00	3.196E-01
U-235	1.850E-04	1.240E-05	8.447E01	5.662E00
U-238	1.930E-06	8.310E-07	5.676E00	2.444E00
Y-90	1.090E01	1.570E00	2.004E-05	2.886E-06

Material Parameters

Material Parameter	Description	Weight (kg)
8	PLASTICS	23.70
13	STEEL CONTAINER MATERIALS	16.36
14	PLASTIC/LINERS CONTAINER MATERIALS	0.00
21	STEEL LINER MATERIALS	59.90
	Waste Weight:	23.70
	Packaging Weight:	76.26
	Total Material Weight:	99.96

Hazardous Codes

Hazardous Code	Description
D004	ARSENIC
D005	BARIUM
D006	CADMIUM

Container: 1153
Type: 40 - RH 30 gal TBO

Extended Status: APPROVED CERT IN APPROVED CERT CANISTER EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 04/05/2013
Waste Handling Code: RH
Disposal Date: 05/01/2013

Hazardous Codes

Hazardous Code	Description
D007	CHROMIUM
D008	LEAD
D009	MERCURY
D010	SELENIUM
D011	SILVER
D019	CARBON TETRACHLORIDE
D028	1,2-DICHLOROETHANE
D029	1,1-DICHLOROETHYLENE
F002	SPENT HALOGENATED SOLVENTS
F005	SPENT NON-HALOGENATED SOLVENTS

Assay Methods

Labor Code	Assay Method	Description	Assay Date
C2	8RHGM1	GRAVIMETRIC OR DIMENSIONAL MEASUREMENTS	03/15/2013

Non-Destructive Examination (NDE)

Labor Code	NDE Method	Description	Examination Date
C2	8RHVE2	VE OF NEWLY PACKAGED RH WASTE	08/17/2012

Edit Limit Check Results

Evaluation Date: 04/05/2013 13:22:37 Overall Status: PASS

Evaluation Code	Status	Return Code	Detailed Description

Container: 1153
Type: 40 - RH 30 gal TBO

Extended Status: APPROVED CERT IN APPROVED CERT CANISTER EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 04/05/2013
Waste Handling Code: RH
Disposal Date: 05/01/2013

Edit Limit Check Results

Evaluation Date: 04/05/2013 13:22:37 Overall Status: PASS

Evaluation Code	Status
DI_CERT_ALL	PASS
DI_CERT_BE	PASS
DI_CERT_CERT	PASS
DI_CERT_CHARZ	PASS
DI_CERT_ED	PASS
DI_CERT_EPA	PASS
DI_CERT_PCB	PASS
DI_CERT_PERC	PASS
DI_CERT_TRAMPAC	PASS
DSA	PASS
WAC	PASS
WAP_CERT	PASS

TRAMPAC Evaluation Results

Evaluation Date: Overall Status:

Evaluation Code	Status	Return Code	Detailed Description

History

Event Date/Time	Event Description	Reason
04/05/2013 13:22:38	INSERT DATA INTO THE DATABASE	
04/05/2013 13:22:38	SUCCESSFUL SUBMISSION FOR CERT	

Container: 1153

Type: 40 - RH 30 gal TBO

Extended Status: APPROVED CERT IN APPROVED CERT CANISTER EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 04/05/2013
Waste Handling Code: RH
Disposal Date: 05/01/2013

History

Event Date/Time	Event Description	Reason
04/05/2013 13:26:59	APPROVED FOR CERT	
04/16/2013 10:07:30	ASSIGNED TO OVERPACK	

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	RH WDS Master Template.xls Rev. 4 Addendum #4, SCO #1066 Excel 2003/2007 Microsoft Windows XP	Units	data					comments					Initial	date
2	Shipper Site ID		C2	Location ID	Dest Program ID	Shipping Purpose					1153		HP/BV	04/04/13
3	Waste Stream Profile		AERHDM	AE	WI	D							HP/BV	04/04/13
4	Container Number		1153										HP/BV	04/04/13
5	Container Type		RH drum-30 tbo	drum, swb, tdop, etc., see WWIS labels for valid types.					U-235 FEM	U-235 FEM Uncert	FGGR Flag	FGGR Test Period	HP/BV	04/04/13
6	WAC Rev #		7.3	0					NULL	NULL	NULL	NULL	HP/BV	04/04/13
7	WAC Ex. #						Be <=100 kg	Be <= 1%	Be Present	Aqueous Material	Be Chem/Mech Bound	Compacted Wst		
8	Cert Site		C2				Y	Y	Y	N	NULL	N	HP/BV	04/04/13
9	Cert Date		4/5/2013											
10	Waste Handling Code		RH	CH, RH									HP/BV	04/04/13
11	Waste Type Code		MTRU	TRU, MTRU									HP/BV	04/04/13
12	Waste Stream BIR ID		AE-T009				p(CI):	choose	1sigma	2sigma	95%CI		HP/BV	04/04/13
13	Waste Stream MWIR ID		NONE		default to 0 for TRU		0.6827	1sigma	1.0000	0.5000	0.5102		HP/BV	04/04/13
14	Generator Site ID		AE				0.9545	2sigma	2.0000	1.0000	1.0204		HP/BV	04/04/13
15	IDC Code		001				0.9500	95%CI	1.9600	0.9800	1.0000		HP/BV	04/04/13
16	Matrix Code		S5400										HP/BV	04/04/13
17	Trucon Code		AE322E										HP/BV	04/04/13
18	Shipping Category						WWIS Req'd CI:	1sigma	1.0000	0.5000	0.5102			
19	Tru Alpha Act	Ci	2.03E+00		2.032E+00		Fraction of MDL Reported on HGAS		1.0000				HP/BV	04/04/13
20	Tru Alpha Act Uncert	1sigma Ci	1.68E-01	2.366E+00	Tru Alpha Act + 2sigma (Ci)								HP/BV	04/04/13
21	Tru Alpha Act Conc	nCi/g	8.68E+04		8.57E+04								HP/BV	04/04/13
22	Tru Alpha Act Conc Uncert	1sigma nCi/g	7.09E+03	1.010E+05	Tru Alpha Act Conc + 2sigma (Ci)								HP/BV	04/04/13
23	Pu239 Fiss Gm Eq	g	7.59E+01		7.600E+01								HP/BV	04/04/13
24	Pu239 Fiss Gm Eq Uncert	1sigma g	4.04E+00	8.398E+01	Pu239 Fiss Gm Eq + 2sigma (Ci)								HP/BV	04/04/13
25	Pu239 Eq Act	Ci	2.04E+00		2.044E+00								HP/BV	04/04/13
26	Decay Heat	watts	2.05E-01		2.049E-01								HP/BV	04/04/13
27	Decay Heat Uncert	1sigma watts	1.39E-02	2.19E-01	Decay Heat + 1sigma (watts)								HP/BV	04/04/13
28	Layers of Packaging		1										HP/BV	04/04/13
29	Fill Factor		85	percentage	Liner Lid Present	N							HP/BV	04/04/13
30	Liner Type		1	1 = plastic drum liner									HP/BV	04/04/13
31	Liner Punctured		Y		Liner Hole Size	457.2	(mm)						HP/BV	04/04/13
32	PCB Conc		NULL				PCB Waste	PCB Mass (kg)	Out of Service				HP/BV	04/04/13
33	Closure Date		8/17/2012	Watt-years	Waste Gen Date		N	NULL	NULL				HP/BV	04/04/13
34	Vent Date		8/17/2012	0.129									HP/BV	04/04/13
35	Filter Install Date		8/17/2012										HP/BV	04/04/13
36	Filter Manufacturer		NFT										HP/BV	04/04/13
37	Filter Serial Number(s)												HP/BV	04/04/13
38	Filter Model Number	NF012,NF013,NF020,NF9026	NF013										HP/BV	04/04/13
39	Number of Filters Installed		1										HP/BV	04/04/13
40	Aspiration Method ID		3										HP/BV	04/04/13
41	Gas Gen Rate			#VALUE!	<<Gas Gen Rate Calculated.		Avagdro's Number	6.022142E+23	NIST					
42	Hydrogen/Methane Gen Rate						Electron Charge	1.602176E-19 V	NIST					
43	Gas Gen Comp Date				Waste (kg)	Packaging (kg)	Total (kg)							
44	Gross Weight	kg	100.000		23.7	76.26	99.96						HP/BV	04/04/13
45	Gross Weight Uncert	1sigma kg	0.5		max. reported	mda							HP/BV	04/04/13
46	Alpha Surf Cont	dpm/100 cm^2	0		0		Minimum Detectable Activity						HP/BV	04/04/13
47	Beta/Gamma Surf Cont	dpm/100 cm^2	0		0		Minimum Detectable Activity		CK 4-5-13	Shipping Calcs			HP/BV	04/04/13
48	Neutron Dose Rate	mrem/hr	0		0		Minimum Detectable Activity			Total TBq	1.93E+00		HP/BV	04/04/13
49	Beta/Gamma Dose Rate	mrem/hr	34800		34800		Minimum Detectable Activity			Fraction	1.29E-01		HP/BV	04/04/13
50	Radionuclide		U-233	U-234	U-235	U-238	Pu-238	Pu-239	Pu-240	Highway Route Control?	No	Am-241	HP/BV	04/04/13
51	Activity	Ci	2.70E-07	6.39E-03	1.85E-04	1.93E-06	5.38E-02	1.36E+00	4.01E-01	Pu-241 8.69E-01	Pu-242 2.94E-05	2.17E-01	HP/BV	04/04/13
52	Activity Uncert	1sigma Ci	8.56E-08	2.02E-03	1.24E-05	8.31E-07	3.96E-02	8.15E+00 -02	4.63E-02	5.26E-01	8.91E-06	1.31E-01	HP/BV	04/04/13
53	Mass	grams	2.77E-05	1.01E+00	8.45E+01	5.68E+00	3.11E-03	2.16E+01	1.74E+00	8.36E-03	7.41E-03	6.25E-02		
54	Mass Uncert	1sigma grams	8.77E-06	3.20E-01	5.66E+00	2.44E+00	2.29E-03	1.30E+02	2.01E-01	5.06E-03	2.24E-03	3.78E-02		
55	calc Tru Alpha Act	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.38E-02	1.36E+00	4.01E-01	0.00E+00	2.94E-05	2.17E-01		
56	calc Tru Alpha Act Conc	nCi/g	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.27E+03	5.74E+04	1.69E+04	0.00E+00	1.24E+00	9.16E+03		
57	calc Act	Ci	2.70E-07	6.39E-03	1.85E-04	1.93E-06	5.38E-02	1.36E+00	4.01E-01	8.69E-01	2.94E-05	2.17E-01		
58	calc Act Conc	nCi/g	1.14E-02	2.70E+02	7.81E+00	8.14E-02	2.27E+03	5.74E+04	1.69E+04	3.67E+04	1.24E+00	9.16E+03		

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
59	calc Pu239 FGE	g	2.49E-05	0.00E+00	5.43E+01	0.00E+00	3.51E-04	2.16E+01	3.92E-02	1.88E-02	5.55E-05	1.17E-03		
60	calc Pu239 Eq Act	Ci	6.92E-08	0.00E+00	0.00E+00	0.00E+00	4.89E-02	1.36E+00	4.01E-01	1.70E-02	2.67E-05	2.17E-01		
61	calc Decay Heat	watts	7.86E-09	1.84E-04	5.10E-06	4.89E-08	1.78E-03	4.22E-02	1.25E-02	2.77E-05	8.66E-07	7.25E-03		
62	uncert Tru Alpha Act	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.96E-02	8.15E+00	4.63E-02	0.00E+00	8.91E-06	1.31E-01		
63	uncert Tru Alpha Act Conc	nCi/g	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.67E+03	3.44E+05	1.95E+03	0.00E+00	3.76E-01	5.53E+03		
64	uncert Act	Ci	8.56E-08	2.02E-03	1.24E-05	8.31E-07	3.96E-02	8.15E+00	4.63E-02	5.26E-01	8.91E-06	1.31E-01		
65	uncert Act Conc	nCi/g	3.61E-03	8.52E+01	5.23E-01	3.51E-02	1.67E+03	3.44E+05	1.95E+03	2.22E+04	3.76E-01	5.53E+03		
66	uncert Pu239 FGE	g	7.89E-06	0.00E+00	3.64E+00	0.00E+00	2.59E-04	1.30E+02	4.53E-03	1.14E-02	1.68E-05	7.06E-04		
67	uncert Pu239 Eq Act	Ci	2.19E-08	0.00E+00	0.00E+00	0.00E+00	3.60E-02	8.15E+00	4.63E-02	1.03E-02	8.10E-06	1.31E-01		
68	uncert Decay Heat	watts	2.49E-09	5.82E-05	3.42E-07	2.11E-08	1.31E-03	2.53E-01	1.44E-03	1.67E-05	2.63E-07	4.38E-03		
69	Shipping Calcs	3.86E+02	1.00E-05	2.37E-01	0.00E+00	0.00E+00	9.94E+00	2.51E+02	7.41E+01	3.22E+00	5.43E-03	4.01E+01		
70	49CFR173.433f		0.00%	0.06%	0.00%	0.00%	2.58%	65.10%	19.20%	0.83%	0.00%	10.39%		
71	Radionuclide		Cm-244	Cm-245	Sr-90	Cs-134	Cs-137	Eu-154	Y-90	Ba-137M			HP/BV	04/04/13
72	Activity	Ci	6.30E-05	1.03E-08	1.09E+01	2.87E-06	1.41E+01	8.42E-03	1.09E+01	1.33E+01			HP/BV	04/04/13
73	Activity Uncert	1sigma Ci	5.96E-05	9.73E-09	1.57E+00	4.13E-07	2.03E+00	1.21E-03	1.57E+00	1.92E+00			HP/BV	04/04/13
74	Mass	grams	7.70E-07	5.92E-08	7.90E-02	2.19E-09	1.60E-01	3.15E-05	2.00E-05	2.47E-08	NULL	NULL		
75	Mass Uncert	1sigma grams	7.29E-07	5.59E-08	1.14E-02	3.15E-10	2.31E-02	4.53E-06	2.89E-06	3.57E-09	NULL	NULL		
76	calc Tru Alpha Act	Ci	0.00E+00	1.03E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NULL	NULL		
77	calc Tru Alpha Act Conc	nCi/g	0.00E+00	4.35E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NULL	NULL		
78	calc Act	Ci	6.30E-05	1.03E-08	1.09E+01	2.87E-06	1.41E+01	8.42E-03	1.09E+01	1.33E+01	NULL	NULL		
79	calc Act Conc	nCi/g	2.66E+00	4.35E-04	4.60E+05	1.21E-01	5.95E+05	3.55E+02	4.60E+05	5.61E+05	NULL	NULL		
80	calc Pu239 FGE	g	6.93E-08	8.88E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NULL	NULL		
81	calc Pu239 Eq Act	Ci	3.32E-05	1.09E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NULL	NULL		
82	calc Decay Heat	watts	2.20E-06	3.42E-10	1.26E-02	2.91E-08	1.56E-02	7.54E-05	6.03E-02	5.24E-02	NULL	NULL		
83	uncert Tru Alpha Act	Ci	0.00E+00	9.73E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NULL	NULL		
84	uncert Tru Alpha Act Conc	nCi/g	0.00E+00	4.11E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NULL	NULL		
85	uncert Act	Ci	5.96E-05	9.73E-09	1.57E+00	4.13E-07	2.03E+00	1.21E-03	1.57E+00	1.92E+00	NULL	NULL		
86	uncert Act Conc	nCi/g	2.51E+00	4.11E-04	6.62E+04	1.74E-02	8.57E+04	5.11E+01	6.62E+04	8.10E+04	NULL	NULL		
87	uncert Pu239 FGE	g	6.56E-08	8.39E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NULL	NULL		
88	uncert Pu239 Eq Act	Ci	3.14E-05	1.03E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NULL	NULL		
89	uncert Decay Heat	watts	2.08E-06	3.23E-10	1.82E-03	4.19E-09	2.25E-03	1.08E-05	8.69E-03	7.57E-03	NULL	NULL		
90	Shipping Calcs		5.83E-03	1.90E-06	4.04E+00	2.13E-07	1.04E+00	6.24E-04	2.01E+00	0.00E+00	NULL	NULL		
91	49CFR173.433f		0.00%	0.00%	1.05%	0.00%	0.27%	0.00%	0.52%	0.00%	NULL	NULL		
92	Waste Material Parameter		PW	SL									HP/BV	04/04/13
93	Wgt of Mat Parms (kg or lbs)	kg	23.7	59.9									HP/BV	04/04/13
94	Radio Assay Method		8RHGM1										HP/BV	04/04/13
95	Data Package Number		ANLE-RH-50-67					kg					HP/BV	04/04/13
96	Assay Date		3/15/2013				lbs	0.4536					HP/BV	04/04/13
97	Charz Method ID		8RHVE2				kg	1.0000					HP/BV	04/04/13
98	Data Package Number		ANLRHVE12019										HP/BV	04/04/13
99	Charz Method Date		8/17/2012										HP/BV	04/04/13
100	Haz Codes		D004	D005	D006	D007	D008	D009	D010	D011	D019	D028	HP/BV	04/04/13
101	Haz Codes		D029	F002	F005								HP/BV	04/04/13
102	Haz Codes													
103	Haz Codes													
104	Sample ID	Headspace Gas H/M	NULL										HP/BV	04/04/13
105	Sample Type			HGHM									HP/BV	04/04/13
106	Layer No. Sampled				0								HP/BV	04/04/13
107	Date Sampled					Sample Site							HP/BV	04/04/13
108	Method ID			DTP-1.2-041									HP/BV	04/04/13
109	Data Package Number												HP/BV	04/04/13
110	CAS #		NULL	NULL										
111	Analyte												HP/BV	04/04/13
112	Concentration												HP/BV	04/04/13
113	units	%vol											HP/BV	04/04/13
114	Date Analyzed			NULL									HP/BV	04/04/13
115	B Detectable Flag													
116	D Detectable Flag													
117	E Detectable Flag													
118	J Detectable Flag													
119	U Detectable Flag												HP/BV	04/04/13
120	NA Detectable Flag		NA	NA										
121														
122	Sample ID	Headspace Gas VOC											HP/BV	04/04/13
123	Sample Type			HGVO									HP/BV	04/04/13
124	Layer No. Sampled					SARP-Flammable VOCs (ppmv)		0					HP/BV	04/04/13
125	Date Sampled												HP/BV	04/04/13

RH WDS Master Template.xls Rev. 4
Addendum #4, SCO #1066
Excel 2003/2007 Microsoft Windows XP

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
126	Method ID			DTP-1.2-041									HP/BV	04/04/13
127	Data Package Number												HP/BV	04/04/13
128	Methanol Method ID													
129	CAS #												HP/BV	04/04/13
130	Analyte		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
131	Concentration												HP/BV	04/04/13
132	units	ppmv											HP/BV	04/04/13
133	Date Analyzed		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL			HP/BV	04/04/13
134	B Detectable Flag													
135	D Detectable Flag													
136	E Detectable Flag													
137	J Detectable Flag													
138	U Detectable Flag												HP/BV	04/04/13
139	NA Detectable Flag		NA	NA	NA	NA	NA	NA	NA	NA				
140	SARP-Flammable Calc		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
141	CAS #												HP/BV	04/04/13
142	Analyte		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
143	Concentration												HP/BV	04/04/13
144	units	ppmv											HP/BV	04/04/13
145	Date Analyzed		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL			HP/BV	04/04/13
146	B Detectable Flag													
147	D Detectable Flag													
148	E Detectable Flag													
149	J Detectable Flag													
150	U Detectable Flag												HP/BV	04/04/13
151	NA Detectable Flag		NA	NA	NA	NA	NA	NA	NA	NA				
152	SARP-Flammable Calc		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
153	CAS #												HP/BV	04/04/13
154	Analyte		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
155	Concentration												HP/BV	04/04/13
156	units	ppmv											HP/BV	04/04/13
157	Date Analyzed		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL			HP/BV	04/04/13
158	B Detectable Flag													
159	D Detectable Flag													
160	E Detectable Flag													
161	J Detectable Flag													
162	U Detectable Flag												HP/BV	04/04/13
163	NA Detectable Flag		NA	NA	NA	NA	NA	NA	NA	NA				
164	SARP-Flammable Calc		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
165	CAS #												HP/BV	04/04/13
166	Analyte		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
167	Concentration												HP/BV	04/04/13
168	units	ppmv											HP/BV	04/04/13
169	Date Analyzed		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL			HP/BV	04/04/13
170	B Detectable Flag													
171	D Detectable Flag													
172	E Detectable Flag													
173	J Detectable Flag													
174	U Detectable Flag												HP/BV	04/04/13
175	NA Detectable Flag		NA	NA	NA	NA	NA	NA	NA	NA				
176	SARP-Flammable Calc		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
177	CAS #													
178	Analyte		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
179	Concentration													
180	units	ppmv												
181	Date Analyzed		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
182	B Detectable Flag													
183	D Detectable Flag										RH WDS Master Template.xls Rev. 4			
184	E Detectable Flag										Addendum #4, SCO #1066			
185	J Detectable Flag										Excel 2003/2007 Microsoft Windows			
186	U Detectable Flag										XP			
187	NA Detectable Flag		NA	NA	NA	NA	NA	NA	NA	NA				

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
188	SARP-Flammable Calc		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
189			type	comment										
190	Comment													
191	Comment													
192	Comment													
193	Comment													
194	Comment													
195	Comment													
196	Comment													
197	Comment													
198	Comment													
199	Comment													
200														
201			Requirements Met?											
202	Free liquids <1% by volume		YES											
203	No non-rad. pyrophorics		YES											
204	Chemical compatability		YES											
205	No explosives		YES											
206	No corrosives		YES											
207	No pressurized containers		YES											
208	No sealed Containers >4 liters		YES											
209	Liner punctured/ filtered		YES											
210	Flammable VOCs <500ppmv		YES											
211	Container is in Approved Waste Stream Profile Form?	AERHDM	YES											
212	Can it be established through Process Knowledge that the concentration of flammable VOCs present in the headspace of the container is <= 500 ppm?.		YES											
213														
214														
215														
216														
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236														

Creta Hulkes
CCP Certification Official

4-5-2013
Date

Lot #

RH WDS Master Template.xls Rev. 4
Addendum #4, SCO #1066
Excel 2003/2007 Microsoft Windows XP

Attachment 3

Waste Container Radiological Characterization Record

Operating Procedure	CCP-TP-513,	Rev. 12 JN 3-26-13
Date of Characterization	3/15/2013	
Waste Stream Designation	AERHDM	
Container Number	1153	
# of 1-Inch Shield Pots	1	
# of 3/4-Inch Shield Pots	1	
Container Gross Weight	1.00E+02	kg 100
Waste Weight	2.37E+01	kg 23.7
Waste Material Type	Steel	
Calculation Number	ANLE-RH-50-67	Rev. 0

57.7-51

Nuclide	Activity (Ci)	Grams	FGE	PECi	Watts	Uncertainty	Uncertainty in Curies	Uncertainty in Grams
U-233	2.70E-07	2.77E-05	2.49E-05	6.93E-08	7.87E-09	31.7%	8.56E-08	8.77E-06
U-234	6.39E-03	1.01E+00	0.00E+00	0.00E+00	1.84E-04	31.7%	2.02E-03	3.20E-01
U-235	1.85E-04	8.43E+01	5.42E+01	0.00E+00	5.09E-06	6.7%	1.24E-05	5.67E+00
U-238	1.93E-06	5.69E+00	0.00E+00	0.00E+00	4.90E-08	43.0%	8.31E-07	2.45E+00
Pu-238	5.38E-02	3.11E-03	3.51E-04	4.89E-02	1.78E-03	73.5%	3.96E-02	2.29E-03
Pu-239	1.36E+00	2.16E+01	2.16E+01	1.36E+00	4.22E-02	6.0%	8.15E-02	1.30E+00
Pu-240	4.01E-01	1.74E+00	3.92E-02	4.01E-01	1.25E-02	11.5%	4.63E-02	2.01E-01
Pu-241	8.69E-01	8.36E-03	1.88E-02	1.70E-02	2.77E-05	60.5%	5.26E-01	5.06E-03
Pu-242	2.94E-05	7.42E-03	5.56E-05	2.68E-05	8.68E-07	30.3%	8.91E-06	2.25E-03
Am-241	2.17E-01	6.25E-02	1.17E-03	2.17E-01	7.25E-03	60.5%	1.31E-01	3.78E-02
Cm-244	6.30E-05	7.70E-07	6.93E-08	3.31E-05	2.20E-06	94.6%	5.96E-05	7.28E-07
Cm-245	1.03E-08	5.91E-08	8.87E-07	1.09E-08	3.41E-10	94.6%	9.73E-09	5.59E-08
Sr-90	1.09E+01	7.93E-02	0.00E+00	0.00E+00	1.27E-02	14.4%	1.57E+00	1.14E-02
Cs-134	2.87E-06	2.19E-09	0.00E+00	0.00E+00	2.91E-08	14.4%	4.13E-07	3.15E-10
Cs-137	1.41E+01	1.60E-01	0.00E+00	0.00E+00	1.56E-02	14.4%	2.03E+00	2.30E-02
Eu-154	8.42E-03	3.15E-05	0.00E+00	0.00E+00	7.54E-05	14.4%	1.21E-03	4.54E-06
Y-90	1.09E+01	2.01E-05	0.00E+00	0.00E+00	6.05E-02	14.4%	1.57E+00	2.89E-06
Ba-137m	1.33E+01	2.48E-08	0.00E+00	0.00E+00	5.25E-02	14.4%	1.92E+00	3.56E-09
Totals	5.22E+01	1.15E+02	7.59E+01	2.04E+00	2.05E-01			

	Value	(one Sigma)	
TRU Alpha Activity Concentration	8.68E+04	7.09E+03	nCi/g
TRU Alpha Activity	2.03E+00	1.68E-01	Ci
Total Pu-239 Equiv Activity	2.04E+00	1.67E-01	Ci
Total Pu-239 Fissile Gram Equiv	7.59E+01	4.04E+00	g
Total Decay Heat	2.05E-01	1.39E-02	W
Volume Activity	4.60E-01	3.34E-02	Ci/L

Originator Derek Ott Date 3/15/2013

Independent Technical Reviewer Jene Vance Date 3/15/2013

3

ANLRHN6T2-09

Controlled Copy

Attachment 1 – Visual Examination Data Form

Site ID: RHANL	
Examination Date: 08-17-12	Batch Number: NA
Procedure #: CCP-TP-500	Revision #: 11 / Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A	Recording Start: NA / Recording Stop: NA
Initial Container ☒N/A	Final Container ☐ N/A
Container or Package ID Number:	Container or Package ID Number: 1153
Container Type:	Container Type: 30-Gallon Container
Waste Matrix Code:	Waste Matrix Code: S5400
Waste Stream:	Waste Stream: AERHDM
	Rigid Liner: ☒Y ☐N Type: 140 MIL / Rigid Liner Lid: ☐ Y ☒N
	Rigid Liner Vented or Hole Size: NA
Percent Fill: / Percent Organic Waste:	Percent Fill: 85% / Percent Organic Waste: 0%
Layers of Confinement: / Closure Method:	Layers of Confinement: 1 / Closure Method: Heat Sealed filtered
Comments (e.g., filter information, NCRs): NA	

Waste Description:

BOTTOM CAN: 1014

TOP CAN: 960

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Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 6-6-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒N/A	
Container or Package ID Number: 1014		Container or Package ID Number:	
Container Type: 7 GALLON CONTAINER		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AE.RHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 85	Percent Organic Waste: 0	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7 GALLON CONTAINER (IM)
SHIELD POT CENTERING RING (IM)
SHIELD POT #7176

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 6-6-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 7176		Container or Package ID Number:	
Container Type: 1 GALLON SHIELD POT		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AE RHAM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 0	Percent Organic Waste: 0	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NO WASTE WAS ADDED TO SHIELD POT			

Waste Description:

VENTED 1 GALLON "1" INCH THICK LEAD LINED SHIELD POT (OM) (IM)

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Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 5-24-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 960		Container or Package ID Number:	
Container Type: 7 GALLON CONTAINER		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AEBHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 85%	Percent Organic Waste: 0%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7 GALLON CONTAINER (IM)
SHIELD POT CENTERING RING (IM)
SHIELD POT # 7216

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 09-26-11		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒N/A	
Container or Package ID Number: 7216		Container or Package ID Number:	
Container Type: 1-Gallon Container		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐Y ☐N
		Rigid Liner Vented or Hole Size	
Percent Fill: 45%	Percent Organic Waste: 0%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description: Vented 1-Gallon 3/4-INCH thick Lead Lined shield Pot-(OM)(IM)

Fuel Specimen-074C3-(OM)
Fuel Specimen-074C4-(OM)
Fuel Specimen-074C2-(OM)
Fuel Specimen-074C5-(OM)

AGHCF RH-TRU 30-Gallon Waste Drum Datasheet

(The bracketed numbers in the left margin refer to the corresponding procedure step number.)

AGHCF Drum No. 1153

Section 1 — Fill out in accordance with NOD-AGHCF-OPS-303

[8.2.1] AGHCF Drum No. 1153

[8.2.14] Requisition Number: RW – 88037

[8.2.2] Drum Is Type A [ISI][1]: YES ☑ NO ☐

[8.2.5] Drum Inspection [ISI][1]: SAT ☑ UNSAT ☐

[8.2.6] Drum Vent Model No. [ISI][1]: NUCFIL-013

[8.2.6] Drum Vent Serial No. [ISI][1]: AG-1199

[8.2.7] Torque Wrench for Drum Vent
ID Number: ARG-04110162-57
Calibration Due Date: 09/02/2012

[8.2.21] Acceptance Criteria Met: YES ☒ NO ☐

ROBERT LEPPINK — FM Print Name
Robert Leppink — FM Sign Name
6/27/12 — Date

1 [ISI] identifies an In-Service Inspection specified in the Technical Safety Requirements

Section 2 — Fill out in accordance with NOD-AGHCF-OPS-305

[37] Top Waste Can No. 9160

[37] Bottom Waste Can No. 1014

[59] William H. Riley — VEO Print Name
William H. Riley — VEO Sign Name
08-17-12 — Date

[59] Montery Harris — VEO Print Name
Montery Harris — VEO Sign Name
8-17-12 — Date

[80.2] Torque Wrench for Ring Bolt
ID Number: 88733
Calibration Due Date: 6/21/13

[86] Date Loaded: 8/17/12

[86] Tamper Seal 1 No.: 6806

[86] Tamper Seal 2 No.: 6807

[89.2] Total Wt. Loaded Drum: 230 lbs

[Step 89.3] Spring Scale for Drum Weight
ID Number: 10759
Calibration Due Date: 5/7/13

Surface Dose-Rate Calculation Worksheet for RH-TRU FEW Drums

(This worksheet is to be completed under the direction of the PIC for each 30-gallon drum of FEW out-loaded from the AGHCF in accordance with NOD-AGHCF-OPS-305, *RH-TRU 30-Gallon Waste Drum Out-Loading*. The bracketed numbers in the left margin refer to the corresponding procedure step number.)

[96.1] Drum Number 1153 Survey date 8/17/12

[96.1] Inner shield pot configuration (circle one):

a. 1 in. top + 1 in. bottom
b. ¾ in. top + 1 in. bottom
c. 1 in. top + ¾ in. bottom
d. ¾ in. top + ¾ in. bottom

Maximum dose rate (R/hr) as recorded on the 30-gallon drum 2.0 R/hr

The following table will be used to determine the multiplier for generating the calculated surface dose rate for the unshielded FEW in this container, based on the location of the maximum measured dose rate

Multiplier Factors for Various Placements of 1 in. and ¾ in. Shield Pots in Drums

Configuration of shield pots in drum	Side (maximum)	Bottom	Top
a. Two 1 in. shield pots	32.2	27.9	33.6
b. One of each type – ¾ in. shield pot on top and 1 in. shield pot on bottom	17.4	27.8	16.6
c. One of each type – 1 in. shield pot on top and ¾ in. shield pot on bottom	16.9	14.2	33.7
d. Two ¾ in. shield pots	15.9	14.1	16.5

[96.1] Calculate the FEW surface dose rate:

Maximum dose rate on drum (R/hr) x Multiplier factor = FEW surface dose rate (R/hr)

2.0 R/hr x 17.4 = 34.8 R/hr = 34,800 mrem

(Enter actual values on the lines above to perform and document the calculation)

[96.2] Calculated by: James Smith / [signature] / 8/17/12
Print name / Signature / Date

[97.2] IV done by: Kyle Hasle / [signature] / 8/17/12
Print name / Signature / Date

[98] Based on the above calculations, PIC makes the following determination, checks the appropriate box, and signs off below.

The FEW surface dose rate is between 0.2 R/hr and 1,000 R/hr ☒ **Yes** ☐ **No**

If Yes, continue outloading

If No, notify FM.

[122] James Smith / [signature] / 8/17/12
PIC Print Name / PIC Signature / Date

3. Canister AE0157 – which contains drums 1089, 1168 and 1169
   a. Waste Container Data Report from WDS for Canister AE0157
   b. Build Sheet
   c. TCO Load Sheet
   d. CIS for Lots 39 and 42
   e. AK Tracking Spreadsheet Vent/Closure Dates
   f. NCR/CAR check for Lots 39 and 42
   g. DRUM 1089
      i. Waste Container Data Report from WDS for drum 1089
      ii. WWIS/WDS Data Entry Spreadsheet
      iii. DTC BDR Data Sheets
      iv. VE BDR Data Sheets
      v. Filter Data
      vi. Surface Dose Rate Calculation Report
   h. DRUM 1168
      i. Waste Container Data Report from WDS for drum 1168
      ii. WWIS/WDS Data Entry Spreadsheet
      iii. DTC BDR Data Sheets
      iv. VE BDR Data Sheets
      v. Filter Data
      vi. Surface Dose Rate Calculation Report
   i. DRUM 1169
      i. Waste Container Data Report from WDS for drum 1169
      ii. WWIS/WDS Data Entry Spreadsheet
      iii. DTC BDR Data Sheets
      iv. VE BDR Data Sheets
      v. Filter Data
      vi. Surface Dose Rate Calculation Report

Waste Isolation Pilot Plant
Canister Data Report

Report Statistics

Report Version:	**2.3**
WDS Instance:	**prd05.wipp.carlsbad.nm.us**
Generated on:	**August 19, 2013 10:44 AM**
Generated by:	**KIRKES, CRETA**
Total Pages:	**7**

Selection Criteria

Container Number: **AE0157**

Container: AE0157
Type: 11 - 72-B Removable Lid OP

Extended Status: APPROVED CERT EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 06/18/2013

Waste Handling Code: RH
Disposal Date: 07/10/2013

Current Location Site: WI
Generator Site: AE
Destination Site ID: WI

Certification Program ID: C2
Shipping Program ID: C2

Neutron Dose Rate (mrem/hr): 0.0
Beta Gamma Dose Rate (mrem/hr): 1900.0
Total Dose Rate (mrem/hr): 1900.0

FGE (g): 1.779E02
FGE Uncertainty (g): 5.696E01

Gross Weight (kg): 826.47
Gross Weight Uncert (kg): 25.86

Decay Heat (W): 6.341E-01
Decay Heat Uncertainty (W): 1.524E-01

Shipment Data

Payload ID: **AE0157** Assembly ID: AE130746 Payload Complete? Y
Shipment Number: AER13016 Send Date: 07/01/2013 Receipt Date: 07/03/2013
Shipment Status: SHIPMENT RECEIVED AT DESTINATION

Emplacement Location

Panel: 6 Room: 1 Borehole: 007

Certification Data Values

Waste Stream Profile Code: AERHDM
Waste Type Code: MTRU
IDC Code: 001
Waste Matrix Code: S5400
WAC Revision Number: 7.4
Fill Factor (%): 31.52

TRU Alpha Activity (Ci): 1.192E01
TRU Alpha Activity Uncertainty (Ci): 3.836E00
TRU Alpha Activity Concentration (Ci/g): 1.328E-04
PU-239 Equivalent Activity (PE-Ci): 1.216E01
Alpha Surface Contamination (dpm/cm^2): 19.0
Beta/Gamma Surface Contamination (dpm/cm^2): 199.0

Transportation Data Values

Closure Date: 06/17/2013 Shipment Purpose: DISPOSAL
Vent Date: 06/17/2013 Machine Compacted? N

Waste Gen Date:
Content Code: AE321C
U-235 FEM (g):
U-235 FEM Uncert (g):
Be chemically/ mechanically bound:

Filters

Filter Model Number	Filter Diffusivity (mol/s/ml)	Quantity	Install Date

Container: AE0157

Type: 11 - 72-B Removable Lid OP

Extended Status: APPROVED CERT EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 06/18/2013

Waste Handling Code: RH
Disposal Date: 07/10/2013

PCB Waste? N
PCB Mass (kg):
PCB Concentration (ppm):
PCB Out of Service Date:
Be Present? Y
Be <= 1% by weight? Y

Governing Packing Fraction (compaction level): non-compacted

Filters

Filter Model Number	Filter Diffusivity (mol/s/ml)	Quantity	Install Date
NF019D	1.85E-05	1	06/17/2013

Certification Comments

Radionuclides

Radionuclide	Activity (Ci)	Activity Uncert (Ci)	Mass (g)	Mass Uncert (g)
AM-241	3.913E00	1.442E00	1.128E00	4.155E-01
BA-137M	2.593E01	4.725E00	4.820E-08	8.782E-09
CM-244	2.190E-02	1.570E-02	2.677E-04	1.919E-04
CS-134	1.300E-01	6.270E-02	9.924E-05	4.786E-05
CS-137	2.732E01	4.990E00	3.105E-01	5.670E-02
EU-154	1.400E-01	5.760E-02	5.243E-04	2.157E-04
PU-238	7.160E-01	2.373E-01	4.139E-02	1.371E-02
PU-239	4.948E00	2.749E00	7.866E01	4.370E01
PU-240	2.342E00	9.607E-01	1.018E01	4.177E00
PU-241	1.493E01	5.280E00	1.436E-01	5.077E-02
PU-242	6.190E-04	2.000E-04	1.559E-01	5.039E-02
SR-90	1.741E01	3.428E00	1.262E-01	2.484E-02

Container: AE0157
Type: 11 - 72-B Removable Lid OP

Extended Status: APPROVED CERT EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 06/18/2013

Waste Handling Code: RH
Disposal Date: 07/10/2013

Radionuclides

Radionuclide	Activity (Ci)	Activity Uncert (Ci)	Mass (g)	Mass Uncert (g)
U-233	2.186E-07	5.873E-08	2.239E-05	6.017E-06
U-234	1.124E-02	3.133E-03	1.778E00	4.958E-01
U-235	3.366E-04	8.496E-05	1.537E02	3.880E01
U-238	6.810E-05	2.771E-05	2.003E02	8.151E01
Y-90	1.741E01	3.428E00	3.200E-05	6.301E-06

Material Parameters

Material Parameter	Description	Weight (kg)
1	IRON BASE METAL ALLOYS	215.28
8	PLASTICS	89.80
13	STEEL CONTAINER MATERIALS	517.01
14	PLASTIC/LINERS CONTAINER MATERIALS	4.26
	Waste Weight:	305.08
	Packaging Weight:	521.27
	Total Material Weight:	826.35

Hazardous Codes

Hazardous Code	Description
D004	ARSENIC
D005	BARIUM
D006	CADMIUM
D007	CHROMIUM

Container: AE0157
Type: 11 - 72-B Removable Lid OP

Extended Status: APPROVED CERT EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 06/18/2013

Waste Handling Code: RH
Disposal Date: 07/10/2013

Hazardous Codes

Hazardous Code	Description
D008	LEAD
D009	MERCURY
D010	SELENIUM
D011	SILVER
D019	CARBON TETRACHLORIDE
D028	1,2-DICHLOROETHANE
D029	1,1-DICHLOROETHYLENE
F002	SPENT HALOGENATED SOLVENTS
F005	SPENT NON-HALOGENATED SOLVENTS

Edit Limit Check Results

Evaluation Date: 06/18/2013 07:41:32 Overall Status: PASS

Evaluation Code	Status	Return Code	Detailed Description
DI_CERT_ALL	PASS		
DI_CERT_BE	PASS		
DI_CERT_CERT	PASS		
DI_CERT_CHARZ	PASS		
DI_CERT_ED	PASS		
DI_CERT_EPA	PASS		
DI_CERT_PCB	PASS		
DI_CERT_PERC	PASS		

Container: AE0157
Type: 11 - 72-B Removable Lid OP

Extended Status: APPROVED CERT EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 06/18/2013

Waste Handling Code: RH
Disposal Date: 07/10/2013

Edit Limit Check Results

Evaluation Date: 06/18/2013 07:41:32 Overall Status: PASS

Evaluation Code	Status
DI_CERT_TRAMPAC	PASS
DSA	PASS
WAC	PASS
WAP_CERT	PASS

TRAMPAC Evaluation Results

Evaluation Date: 06/18/2013 07:41:32 Overall Status: PASS

Evaluation Code	Status	Return Code	Detailed Description
CANISTER_72B_ALL	PASS		
CANISTER_72B_ASP	PASS		
CANISTER_72B_CONT	PASS		
CANISTER_72B_FIL	PASS		
CANISTER_72B_GVE	PASS		
CANISTER_72B_NUC	PASS		
CANISTER_72B_PDH	PASS		
CANISTER_72B_RDR	PASS		
CANISTER_72B_WGT	PASS		

Inner Containers

Container Number	Type Code	Content Code	Gross Weight + Error	FGE + 2x Error	Waste Stream
1089	40 - RH 30 gal TBO	AE322K	102.10	2.25E00	AERHDM
1168	40 - RH 30 gal TBO	AE321C	102.10	1.583E02	AERHDM
1169	40 - RH 30 gal TBO	AE322C	102.50	1.792E02	AERHDM

Container: AE0157

Type: 11 - 72-B Removable Lid OP

Extended Status: APPROVED CERT EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 06/18/2013

Waste Handling Code: RH
Disposal Date: 07/10/2013

History

Event Date/Time	Event Description	Reason
06/11/2013 13:47:27	INSERT DATA INTO THE DATABASE	
06/11/2013 14:18:34	INSERT DATA INTO THE DATABASE	
06/18/2013 07:41:34	SUCCESSFUL SUBMISSION FOR CERT	
06/18/2013 07:50:03	ASSIGNED TO PAYLOAD	
06/18/2013 07:57:46	APPROVED FOR CERT	

Generated: 6/11/2013 14:19

Canister #: AE0157

Canister Gross Weight + Error

848.07 kg

1,870.00 lbs

Canister Content

Canister Filters

Filter Model	Quantity
NF019D	1

Inner Containers

Container Number	Gross (kg)	Wgt+Err (lbs)	PCB Waste?	Be Present?	Total Dose Rate (mrem/hr)	Content Code	Waste Stream Profile	Filter Model	Qty
1169	102.5	226.01	N	Y	549900	AE322C	AERHDM	NF013	1
1089	102.1	225.13	N	Y	16920.4	AE322K	AERHDM	NF013	1
1168	102.1	225.13	N	Y	124080	AE321C	AERHDM	NF013	1

Attachment 1 – RLC Loading Form

RLC Inspection

RLC Canister ID: AE0157

RLC Serial Number: 110045

Filter Type Number	Filter Serial Numbers	Date Filter Installed
1 NUCFIL-019DS	1 DL-452	1 6-17-13
2	2	2
3 N	3 N	3 N
4 A	4 A	4 A

Pintle Cap Screws

Torque Wrench Serial Number: N/A Cal Due Date: N/A

Filters/Pipe Plugs

Torque Wrench Serial Number: XC0135 Cal Due Date: 10-1-13

Maintenance/Inspections Complete

Canister Loading Operator

Printed Name Curtis Groberg Signature [signature] Date 6-17-13

Dunnage Container is empty? YES ☐ NO ☐ NA ☑

Dunnage Container is dry? YES ☐ NO ☐ NA ☑

Dunnage Container vent port plug removed? YES ☐ NO ☐ NA ☑

Dunnage Container Weight in pounds (lbs) : N/A

RH Waste Container Numbers	Operator Initials	Peer Verifier Initials
1169	CGA	FA
1168	CGA	FA
1089	CGA	FA

Peer Verifier – Waste containers loaded into RLC match RH Waste Container Numbers listed above.

Printed Name Fernando Acosta Signature [signature] Date 6-17-13

RLC Closure Date: 6-17-13

Gross Weight in pounds (lbs) : 1820

Load Cell Serial Number: XC0525 Calibration Due Date: 2-13-14

Canister Loading Operator

Printed Name Curtis Groberg Signature [signature] Date 6-17-13

Supervisor

Printed Name Dave Landon Signature [signature] Date 06-17-13

Argonne Radiological Survey Report

Survey #:	20130617 M_W 331 JSS 03		
Date / Time:	06/17/2013 11:30:00 AM		
Status:	Approved		

Description:	Removable Lid Canister Survey				
Survey Purpose:	Job Specific Survey (e.g.for RWP)			Cross Ref #:	
Survey Requestor:	Ray, Willis D.	Division:	NWM	Department:	
Building:	331	Room:	YARD	Technicians:	
Location:		RWP #:	2013-331-002	HPT	Wilkins, Marlen (212835)
Submitter:	Wilkins, Marlen	Submit Date:	06/17/2013		
Reviewer:	Wishau, Roger J.	Review Date	06/17/2013		

Survey Instrument Summary

2029:	ANL: DABRAS, GATE: GP7-600, BERTH: MZ200
Calibration Date:	February 28, 2014
Efficiency:	High Efficiency

Value Type	Value	Unit of Measure
Bkgd β	282.98	cpm
Bkgd α	2.3	cpm
Eff β high	0.531	cpm/dpm
Eff β mid	0.334	cpm/dpm
Eff α	0.299	cpm/dpm
MDA β	77	dpm/100cm²
MDA α	16.4	dpm/100cm²
Ts	2	min
Tb	100	min

3765:	LUD: 78
Calibration Date:	December 31, 2013
Efficiency:	Mid Efficiency

Value Type	Value	Unit of Measure
Bkgd Dose	< 0.1	mR/h

Survey Comments

Comment	Commenter	Comment Date
RLC AE0157 contains (3) drums- #1169, 1168 and 1089.	Wilkins, Marlen(212835)	Jun 17, 2013 8:18 AM

Printed or electronically downloaded copies may be obsolete. Before using such a copy for work direction, employees must verify that it is current by comparing its revision number to that shown in the on-line version.

Survey Points

Survey Point: 1	RLC #AE0157. Highest noted (Smears 1-4) See attachment.		
Instr. Set #: 2029 **ANL: DABRAS, GATE: GP7-600, BERTH: MZ200**	**Value Type**	**Value**	**Distance**
	Removable β (Use Beta High)	20.8 dpm/100cm²	N/A
	Removable α	7.4 dpm/100cm²	N/A
	Gross Removable β (Use Beta High)	294 cpm/100cm²	N/A
	Gross Removable α	4.5 cpm/100cm²	N/A
Instr. Set #: 3765 **LUD: 78**	**Value Type**	**Value**	**Distance**
	Gross γ	1900 mR/h	0 cm

Survey Point: 2	Highest general area dose rate around loaded silo.		
Instr. Set #: 3765 **LUD: 78**	**Value Type**	**Value**	**Distance**
	Gross γ	29.3 mR/h	30 cm

Survey Point: 3	Highest general area dose rate on platform after RLC loaded.. Waist level.		
Instr. Set #: 3765 **LUD: 78**	**Value Type**	**Value**	**Distance**
	Gross γ	5.3 mR/h	

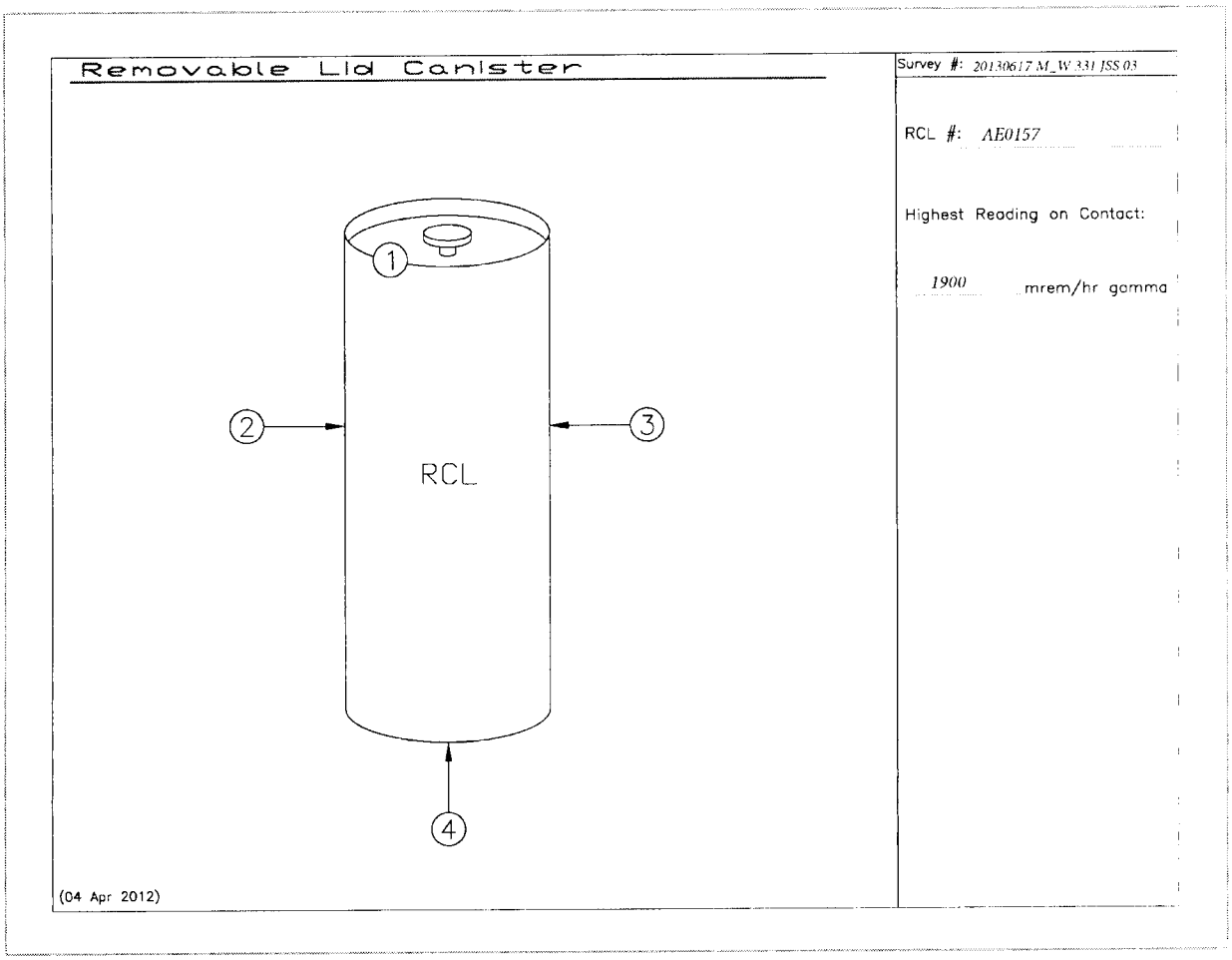
Survey Attachments

Attachment Type	Filename	Content Length	Last Update Date
image/jpeg	RLC AE0157_06-17-2013.jpg	120769	Jun 17, 2013 11:37 AM

Printed or electronically downloaded copies may be obsolete. Before using such a copy for work direction, employees must verify that it is current by comparing its revision number to that shown in the on-line version.

Appendix: Attached Survey Photos

RLC AE0157 06-17-2013 .jpg



Printed or electronically downloaded copies may be obsolete. Before using such a copy for work direction, employees must verify that it is current by comparing its revision number to that shown in the on-line version.

CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

Waste Stream: # AERHDM

Lot # 39

Container ID Number	Historical Container ID	NDA BDR or Radiological Characterization BDR (CH only)	VE BDR	RTR BDR	Solids Sampling BDR	Solids Analytical BDR	Load Management/ Overpack Yes	Permit Required Headspace Gas BDR			
								Sample	Analysis		
1138	NA	NA	ANLRHVE12016	NA	NA	NA		NA	NA	NA	NA
1147	NA	NA	ANLRHVE12016	NA	NA	NA		NA	NA	NA	NA
1149	NA	NA	ANLRHVE12016	NA	NA	NA		NA	NA	NA	NA
1157	NA	NA	ANLRHVE12017	NA	NA	NA		NA	NA	NA	NA
1158	NA	NA	ANLRHVE12017	NA	NA	NA		NA	NA	NA	NA
1159	NA	NA	ANLRHVE12017	NA	NA	NA		NA	NA	NA	NA
1089	NA	NA	ANLRHVE12001	NA	NA	NA		NA	NA	NA	NA
1108	NA	NA	ANLRHVE12010	NA	NA	NA		NA	NA	NA	NA
1171	NA	NA	ANLRHVE13001	NA	NA	NA		NA	NA	NA	NA
1173	NA	NA	ANLRHVE13001	NA	NA	NA		NA	NA	NA	NA
1175	NA	NA	ANLRHVE13001	NA	NA	NA		NA	NA	NA	NA
1177	NA	NA	ANLRHVE13001	NA	NA	NA		NA	NA	NA	NA
1179	NA	NA	ANLRHVE13001	NA	NA	NA		NA	NA	NA	NA
1181	NA	NA	ANLRHVE13001	NA	NA	NA		NA	NA	NA	NA

Laura Nelson
Signature of Site Project Manager

Laura Nelson
Printed Name

4-15-13
Date

CB-004

CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

Waste Stream: # AERHDM

Lot # 42

Container ID Number	Historical Container ID	NDA BDR or Radiological Characterization BDR (CH only)	VE BDR	RTR BDR	Solids Sampling BDR	Solids Analytical BDR	Load Management/ Overpack Yes	Permit Required Headspace Gas BDR			
								Sample	Analysis		
1167	NA	ANLRHDTC13002	ANLRHVE13003	NA	NA	NA		NA	NA	NA	NA
1168	NA	ANLRHDTC13002	ANLRHVE13003	NA	NA	NA		NA	NA	NA	NA
1169	NA	ANLRHDTC13002	ANLRHVE13003	NA	NA	NA		NA	NA	NA	NA
1174	NA	ANLRHDTC13003	ANLRHVE13002	NA	NA	NA		NA	NA	NA	NA
1176	NA	ANLRHDTC13003	ANLRHVE13002	NA	NA	NA		NA	NA	NA	NA
1178	NA	ANLRHDTC13003	ANLRHVE13002	NA	NA	NA		NA	NA	NA	NA
1182	NA	ANLRHDTC13003	ANLRHVE13002	NA	NA	NA		NA	NA	NA	NA

Laura Nelson
Signature of Site Project Manager

Laura Nelson
Printed Name

4-15-13
Date

CIS-004

AK VENT/CLOSURE DATES FOR INNER DRUMS OF CANISTER AE0157 - AUDIT PURPOSES ONLY

CONTAINER ID	WASTE STREAM	AK REPORT	WASTE MATRIX CODE	VENT DATE	CLOSURE DATE
1123	AERHDM	CCP-AK-ANLE-500	S5400	12/13/2011	12/13/2011
1122	AERHDM	CCP-AK-ANLE-500	S5400	10/4/2012	10/4/2012
1121	AERHDM	CCP-AK-ANLE-500	S5400	10/8/2012	10/8/2012

Dominguez, Lena - NWP

From: Mueller, Terry - NWP
Sent: Tuesday, June 11, 2013 9:34 AM
To: Dominguez, Lena - NWP; Pettus, Helen - NWP; Soaterna, Carolina - NWP; Valenzuela, Bobbie - NWP
Cc: Walker, Mak (Maryann) - NWP; Jones, Laura - NWP
Subject: FW: NCR/CAR check for ANL AERHDM Lot 39
Attachments: NCR_BDR_CONTAINER_CHECK_ANL AERHDM Lot 39_2nd.xls

There are no NCR or CAR dispositions that impact the acceptability of these containers, alternate container IDs, and associated BDRs for certification and shipping as listed on the attached. This check was verified independently.

Thanks!

Terry L. Mueller
Assurance Programs
MS GS-103
work (575)-234-7016
fax (575)-234-7042

Nuclear Waste Partnership LLC

A URS-led partnership with B&W and AREVA
Contractor to the Department of Energy

From: Pettus, Helen - NWP
Sent: Tuesday, June 11, 2013 9:20 AM
To: Jones, Laura - NWP; Kantrowitz, Rich - NWP; Mueller, Terry - NWP; Walker, Mak (Maryann) - NWP
Subject: NCR/CAR check for ANL AERHDM Lot 39

Please do an NCR/CAR check for ANL AERHDM Lot 39.

Thanks,

Helen Pettus
Central Characterization Program
Nuclear Waste Partnership LLC
Contractor for the U.S. Department of Energy
Waste Isolation Pilot Plant
575-234-7696 (W)
helen.pettus@wipp.ws

Dominguez, Lena - NWP

From: Mueller, Terry - NWP
Sent: Wednesday, April 24, 2013 3:33 PM
To: Dominguez, Lena - NWP; Pettus, Helen - NWP; Soaterna, Carolina - NWP; Valenzuela, Bobbie - NWP
Cc: Jones, Laura - NWP
Subject: FW: NCR/CAR check for ANL RH AERHDM Lot 42.
Attachments: NCR_BDR_CONTAINER_CHECK_ANL AERHDM Lot 42_2nd.xls

There are no NCR or CAR dispositions that impact the acceptability of these containers, alternate container IDs, and associated BDRs for certification and shipping as listed on the attached. This check was verified independently.

Thanks!

TERRY L. MUELLER
Assurance Programs
MS GS-103
work (575)-234-7016
fax (575)-234-7042

Nuclear Waste Partnership LLC

A URS-led partnership with B&W and AREVA
Contractor to the Department of Energy

From: Pettus, Helen - NWP
Sent: Wednesday, April 24, 2013 3:25 PM
To: Jones, Laura - NWP; Kantrowitz, Rich - NWP; Klingler, Larry - NWP; Mueller, Terry - NWP; Walker, Mak (Maryann) - NWP
Cc: Kirkes, Creta - NWP
Subject: NCR/CAR check for ANL AERHDM Lot 42.

Please do an NCR/CAR check for ANL AERHDM Lot 42.

Thanks,

Helen Pettus
Central Characterization Program
Nuclear Waste Partnership LLC
Contractor for the U.S. Department of Energy
Waste Isolation Pilot Plant
575-234-7696 (W)
helen.pettus@wipp.ws

Waste Isolation Pilot Plant
Container Data Report

Report Statistics

Report Version:	**2.3**
WDS Instance:	**prd05.wipp.carlsbad.nm.us**
Generated on:	**August 19, 2013 10:48 AM**
Generated by:	**KIRKES, CRETA**
Total Pages:	**7**

Selection Criteria

Container Number: **1089**

Container: 1089
Type: 40 - RH 30 gal TBO

Extended Status: APPROVED CERT IN APPROVED CERT CANISTER EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 06/11/2013
Waste Handling Code: RH
Disposal Date: 07/10/2013

Current Location Site: WI
Generator Site: AE
Destination Site ID: WI

Certification Program ID: C2
Shipping Program ID: C2

Overpack Container: AE0157
Overpack Type: REMOVABLE-LID 72-B CANISTER
Overpack Status: CERTIFICATION DATA APPROVED

Neutron Dose Rate (mrem/hr): 0.4
Beta Gamma Dose Rate (mrem/hr): 16920.0
Total Dose Rate (mrem/hr): 16920.4

FGE (g): 1.2E00
FGE Uncertainty (g): 5.25E-01

Gross Weight (kg): 101.60
Gross Weight Uncert (kg): 0.50

Decay Heat (W): 7.11E-02
Decay Heat Uncertainty (W): 2.83E-02

Shipment Data

Payload ID: **AE0157** Assembly ID: AE130746 Payload Complete? Y
Shipment Number: AER13016 Send Date: 07/01/2013 Receipt Date: 07/03/2013
Shipment Status: SHIPMENT RECEIVED AT DESTINATION

Emplacement Location

Panel: 6 Room: 1 Borehole: 007

Certification Data Values

Waste Stream Profile Code: AERHDM
Waste Type Code: MTRU
IDC Code: 001
Waste Matrix Code: S5400
WAC Revision Number: 7.4
Fill Factor (%): 85.00
Waste Stream BIR ID: AE-T009
Waste Stream MWIR ID: NONE

TRU Alpha Activity (Ci): 3.71E-01
TRU Alpha Activity Uncertainty (Ci): 1.65E-01
TRU Alpha Activity Concentration (Ci/g): 1.25E-05
PU-239 Equivalent Activity (PE-Ci): 3.66E-01
Alpha Surface Contamination (dpm/cm^2): 0.0
Beta/Gamma Surface Contamination (dpm/cm^2): 0.0

Transportation Data Values

Closure Date: 12/13/2011
Vent Date: 12/13/2011
Process Knowledge? Y
Waste Gen Date:
Content Code: AE322K
U-235 FEM (g):
U-235 FEM Uncert (g):
Be chemically/ mechanically bound:

Shipment Purpose: DISPOSAL
Machine Compacted? N
Liner Exists? Y
Liner Hole Size(mm):
Liner Lid Present? N
Layers of Packaging 2
Aqueous Material? N

Gas Generation Data Values

Measured FGGR (mol/s)	Measured TGRR (mol/s)	Truncated FGGR Test (Y/N)	Truncated FGGR Test Period (days)

Container: 1089
Type: 40 - RH 30 gal TBO

Extended Status: APPROVED CERT IN APPROVED CERT CANISTER EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 06/11/2013
Waste Handling Code: RH
Disposal Date: 07/10/2013

PCB Waste? N
PCB Mass (kg):
PCB Concentration (ppm):
PCB Out of Service Date:
Be Present? Y
Be <= 1% by weight? Y
Be mass <= 100kg? Y
Separation OK? Y
Packing Fraction (compaction level): non-compacted

Filters

Filter Model Number	Filter Diffusivity (mol/s/ml)	Quantity	Install Date
NF013	3.7E-06	1	12/13/2011

Certification Comments

Radionuclides

Radionuclide	Activity (Ci)	Activity Uncert (Ci)	Mass (g)	Mass Uncert (g)
AM-241	3.340E-02	1.640E-02	9.625E-03	4.726E-03
BA-137M	4.850E00	1.910E00	9.015E-09	3.550E-09
CM-244	2.190E-02	1.570E-02	2.677E-04	1.919E-04
CS-134	1.300E-01	6.270E-02	9.924E-05	4.786E-05
CS-137	5.120E00	2.020E00	5.818E-02	2.295E-02
EU-154	1.400E-01	5.760E-02	5.243E-04	2.157E-04
PU-238	3.180E-01	1.460E-01	1.838E-02	8.439E-03
PU-239	7.550E-03	3.090E-03	1.200E-01	4.913E-02
PU-240	1.240E-02	5.350E-03	5.391E-02	2.326E-02
PU-241	6.200E-01	3.170E-01	5.962E-03	3.048E-03
PU-242	1.900E-05	9.550E-06	4.786E-03	2.406E-03
SR-90	4.580E00	1.820E00	3.319E-02	1.319E-02

Container: 1089
Type: 40 - RH 30 gal TBO

Extended Status: APPROVED CERT IN APPROVED CERT CANISTER EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 06/11/2013
Waste Handling Code: RH
Disposal Date: 07/10/2013

Radionuclides

Radionuclide	Activity (Ci)	Activity Uncert (Ci)	Mass (g)	Mass Uncert (g)
U-233	5.750E-09	2.740E-09	5.891E-07	2.807E-07
U-234	2.180E-04	1.060E-04	3.449E-02	1.677E-02
U-235	3.620E-06	1.620E-06	1.653E00	7.397E-01
U-238	5.300E-06	2.140E-06	1.559E01	6.294E00
Y-90	4.580E00	1.820E00	8.419E-06	3.346E-06

Material Parameters

Material Parameter	Description	Weight (kg)
8	PLASTICS	29.80
13	STEEL CONTAINER MATERIALS	16.36
14	PLASTIC/LINERS CONTAINER MATERIALS	0.00
21	STEEL LINER MATERIALS	55.40
	Waste Weight:	29.80
	Packaging Weight:	71.76
	Total Material Weight:	101.56

Hazardous Codes

Hazardous Code	Description
D004	ARSENIC
D005	BARIUM
D006	CADMIUM
D007	CHROMIUM

Container: 1089
Type: 40 - RH 30 gal TBO

Extended Status: APPROVED CERT IN APPROVED CERT CANISTER EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 06/11/2013
Waste Handling Code: RH
Disposal Date: 07/10/2013

Hazardous Codes

Hazardous Code	Description
D008	LEAD
D009	MERCURY
D010	SELENIUM
D011	SILVER
D019	CARBON TETRACHLORIDE
D028	1,2-DICHLOROETHANE
D029	1,1-DICHLOROETHYLENE
F002	SPENT HALOGENATED SOLVENTS
F005	SPENT NON-HALOGENATED SOLVENTS

Assay Methods

Labor Code	Assay Method	Description	Assay Date
C9	14DTC1	DOSE-TO-CURIE	03/12/2012

Non-Destructive Examination (NDE)

Labor Code	NDE Method	Description	Examination Date
C2	8RHVE2	VE OF NEWLY PACKAGED RH WASTE	12/13/2011

Edit Limit Check Results

Evaluation Date: 06/11/2013 12:34:58 Overall Status: PASS

Evaluation Code	Status	Return Code	Detailed Description
DI_CERT_ALL	PASS		

Container: 1089
Type: 40 - RH 30 gal TBO

Extended Status: APPROVED CERT IN APPROVED CERT CANISTER EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 06/11/2013
Waste Handling Code: RH
Disposal Date: 07/10/2013

Edit Limit Check Results

Evaluation Date: 06/11/2013 12:34:58 Overall Status: PASS

Evaluation Code	Status
DI_CERT_BE	PASS
DI_CERT_CERT	PASS
DI_CERT_CHARZ	PASS
DI_CERT_ED	PASS
DI_CERT_EPA	PASS
DI_CERT_PCB	PASS
DI_CERT_PERC	PASS
DI_CERT_TRAMPAC	PASS
DSA	PASS
WAC	PASS
WAP_CERT	PASS

TRAMPAC Evaluation Results

Evaluation Date: Overall Status:

Evaluation Code	Status	Return Code	Detailed Description

History

Event Date/Time	Event Description	Reason
06/11/2013 12:34:59	INSERT DATA INTO THE DATABASE	
06/11/2013 12:34:59	SUCCESSFUL SUBMISSION FOR CERT	

Container: 1089

Type: 40 - RH 30 gal TBO

Extended Status: APPROVED CERT IN APPROVED CERT CANISTER EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 06/11/2013
Waste Handling Code: RH
Disposal Date: 07/10/2013

History

Event Date/Time	Event Description	Reason
06/11/2013 12:36:40	APPROVED FOR CERT	
06/11/2013 13:58:00	REMOVED FROM OVERPACK	
06/18/2013 07:41:34	ASSIGNED TO OVERPACK	

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	**RH WDS Master Template.xls Rev. 4 Addendum #4, SCO #1066 Excel 2003/2007 Microsoft Windows XP**	**Units**	**data**				**comments**						**Initial**	**date**
2	Shipper Site ID		C2	Location ID	Dest Program ID	Shipping Purpose					**1089**		CK/HP	06/11/13
3	Waste Stream Profile		AERHDM	AE	WI	D							CK/HP	06/11/13
4	Container Number		1089										CK/HP	06/11/13
5	Container Type		RH drum-30 tbo	drum, swb, tdop, etc., see WWIS labels for valid types					U-235 FEM	U-235 FEM Uncert	FGGR Flag	FGGR Test Period	CK/HP	06/11/13
6	WAC Rev #		7.4	0					NULL	NULL	NULL	NULL	CK/HP	06/11/13
7	WAC Ex. #						Be <=100 kg	Be <= 1%	Be Present	Aqueous Material	Be Chem/Mech Bound	Compacted Wst		
8	Cert Site		C2				Y	Y	Y	N	N	N	CK/HP	06/11/13
9	Cert Date		6/11/2013											
10	Waste Handling Code		RH	CH, RH									CK/HP	06/11/13
11	Waste Type Code		MTRU	TRU, MTRU									CK/HP	06/11/13
12	Waste Stream BIR ID		AE-T009				p(CI)	choose	1sigma	2sigma	95%CI		CK/HP	06/11/13
13	Waste Stream MWIR ID		NONE		default to 0 for TRU		0.6827	1sigma	1.0000	0.5000	0.5102		CK/HP	06/11/13
14	Generator Site ID		AE				0.9545	2sigma	2.0000	1.0000	1.0204		CK/HP	06/11/13
15	IDC Code		001				0.9500	95%CI	1.9600	0.9800	1.0000		CK/HP	06/11/13
16	Matrix Code		S5400										CK/HP	06/11/13
17	Trucon Code		AE322K										CK/HP	06/11/13
18	Shipping Category						WWIS Req'd CI:	1sigma	1.0000	0.5000	0.5102			
19	Tru Alpha Act	Ci	3.71E-01		3.714E-01		Fraction of MDL Reported on HGAS		1.0000				CK/HP	06/11/13
20	Tru Alpha Act Uncert	1sigma Ci	1.65E-01	7.010E-01	Tru Alpha Act + 2sigma (Ci)								CK/HP	06/11/13
21	Tru Alpha Act Conc	nCi/g	1.25E+04		1.25E+04								CK/HP	06/11/13
22	Tru Alpha Act Conc Uncert	1sigma nCi/g	5.55E+03	2.360E+04	Tru Alpha Act Conc + 2sigma (Ci)								CK/HP	06/11/13
23	Pu239 Fiss Gm Eq	g	1.20E+00		1.200E+00								CK/HP	06/11/13
24	Pu239 Fiss Gm Eq Uncert	1sigma g	5.25E-01	2.250E+00	Pu239 Fiss Gm Eq + 2sigma (Ci)								CK/HP	06/11/13
25	Pu239 Eq Act	Ci	3.66E-01		3.661E-01								CK/HP	06/11/13
26	Decay Heat	watts	7.11E-02		7.106E-02								CK/HP	06/11/13
27	Decay Heat Uncert	1sigma watts	2.83E-02	9.94E-02	Decay Heat + 1sigma (watts)								CK/HP	06/11/13
28	Layers of Packaging		2										CK/HP	06/11/13
29	Fill Factor		85	percentage	Liner Lid Present	N							CK/HP	06/11/13
30	Liner Type		1	1 = plastic drum liner									CK/HP	06/11/13
31	Liner Punctured		Y		Liner Hole Size	457.2	(mm)						CK/HP	06/11/13
32	PCB Conc						PCB Waste	PCB Mass (kg)	Out of Service				CK/HP	06/11/13
33	Closure Date		12/13/2011	Watt-years	Waste Gen Date		N	NULL	NULL				CK/HP	06/11/13
34	Vent Date		12/13/2011	0.106									CK/HP	06/11/13
35	Filter Install Date		12/13/2011										CK/HP	06/11/13
36	Filter Manufacturer		NFT										CK/HP	06/11/13
37	Filter Serial Number(s)												CK/HP	06/11/13
38	Filter Model Number	NF012,NF013,NF020,NF9026	NF013										CK/HP	06/11/13
39	Number of Filters Installed		1										CK/HP	06/11/13
40	Aspiration Method ID		3										CK/HP	06/11/13
41	Gas Gen Rate			#VALUE!	**<<Gas Gen Rate Calculated.**		Avagdro's Number:	6.022142E+23	NIST					
42	Hydrogen/Methane Gen Rate						Electron Charge	1.602176E-19	V NIST					
43	Gas Gen Comp Date				Waste (kg)	Packaging (kg)	Total (kg)							
44	Gross Weight	kg	101.600		29.8	71.76	101.56						CK/HP	06/11/13
45	Gross Weight Uncert	1sigma kg	0.5		max. reported	mda							CK/HP	06/11/13
46	Alpha Surf Cont	dpm/100 cm^2	0		0		Minimum Detectable Activity			Shipping Calcs			CK/HP	06/11/13
47	Beta/Gamma Surf Cont	dpm/100 cm^2	0		0		Minimum Detectable Activity			Total TBq	7.56E-01		CK/HP	06/11/13
48	Neutron Dose Rate	mrem/hr	0.4		0.4		Minimum Detectable Activity			Fraction	2.53E-02		CK/HP	06/11/13
49	Beta/Gamma Dose Rate	mrem/hr	16920		16920		Minimum Detectable Activity			Highway Route Control?	No		CK/HP	06/11/13
50	Radionuclide		U-233	U-234	U-235	U-238	Pu-238	Pu-239	Pu-240	Pu-241	Pu-242	Am-241	CK/HP	06/11/13
51	Activity	Ci	5.75E-09	2.18E-04	3.62E-06	5.30E-06	3.18E-01	7.55E-03	1.24E-02	6.20E-01	1.90E-05	3.34E-02	CK/HP	06/11/13
52	Activity Uncert	1sigma Ci	2.74E-09	1.06E-04	1.62E-06	2.14E-06	1.46E-01	3.09E-03	5.35E-03	3.17E-01	9.55E-06	1.64E-02	CK/HP	06/11/13
53	Mass	grams	5.89E-07	3.45E-02	1.65E+00	1.56E+01	1.84E-02	1.20E-01	5.39E-02	5.96E-03	4.79E-03	9.63E-03		
54	Mass Uncert	1sigma grams	2.81E-07	1.68E-02	7.40E-01	6.29E+00	8.44E-03	4.91E-02	2.33E-02	3.05E-03	2.41E-03	4.73E-03		
55	calc Tru Alpha Act	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.18E-01	7.55E-03	1.24E-02	0.00E+00	1.90E-05	3.34E-02		
56	calc Tru Alpha Act Conc	nCi/g	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.07E+04	2.53E+02	4.16E+02	0.00E+00	6.38E-01	1.12E+03		
57	calc Act	Ci	5.75E-09	2.18E-04	3.62E-06	5.30E-06	3.18E-01	7.55E-03	1.24E-02	6.20E-01	1.90E-05	3.34E-02		
58	calc Act Conc	nCi/g	1.93E-04	7.32E+00	1.21E-01	1.78E-01	1.07E+04	2.53E+02	4.16E+02	2.08E+04	6.38E-01	1.12E+03		

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
59	calc Pu239 FGE	g	5.30E-07	0.00E+00	1.06E+00	0.00E+00	2.08E-03	1.20E-01	1.21E-03	1.34E-02	3.59E-05	1.80E-04		
60	calc Pu239 Eq Act	Ci	1.47E-09	0.00E+00	0.00E+00	0.00E+00	2.89E-01	7.55E-03	1.24E-02	1.22E-02	1.73E-05	3.34E-02		
61	calc Decay Heat	watts	1.67E-10	6.28E-06	9.98E-08	1.34E-07	1.05E-02	2.34E-04	3.86E-04	1.97E-05	5.60E-07	1.12E-03		
62	uncert Tru Alpha Act	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.46E-01	3.09E-03	5.35E-03	0.00E+00	9.55E-06	1.64E-02		
63	uncert Tru Alpha Act Conc	nCi/g	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.90E+03	1.04E+02	1.80E+02	0.00E+00	3.20E-01	5.50E+02		
64	uncert Act	Ci	2.74E-09	1.06E-04	1.62E-06	2.14E-06	1.46E-01	3.09E-03	5.35E-03	3.17E-01	9.55E-06	1.64E-02		
65	uncert Act Conc	nCi/g	9.19E-05	3.56E+00	5.44E-02	7.18E-02	4.90E+03	1.04E+02	1.80E+02	1.06E+04	3.20E-01	5.50E+02		
66	uncert Pu239 FGE	g	2.53E-07	0.00E+00	4.76E-01	0.00E+00	9.54E-04	4.91E-02	5.23E-04	6.86E-03	1.80E-05	8.84E-05		
67	uncert Pu239 Eq Act	Ci	7.03E-10	0.00E+00	0.00E+00	0.00E+00	1.33E-01	3.09E-03	5.35E-03	6.22E-03	8.68E-06	1.64E-02		
68	uncert Decay Heat	watts	7.97E-11	3.05E-06	4.47E-08	5.43E-08	4.84E-03	9.58E-05	1.67E-04	1.01E-05	2.81E-07	5.48E-04		
69	Shipping Calcs	7.59E+01	2.13E-07	8.07E-03	0.00E+00	0.00E+00	5.88E+01	1.40E+00	2.29E+00	2.30E+00	3.51E-03	6.17E+00		
70	49CFR173.433f		0.00%	0.01%	0.00%	0.00%	77.42%	1.84%	3.02%	3.02%	0.00%	8.13%		
71	Radionuclide		Cm-244	Cs-137	Ba-137m	Sr-90	Y-90	Cs-134	Eu-154				CK/HP	06/11/13
72	Activity	Ci	2.19E-02	5.12E+00	4.85E+00	4.58E+00	4.58E+00	1.30E-01	1.40E-01				CK/HP	06/11/13
73	Activity Uncert	1sigma Ci	1.57E-02	2.02E+00	1.91E+00	1.82E+00	1.82E+00	6.27E-02	5.76E-02				CK/HP	06/11/13
74	Mass	grams	2.68E-04	5.82E-02	9.01E-09	3.32E-02	8.42E-06	9.92E-05	5.24E-04	NULL	NULL	NULL		
75	Mass Uncert	1sigma grams	1.92E-04	2.30E-02	3.55E-09	1.32E-02	3.35E-06	4.79E-05	2.16E-04	NULL	NULL	NULL		
76	calc Tru Alpha Act	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NULL	NULL	NULL		
77	calc Tru Alpha Act Conc	nCi/g	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NULL	NULL	NULL		
78	calc Act	Ci	2.19E-02	5.12E+00	4.85E+00	4.58E+00	4.58E+00	1.30E-01	1.40E-01	NULL	NULL	NULL		
79	calc Act Conc	nCi/g	7.35E+02	1.72E+05	1.63E+05	1.54E+05	1.54E+05	4.36E+03	4.70E+03	NULL	NULL	NULL		
80	calc Pu239 FGE	g	2.41E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NULL	NULL	NULL		
81	calc Pu239 Eq Act	Ci	1.15E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NULL	NULL	NULL		
82	calc Decay Heat	watts	7.66E-04	5.67E-03	1.91E-02	5.31E-03	2.53E-02	1.32E-03	1.25E-03	NULL	NULL	NULL		
83	uncert Tru Alpha Act	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NULL	NULL	NULL		
84	uncert Tru Alpha Act Conc	nCi/g	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NULL	NULL	NULL		
85	uncert Act	Ci	1.57E-02	2.02E+00	1.91E+00	1.82E+00	1.82E+00	6.27E-02	5.76E-02	NULL	NULL	NULL		
86	uncert Act Conc	nCi/g	5.27E+02	6.78E+04	6.41E+04	6.11E+04	6.11E+04	2.10E+03	1.93E+03	NULL	NULL	NULL		
87	uncert Pu239 FGE	g	1.73E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NULL	NULL	NULL		
88	uncert Pu239 Eq Act	Ci	8.26E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NULL	NULL	NULL		
89	uncert Decay Heat	watts	5.49E-04	2.24E-03	7.53E-03	2.11E-03	1.01E-02	6.37E-04	5.16E-04	NULL	NULL	NULL		
90	Shipping Calcs		2.03E+00	3.79E-01	0.00E+00	1.70E+00	8.47E-01	9.63E-03	1.04E-02	NULL	NULL	NULL		
91	49CFR173.433f		2.67%	0.50%	0.00%	2.23%	1.12%	0.01%	0.01%	NULL	NULL	NULL		
92	Waste Material Parameter		PW	SL									CK/HP	06/11/13
93	Wgt of Mat Parms (kg or lbs)	kg	29.8	55.4									CK/HP	06/11/13
94	Radio Assay Method		14DTC1										CK/HP	06/11/13
95	Data Package Number		ANLRHDTC12001					kg					CK/HP	06/11/13
96	Assay Date		3/12/2012				lbs	0.4536					CK/HP	06/11/13
97	Charz Method ID		8RHVE2				kg	1.0000					CK/HP	06/11/13
98	Data Package Number		ANLRHVE12001										CK/HP	06/11/13
99	Charz Method Date		12/13/2011										CK/HP	06/11/13
100	Haz Codes		D004	D005	D006	D007	D008	D009	D010	D011	D019	D028	CK/HP	06/11/13
101	Haz Codes		D029	F002	F005								CK/HP	06/11/13
102	Haz Codes													
103	Haz Codes													
104	Sample ID	Headspace Gas H/M	NULL										CK/HP	06/11/13
105	Sample Type			HGHM									CK/HP	06/11/13
106	Layer No. Sampled				0								CK/HP	06/11/13
107	Date Sampled					Sample Site							CK/HP	06/11/13
108	Method ID			DTP-1.2-041									CK/HP	06/11/13
109	Data Package Number												CK/HP	06/11/13
110	CAS #		NULL	NULL										
111	Analyte												CK/HP	06/11/13
112	Concentration												CK/HP	06/11/13
113	units	%vol											CK/HP	06/11/13
114	Date Analyzed			NULL									CK/HP	06/11/13
115	B Detectable Flag													
116	D Detectable Flag													
117	E Detectable Flag													
118	J Detectable Flag													
119	U Detectable Flag												CK/HP	06/11/13
120	NA Detectable Flag		NA	NA										
121											RH WDS Master Template xls Rev. 4			
122	Sample ID	Headspace Gas VOC									Addendum #4, SCO #1066		CK/HP	06/11/13
123	Sample Type			HGVO							Excel 2003/2007 Microsoft Windows		CK/HP	06/11/13
124	Layer No. Sampled					SARP-Flammable VOCs (ppmv)		0			XP		CK/HP	06/11/13
125	Date Sampled												CK/HP	06/11/13

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
126	Method ID			DTP-1.2-041									CK/HP	06/11/13
127	Data Package Number												CK/HP	06/11/13
128	Methanol Method ID													
129	CAS #												CK/HP	06/11/13
130	Analyte		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
131	Concentration												CK/HP	06/11/13
132	units	ppmv											CK/HP	06/11/13
133	Date Analyzed		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL			CK/HP	06/11/13
134	B Detectable Flag													
135	D Detectable Flag													
136	E Detectable Flag													
137	J Detectable Flag													
138	U Detectable Flag												CK/HP	06/11/13
139	NA Detectable Flag		NA	NA	NA	NA	NA	NA	NA	NA				
140	SARP-Flammable Calc		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
141	CAS #												CK/HP	06/11/13
142	Analyte		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
143	Concentration												CK/HP	06/11/13
144	units	ppmv											CK/HP	06/11/13
145	Date Analyzed		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL			CK/HP	06/11/13
146	B Detectable Flag													
147	D Detectable Flag													
148	E Detectable Flag													
149	J Detectable Flag													
150	U Detectable Flag												CK/HP	06/11/13
151	NA Detectable Flag		NA	NA	NA	NA	NA	NA	NA	NA				
152	SARP-Flammable Calc		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
153	CAS #												CK/HP	06/11/13
154	Analyte		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
155	Concentration												CK/HP	06/11/13
156	units	ppmv											CK/HP	06/11/13
157	Date Analyzed		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL			CK/HP	06/11/13
158	B Detectable Flag													
159	D Detectable Flag													
160	E Detectable Flag													
161	J Detectable Flag													
162	U Detectable Flag												CK/HP	06/11/13
163	NA Detectable Flag		NA	NA	NA	NA	NA	NA	NA	NA				
164	SARP-Flammable Calc		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
165	CAS #												CK/HP	06/11/13
166	Analyte		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
167	Concentration												CK/HP	06/11/13
168	units	ppmv											CK/HP	06/11/13
169	Date Analyzed		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL			CK/HP	06/11/13
170	B Detectable Flag													
171	D Detectable Flag													
172	E Detectable Flag													
173	J Detectable Flag													
174	U Detectable Flag												CK/HP	06/11/13
175	NA Detectable Flag		NA	NA	NA	NA	NA	NA	NA	NA				
176	SARP-Flammable Calc		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
177	CAS #													
178	Analyte		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
179	Concentration													
180	units	ppmv												
181	Date Analyzed		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
182	B Detectable Flag													
183	D Detectable Flag										RH WDS Master Template.xls Rev. 4			
184	E Detectable Flag										Addendum #4, SCO #1066			
185	J Detectable Flag										Excel 2003/2007 Microsoft Windows			
186	U Detectable Flag										XP			
187	NA Detectable Flag		NA	NA	NA	NA	NA	NA	NA	NA				

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
188	SARP-Flammable Calc		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
189			type	comment										
190	Comment													
191	Comment													
192	Comment													
193	Comment													
194	Comment													
195	Comment													
196	Comment													
197	Comment													
198	Comment													
199	Comment													
200														
201			**Requirements Met?**											
202	Free liquids <1% by volume		YES											
203	No non-rad. pyrophorics		YES											
204	Chemical compatability		YES											
205	No explosives		YES											
206	No corrosives		YES											
207	No pressurized containers		YES											
208	No sealed Containers >4 liters		YES											
209	Liner punctured/ filtered		YES											
210	Flammable VOCs <500ppmv		YES											
211	Container is in Approved Waste Stream Profile Form?	AERHDM	YES											
212	Can it be established through Process Knowledge that the concentration of flammable VOCs present in the headspace of the container is <= 500 ppm?.		YES											
213														
214														
215														
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Cheta Knowles
CCP Certification Official

6-11-2013
Date

37
Lot #

RH WDS Master Template.xls Rev. 4
Addendum #4, SCO #1066
Excel 2003/2007 Microsoft Windows XP

Attachment 2 – Container Data Sheet

BDR Number: ANLRHDTC12001

Date:	3-12-12
Container No.:	1089
Probe Position:	30 Gallon
Instrument No.:	XCO 433
Probe No.:	XCO 434
Measured Background Dose Rate (mR/hr):	12
Gross Weight (kg):	101.6
Dose Rate 1 (mR/hr):	38
Dose Rate 2 (mR/hr):	36
Dose Rate 3 (mR/hr):	37
Dose Rate 4 (mR/hr):	35
Highest measured dose rate is greater than three times the measured background.	(YES) NO

Printed Name	Signature	Date
Monterry Harris	Monterry Harris	3-12-12

Waste Container Dose-to-Curie Conversion Record

SCO 1151 DTC for AERHDM - RERTR Rev. 0 Microsoft Excel 2003, 2007, 2010; Microsoft Windows XP Professional 2002 and 2003

Operating Procedure	CCP-TP-504	12
Date of Survey	3/12/2012	
Waste Stream Designation	AERHDM	
Container Number	1089	

Shielded Containers	Top	Bottom
Type	3/4-Inch	3/4-Inch
Estimate Fill Percentages	85	78

Container Gross Weight 101.6 kg

Container Net Weight 29.8 kg

Measured Container Dose Rate			Background
Quadrant #1	38	mR/hr	12 mR/hr
Quadrant #2	36	mR/hr	
Quadrant #3	37	mR/hr	
Quadrant #4	35	mR/hr	

Average Dose Rate Minus Background 24.5 mR/hr

Nuclide	Curie Scaling Factors	Activity (Ci)	Grams	FGE	PECi	Watts	Uncertainty	Uncertainty in Curies	Uncertainty in Grams
U-233	1.08E-09	5.75E-09	5.89E-07	5.30E-07	1.47E-09	1.67E-10	47.7%	2.74E-09	2.81E-07
U-234	4.07E-05	2.18E-04	3.45E-02	0.00E+00	0.00E+00	6.27E-06	48.5%	1.06E-04	1.67E-02
U-235	6.78E-07	3.62E-06	1.65E+00	1.06E+00	0.00E+00	9.99E-08	44.7%	1.62E-06	7.40E-01
U-238	9.92E-07	5.30E-06	1.56E+01	0.00E+00	0.00E+00	1.34E-07	40.3%	2.14E-06	6.29E+00
Pu-238	5.95E-02	3.18E-01	1.84E-02	2.08E-03	2.89E-01	1.05E-02	46.0%	1.46E-01	8.47E-03
Pu-239	1.41E-03	7.55E-03	1.20E-01	1.20E-01	7.55E-03	2.34E-04	41.0%	3.09E-03	4.92E-02
Pu-240	2.33E-03	1.24E-02	5.41E-02	1.22E-03	1.24E-02	3.87E-04	43.0%	5.35E-03	2.33E-02
Pu-241	1.27E-01	6.20E-01	5.96E-03	1.34E-02	1.22E-02	1.97E-05	51.1%	3.17E-01	3.05E-03
Pu-242	3.55E-06	1.90E-05	4.78E-03	3.58E-05	1.72E-05	5.59E-07	50.4%	9.55E-06	2.41E-03
Am-241	5.89E-03	3.34E-02	9.62E-03	1.80E-04	3.34E-02	1.12E-03	49.3%	1.64E-02	4.74E-03
Cm-244	4.40E-03	2.19E-02	2.68E-04	2.41E-05	1.15E-02	7.67E-04	71.6%	1.57E-02	1.92E-04
Cs-137	1.00E+00	5.12E+00	5.82E-02	0.00E+00	0.00E+00	5.67E-03	39.5%	2.02E+00	2.30E-02
Ba-137m	9.46E-01	4.85E+00	9.01E-09	0.00E+00	0.00E+00	1.91E-02	39.5%	1.91E+00	3.56E-09
Sr-90	8.96E-01	4.58E+00	3.32E-02	0.00E+00	0.00E+00	5.31E-03	39.8%	1.82E+00	1.32E-02
Y-90	8.96E-01	4.58E+00	8.42E-06	0.00E+00	0.00E+00	2.54E-02	39.8%	1.82E+00	3.35E-06
Cs-134	4.49E-02	1.30E-01	9.89E-05	0.00E+00	0.00E+00	1.32E-03	48.4%	6.27E-02	4.78E-05
Eu-154	3.03E-02	1.40E-01	5.25E-04	0.00E+00	0.00E+00	1.25E-03	41.1%	5.76E-02	2.16E-04
Totals		2.04E+01	1.76E+01	1.20E+00	3.66E-01	7.11E-02			

	Value	(one Sigma)	
TRU Alpha Activity Concentration	1.25E+04	5.55E+03	nCi/g
TRU Alpha Activity	3.71E-01	1.65E-01	Ci
Total Pu-239 Equiv Activity	3.66E-01	1.61E-01	Ci
Total Pu-239 Fissile Gram Equiv	1.20E+00	5.25E-01	g
Total Decay Heat	7.11E-02	2.83E-02	W
Volume Activity	1.80E-01	7.13E-02	Ci/L

Originator Monterry Harris (Print Name)

Signed Monterry Harris Date 3-23-12

08

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 12-13-11		Batch Number: N/A	
Procedure #: CCP-TP-500		Revision #: 11	Video Number N/A
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: N/A	Recording Stop: N/A
Initial Container ☒ N/A		Final Container ☐ N/A	
Container or Package ID Number:		Container or Package ID Number: 1089	
Container Type:		Container Type: 30 gallon container	
Waste Matrix Code:		Waste Matrix Code: S5400	
Waste Stream:		Waste Stream: AERHDM	
		Rigid Liner: ☒Y ☐N Type: 140 MIL.	Rigid Liner Lid: ☐Y ☒N
		Rigid Liner Vented or Hole Size: N/A	
Percent Fill:	Percent Organic Waste:	Percent Fill: 85%	Percent Organic Waste: 30%
Layers of Confinement:	Closure Method:	Layers of Confinement: 1	Closure Method: Heat Sealed Filtered
Comments (e.g., filter information, NCRs): N/A			

Waste Description:

Bottom Can 844
Top Can 853

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 12-01-11		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒N/A	
Container or Package ID Number: 844		Container or Package ID Number:	
Container Type: 7-Gallon Container		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 85%	Percent Organic Waste: 10%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7 Gallon Container - (IM)
Shield Pot Centering Ring - (IM)
Shield Pot - 7003

Attachment 1 – Visual Examination Data Form

Site ID and Location of Packaging Activity: RHANL - 212 GR 08.23.10			
Examination Date 05-05-10	Batch Number: NA		
Procedure #: CCP-TP-500	Revision #: 8	Video Number: NA	
Recording Equipment Check: ☐SAT ☐UNSAT ☑N/A	Recording Start: NA	Recording Stop: NA	
Initial Container ☐ N/A	Final Container ☑ N/A		
Container or Package ID Number: 7003	Container or Package ID Number:		
Container Type: 1 GALLON SHIELD POT	Container Type:		
Waste Matrix Code: S 5400	Waste Matrix Code:		
Waste Stream: AERHDM	Waste Stream:		
	Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N	
	Rigid Liner Vented or Hole Size:		
	Percent Fill:		
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): VOLUME OF ORGANIC WASTE 10%			

Waste Description: Vented 1-gallon ¾-inch thick lead lined shield pot (OM) (IM)

RERTR Plate #549 A G2 (AM)(OM)(P)
RERTR Plate #549 A G1 (AM)(OM)(P)
RERTR Plate #549 F 1 (AM)(OM)(P)
RERTR Plate #549 F 4 (AM)(OM)(P)
RERTR Plate #549 A B1 (AM)(OM)(P)
RERTR Plate #549 A B2 (AM)(OM)(P)
RERTR Plate #549 A B3 (AM)(OM)(P)
RERTR Plate #549 H 1 (AM)(OM)(P)
RERTR Plate #549 H 2 (AM)(OM)(P)
RERTR Plate #549 H 3 (AM)(OM)(P)
RERTR Plate #549 H 5 (AM)(OM)(P)
RERTR Plate #549 H 6 (AM)(OM)(P)
RERTR Plate #549 K 1 (AM)(OM)(P)
RERTR Plate #549 K 2 (AM)(OM)(P)
RERTR Plate #549 K 4 (AM)(OM)(P)
RERTR Plate #549 A H1 (AM)(OM)(P)
RERTR Plate #549 A H2 (AM)(OM)(P)
RERTR Plate #549 A H3 (AM)(OM)(P)

Primary Contents (check one)	☐ Concrete ☑ Steel ☐ Organic Material

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 12-01-11		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 853		Container or Package ID Number:	
Container Type: 7-Gallon Container		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 85%	Percent Organic Waste: 10%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7-Gallon Container - (IM)
Shield Pot Centering Ring - (IM)
Shield Pot - 7105

Attachment 1 – Visual Examination Data Form

Site ID: RHAIVL			
Examination Date: 08-25-11		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒N/A	
Container or Package ID Number: 7105		Container or Package ID Number:	
Container Type: 1 Gallon Container		Container Type:	
Waste Matrix Code: S 5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 85	Percent Organic Waste: 60	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description: Vented 1gallon 3/4" Thick lead lined Shield Pot (om) (Im) RERTR plates (om) (Im) (P)

AGHCF RH-TRU 30-Gallon Waste Drum Datasheet

(The bracketed numbers in the left margin refer to the corresponding procedure step number.)

AGHCF Drum No. 1089

Section 1 — Fill out in accordance with NOD-AGHCF-OPS-303

[8.2.1] AGHCF Drum No. 1089

[8.2.14] Requisition Number: RW – 19660

[8.2.2] Drum Is Type A [ISI][1]: YES ■ NO ☐

[8.2.5] Drum Inspection [ISI][1]: SAT ■ UNSAT ☐

[8.2.6] Drum Vent Model No. [ISI][1]: NUCFIL-013

[8.2.6] Drum Vent Serial No. [ISI][1]: AL-1138

[8.2.7] Torque Wrench for Drum Vent
ID Number: ARG 0411016257
Calibration Due Date: 09/02/2012

[8.2.21] Acceptance Criteria Met: YES ☒ NO ☐

FM Print Name	FM Sign Name	Date
P.J. CARLSON	[signature]	11/22/11

[1] [ISI] identifies an In-Service Inspection specified in the Technical Safety Requirements

Section 2 — Fill out in accordance with NOD-AGHCF-OPS-305

[37] Top Waste Can No. 853

[37] Bottom Waste Can No. 844

	VEO Print Name	VEO Sign Name	Date
[59]	Pat Beallis	Pat Beallis	12-13-11
[59]	William H. Riley	[signature]	12-13-11

[80.2] Torque Wrench for Ring Bolt
ID Number: 88733
Calibration Due Date: 6/23/12

[86] Date Loaded: 12/13/11

[86] Tamper Seal 1 No.: 7374 / 7375

[86] Tamper Seal 2 No.: 7376 / 7377

[89.2] Total Wt. Loaded Drum: 215 lbs

[Step 89.3] Spring Scale for Drum Weight
ID Number: 10759
Calibration Due Date: 5/9/12

Section 3 — Fill out in accordance with NOD-AGHCF OPS-305

RADIOLOGICAL DATA	
Surface Contamination	
[92] Exterior of Drum (Large Area Wipe)	[92] Survey Meter
Alpha (dpm/wipe): < 20	SET Number: 1754

Surface Dose-Rate Calculation Worksheet for RH-TRU FEW Drums

(This worksheet is to be completed under the direction of the PIC for each 30-gallon drum of FEW outloaded from the AGHCF in accordance with NOD-AGHCF-OPS-305, *RH-TRU 30-Gallon Waste Drum Out-Loading — the bracketed numbers in left margin refer to the procedure step number)*

[95.1] Drum Number 1089 Survey date 12/13/11

[95.1] Inner shield pot configuration (circle one):

a. 1 in. top + 1 in. bottom

b. ¾ in. top + 1 in. bottom

c. 1 in. top + ¾ in. bottom

d. ¾ in. top + ¾ in. bottom

Maximum dose rate (R/hr) as recorded on the 30-gallon drum 1.2 R/hr

The following table will be used to determine the multiplier for generating the calculated surface dose rate for the unshielded FEW in this container, based on the location of the maximum measured dose rate

Multiplier Factors for Various Placements of 1 in. and ¾ in. Shield Pots in Drums

Configuration of shield pots in drum	Side (maximum)	Bottom	Top
a. Two 1 in. shield pots	32.2	27.9	33.6
b. One of each type – ¾ in. shield pot on top and 1 in. shield pot on bottom	17.4	27.8	16.6
c. One of each type – 1 in. shield pot on top and ¾ in. shield pot on bottom	16.9	14.2	33.7
d. Two ¾ in. shield pots	15.9	14.1	16.5

[95.1] Calculate the FEW surface dose rate:

Maximum dose rate on drum (R/hr) x Multiplier factor = FEW surface dose rate (R/hr)

1.2 R/hr x 14.1 = 16.92 = 16,920 mRem

(Enter actual values on the lines above to perform and document the calculation)

[95.1] Calculated by: James Smith / Signature / 12/13/11
Print name Date

[96.2] IV done by: Kyle Haske / Signature / 12-13-11
Print name Date

[97] Based on the above calculations, PIC makes the following determination, checks the appropriate box, and signs off below.

The FEW surface dose rate is between 0.2 R/hr and 1,000 R/hr ☒ **Yes** ☐ **No**

If Yes, continue outloading

If No, notify FM.

[121.2] James Smith / PIC Signature / 12/13/11
PIC Print Name Date

 [This replaces NOD-AGHCF-DS-239, ref'd p.2 of NOD-AGHCF-OO-107, which cancelled] NOD-AGHCF-DS-253-00 (07/2011)

Waste Isolation Pilot Plant
Container Data Report

Report Statistics

Report Version:	**2.3**
WDS Instance:	**prd05.wipp.carlsbad.nm.us**
Generated on:	**August 19, 2013 10:48 AM**
Generated by:	**KIRKES, CRETA**
Total Pages:	**6**

Selection Criteria

Container Number: **1168**

Container: 1168
Type: 40 - RH 30 gal TBO

Extended Status: APPROVED CERT IN APPROVED CERT CANISTER EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 04/24/2013
Waste Handling Code: RH
Disposal Date: 07/10/2013

Current Location Site: WI
Generator Site: AE
Destination Site ID: WI

Certification Program ID: C2
Shipping Program ID: C2

Overpack Container: AE0157
Overpack Type: REMOVABLE-LID 72-B CANISTER
Overpack Status: CERTIFICATION DATA APPROVED

Neutron Dose Rate (mrem/hr): 0.0
Beta Gamma Dose Rate (mrem/hr): 124080.0
Total Dose Rate (mrem/hr): 124080.0

FGE (g): 8.29E01
FGE Uncertainty (g): 3.77E01

Gross Weight (kg): 101.60
Gross Weight Uncert (kg): 0.50

Decay Heat (W): 2.64E-01
Decay Heat Uncertainty (W): 9.94E-02

Shipment Data

Payload ID: **AE0157** Assembly ID: AE130746 Payload Complete? Y
Shipment Number: AER13016 Send Date: 07/01/2013 Receipt Date: 07/03/2013
Shipment Status: SHIPMENT RECEIVED AT DESTINATION

Emplacement Location

Panel: 6 Room: 1 Borehole: 007

Certification Data Values

Waste Stream Profile Code: AERHDM
Waste Type Code: MTRU
IDC Code: 001
Waste Matrix Code: S5400
WAC Revision Number: 7.3
Fill Factor (%): 85.00
Waste Stream BIR ID: AE-T009
Waste Stream MWIR ID: NONE

TRU Alpha Activity (Ci): 5.42E00
TRU Alpha Activity Uncertainty (Ci): 2.54E00
TRU Alpha Activity Concentration (Ci/g): 1.82E-04
PU-239 Equivalent Activity (PE-Ci): 5.53E00
Alpha Surface Contamination (dpm/cm^2): 0.0
Beta/Gamma Surface Contamination (dpm/cm^2): 0.0

Transportation Data Values

Closure Date: 10/04/2012
Vent Date: 10/04/2012
Process Knowledge? Y
Waste Gen Date:
Content Code: AE321C
U-235 FEM (g):
U-235 FEM Uncert (g):
Be chemically/ mechanically bound:

Shipment Purpose: DISPOSAL
Machine Compacted? N
Liner Exists? Y
Liner Hole Size(mm):
Liner Lid Present? N
Layers of Packaging 1
Aqueous Material? N

Gas Generation Data Values

Measured FGGR (mol/s)	Measured TGRR (mol/s)	Truncated FGGR Test (Y/N)	Truncated FGGR Test Period (days)

Container: 1168
Type: 40 - RH 30 gal TBO

Extended Status: APPROVED CERT IN APPROVED CERT CANISTER EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 04/24/2013
Waste Handling Code: RH
Disposal Date: 07/10/2013

PCB Waste? N
PCB Mass (kg):
PCB Concentration (ppm):
PCB Out of Service Date:
Be Present? Y
Be <= 1% by weight? Y
Be mass <= 100kg? Y
Separation OK? Y
Packing Fraction (compaction level): non-compacted

Filters

Filter Model Number	Filter Diffusivity (mol/s/ml)	Quantity	Install Date
NF013	3.7E-06	1	10/04/2012

Certification Comments

Radionuclides

Radionuclide	Activity (Ci)	Activity Uncert (Ci)	Mass (g)	Mass Uncert (g)
AM-241	1.820E00	9.550E-01	5.245E-01	2.752E-01
BA-137M	9.880E00	2.860E00	1.836E-08	5.316E-09
CS-137	1.040E01	3.020E00	1.182E-01	3.432E-02
PU-238	1.870E-01	1.240E-01	1.081E-02	7.168E-03
PU-239	2.320E00	1.820E00	3.688E01	2.893E01
PU-240	1.090E00	6.360E-01	4.739E00	2.765E00
PU-241	6.710E00	3.490E00	6.452E-02	3.356E-02
PU-242	2.810E-04	1.320E-04	7.078E-02	3.325E-02
SR-90	6.020E00	1.920E00	4.362E-02	1.391E-02
U-233	9.980E-08	3.880E-08	1.023E-05	3.975E-06
U-234	5.170E-03	2.070E-03	8.180E-01	3.275E-01
U-235	1.560E-04	5.620E-05	7.123E01	2.566E01

Container: 1168
Type: 40 - RH 30 gal TBO

Extended Status: APPROVED CERT IN APPROVED CERT CANISTER EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 04/24/2013
Waste Handling Code: RH
Disposal Date: 07/10/2013

Radionuclides

Radionuclide	Activity (Ci)	Activity Uncert (Ci)	Mass (g)	Mass Uncert (g)
U-238	2.950E-05	1.830E-05	8.676E01	5.382E01
Y-90	6.020E00	1.920E00	1.107E-05	3.529E-06

Material Parameters

Material Parameter	Description	Weight (kg)
8	PLASTICS	29.80
13	STEEL CONTAINER MATERIALS	16.36
14	PLASTIC/LINERS CONTAINER MATERIALS	0.00
21	STEEL LINER MATERIALS	55.40
	Waste Weight:	29.80
	Packaging Weight:	71.76
	Total Material Weight:	101.56

Hazardous Codes

Hazardous Code	Description
D004	ARSENIC
D005	BARIUM
D006	CADMIUM
D007	CHROMIUM
D008	LEAD
D009	MERCURY
D010	SELENIUM

Container: 1168
Type: 40 - RH 30 gal TBO

Extended Status: APPROVED CERT IN APPROVED CERT CANISTER EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 04/24/2013
Waste Handling Code: RH
Disposal Date: 07/10/2013

Hazardous Codes

Hazardous Code	Description
D011	SILVER
D019	CARBON TETRACHLORIDE
D028	1,2-DICHLOROETHANE
D029	1,1-DICHLOROETHYLENE
F002	SPENT HALOGENATED SOLVENTS
F005	SPENT NON-HALOGENATED SOLVENTS

Assay Methods

Labor Code	Assay Method	Description	Assay Date
C9	14DTC1	DOSE-TO-CURIE	02/15/2013

Non-Destructive Examination (NDE)

Labor Code	NDE Method	Description	Examination Date
C2	8RHVE2	VE OF NEWLY PACKAGED RH WASTE	10/04/2012

Edit Limit Check Results

Evaluation Date: 04/24/2013 17:35:26 Overall Status: PASS

Evaluation Code	Status	Return Code	Detailed Description
DI_CERT_ALL	PASS		
DI_CERT_BE	PASS		
DI_CERT_CERT	PASS		
DI_CERT_CHARZ	PASS		
DI_CERT_ED	PASS		

Container: 1168
Type: 40 - RH 30 gal TBO

Extended Status: APPROVED CERT IN APPROVED CERT CANISTER EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 04/24/2013
Waste Handling Code: RH
Disposal Date: 07/10/2013

Edit Limit Check Results

Evaluation Date: 04/24/2013 17:35:26 Overall Status: PASS

Evaluation Code	Status
DI_CERT_EPA	PASS
DI_CERT_PCB	PASS
DI_CERT_PERC	PASS
DI_CERT_TRAMPAC	PASS
DSA	PASS
WAC	PASS
WAP_CERT	PASS

TRAMPAC Evaluation Results

Evaluation Date: Overall Status:

Evaluation Code	Status	Return Code	Detailed Description

History

Event Date/Time	Event Description	Reason
04/24/2013 17:35:26	INSERT DATA INTO THE DATABASE	
04/24/2013 17:35:26	SUCCESSFUL SUBMISSION FOR CERT	
04/25/2013 07:09:30	APPROVED FOR CERT	
06/11/2013 13:58:00	REMOVED FROM OVERPACK	
06/18/2013 07:41:34	ASSIGNED TO OVERPACK	

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	RH WDS Master Template.xls Rev. 4 Addendum #4, SCO #1066 Excel 2003/2007 Microsoft Windows XP	Units	data					comments					Initial	date
2	Shipper Site ID		C2	Location ID	Dest Program ID	Shipping Purpose					1168		CK/LD	04/17/13
3	Waste Stream Profile		AERHDM	AE	WI	D							CK/LD	04/17/13
4	Container Number		1168										CK/LD	04/17/13
5	Container Type		RH drum-30 tbo	drum, swb, tdop, etc., see WWIS labels for valid types.					U-235 FEM	U-235 FEM Uncert	FGGR Flag	FGGR Test Period	CK/LD	04/17/13
6	WAC Rev #		7.3	0					NULL	NULL	NULL	NULL	CK/LD	04/17/13
7	WAC Ex. #						Be <=100 kg	Be <= 1%	Be Present	Aqueous Material	Be Chem/Mech Bound	Compacted Wst		
8	Cert Site		C2				Y	Y	Y	N	NULL	N	CK/LD	04/17/13
9	Cert Date		4/24/13											
10	Waste Handling Code		RH	CH, RH									CK/LD	04/17/13
11	Waste Type Code		MTRU	TRU, MTRU									CK/LD	04/17/13
12	Waste Stream BIR ID		AE-T009				p(CI):	choose	1sigma	2sigma	95%CI		CK/LD	04/17/13
13	Waste Stream MWIR ID		NONE		default to 0 for TRU		0.6827	1sigma	1.0000	0.5000	0.5102		CK/LD	04/17/13
14	Generator Site ID		AE				0.9545	2sigma	2.0000	1.0000	1.0204		CK/LD	04/17/13
15	IDC Code		001				0.9500	95%CI	1.9600	0.9800	1.0000		CK/LD	04/17/13
16	Matrix Code		S5400										CK/LD	04/17/13
17	Trucon Code		~~AE322C~~	AE321C CK 4/24/13									CK/LD	04/17/13
18	Shipping Category						WWIS Req'd CI:	1sigma	1.0000	0.5000	0.5102			
19	Tru Alpha Act	Ci	5.42E+00		5.417E+00		Fraction of MDL Reported on HGAS		1.0000				CK/LD	04/17/13
20	Tru Alpha Act Uncert	1sigma Ci	2.54E+00	1.050E+01	Tru Alpha Act + 2sigma (Ci)								CK/LD	04/17/13
21	Tru Alpha Act Conc	nCi/g	1.82E+05		1.82E+05								CK/LD	04/17/13
22	Tru Alpha Act Conc Uncert	1sigma nCi/g	8.51E+04	3.522E+05	Tru Alpha Act Conc + 2sigma (Ci)								CK/LD	04/17/13
23	Pu239 Fiss Gm Eq	g	8.29E+01		8.295E+01								CK/LD	04/17/13
24	Pu239 Fiss Gm Eq Uncert	1sigma g	3.77E+01	1.583E+02	Pu239 Fiss Gm Eq + 2sigma (Ci)								CK/LD	04/17/13
25	Pu239 Eq Act	Ci	5.53E+00		5.532E+00								CK/LD	04/17/13
26	Decay Heat	watts	2.64E-01		2.640E-01								CK/LD	04/17/13
27	Decay Heat Uncert	1sigma watts	9.94E-02	3.63E-01	Decay Heat + 1sigma (watts)								CK/LD	04/17/13
28	Layers of Packaging		1										CK/LD	04/17/13
29	Fill Factor		85	percentage	Liner Lid Present	N							CK/LD	04/17/13
30	Liner Type		1	1 = plastic drum liner									CK/LD	04/17/13
31	Liner Punctured		Y		Liner Hole Size	457.2	(mm)						CK/LD	04/17/13
32	PCB Conc		NULL				PCB Waste	PCB Mass (kg)	Out of Service				CK/LD	04/17/13
33	Closure Date		10/4/2012	Watt-years	Waste Gen Date		N	NULL	NULL				CK/LD	04/17/13
34	Vent Date		10/4/2012	0.141									CK/LD	04/17/13
35	Filter Install Date		10/4/2012										CK/LD	04/17/13
36	Filter Manufacturer		NFT										CK/LD	04/17/13
37	Filter Serial Number(s)												CK/LD	04/17/13
38	Filter Model Number	NF012,NF013,NF020,NF9026	NF013										CK/LD	04/17/13
39	Number of Filters Installed		1										CK/LD	04/17/13
40	Aspiration Method ID		3										CK/LD	04/17/13
41	Gas Gen Rate			#VALUE!	<<Gas Gen Rate Calculated.		Avagdro's Number:	6.022142E+23	NIST					
42	Hydrogen/Methane Gen Rate						Electron Charge	1.602176E-19 V	NIST					
43	Gas Gen Comp Date				Waste (kg)	Packaging (kg)	Total (kg)							
44	Gross Weight	kg	101.600		29.8	71.76	101.56						CK/LD	04/17/13
45	Gross Weight Uncert	1sigma kg	0.5		max reported	mda							CK/LD	04/17/13
46	Alpha Surf Cont	dpm/100 cm^2	0		0		Minimum Detectable Activity			Shipping Calcs			CK/LD	04/17/13
47	Beta/Gamma Surf Cont	dpm/100 cm^2	0		0		Minimum Detectable Activity			Total TBq	1.65E+00		CK/LD	04/17/13
48	Neutron Dose Rate	mrem/hr	0		0		Minimum Detectable Activity			Fraction	3.44E-01		CK/LD	04/17/13
49	Beta/Gamma Dose Rate	mrem/hr	124080		124080		Minimum Detectable Activity			Highway Route Control?	No		CK/LD	04/17/13
50	Radionuclide		U-233	U-234	U-235	U-238	Pu-238	Pu-239	Pu-240	Pu-241	Pu-242	Am-241	CK/LD	04/17/13
51	Activity	Ci	9.98E-08	5.17E-03	1.56E-04	2.95E-05	1.87E-01	2.32E+00	1.09E+00	6.71E+00	2.81E-04	1.82E+00	CK/LD	04/17/13
52	Activity Uncert	1sigma Ci	3.88E-08	2.07E-03	5.62E-05	1.83E-05	1.24E-01	1.82E+00	6.36E-01	3.49E+00	1.32E-04	9.55E-01	CK/LD	04/17/13
53	Mass	grams	1.02E-05	8.18E-01	7.12E+01	8.68E+01	1.08E-02	3.69E+01	4.74E+00	6.45E-02	7.08E-02	5.24E-01		
54	Mass Uncert	1sigma grams	3.98E-06	3.28E-01	2.57E+01	5.38E+01	7.17E-03	2.89E+01	2.77E+00	3.36E-02	3.32E-02	2.75E-01		
55	calc Tru Alpha Act	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.87E-01	2.32E+00	1.09E+00	0.00E+00	2.81E-04	1.82E+00		
56	calc Tru Alpha Act Conc	nCi/g	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.28E+03	7.79E+04	3.66E+04	0.00E+00	9.43E+00	6.11E+04		
57	calc Act	Ci	9.98E-08	5.17E-03	1.56E-04	2.95E-05	1.87E-01	2.32E+00	1.09E+00	6.71E+00	2.81E-04	1.82E+00		
58	calc Act Conc	nCi/g	3.35E-03	1.73E+02	5.23E+00	9.90E-01	6.28E+03	7.79E+04	3.66E+04	2.25E+05	9.43E+00	6.11E+04		

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
59	calc Pu239 FGE	g	9.20E-06	0.00E+00	4.58E+01	0.00E+00	1.22E-03	3.69E+01	1.07E-01	1.45E-01	5.31E-04	9.81E-03		
60	calc Pu239 Eq Act	Ci	2.56E-08	0.00E+00	0.00E+00	0.00E+00	1.70E-01	2.32E+00	1.09E+00	1.32E-01	2.55E-04	1.82E+00		
61	calc Decay Heat	watts	2.90E-09	1.49E-04	4.30E-06	7.48E-07	6.19E-03	7.19E-02	3.39E-02	2.14E-04	8.28E-06	6.08E-02		
62	uncert Tru Alpha Act	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.24E-01	1.82E+00	6.36E-01	0.00E+00	1.32E-04	9.55E-01		
63	uncert Tru Alpha Act Conc	nCi/g	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.16E+03	6.11E+04	2.13E+04	0.00E+00	4.43E+00	3.20E+04		
64	uncert Act	Ci	3.88E-08	2.07E-03	5.62E-05	1.83E-05	1.24E-01	1.82E+00	6.36E-01	3.49E+00	1.32E-04	9.55E-01		
65	uncert Act Conc	nCi/g	1.30E-03	6.95E+01	1.89E+00	6.14E-01	4.16E+03	6.11E+04	2.13E+04	1.17E+05	4.43E+00	3.20E+04		
66	uncert Pu239 FGE	g	3.58E-06	0.00E+00	1.65E+01	0.00E+00	8.10E-04	2.89E+01	6.22E-02	7.55E-02	2.49E-04	5.15E-03		
67	uncert Pu239 Eq Act	Ci	9.95E-09	0.00E+00	0.00E+00	0.00E+00	1.13E-01	1.82E+00	6.36E-01	6.84E-02	1.20E-04	9.55E-01		
68	uncert Decay Heat	watts	1.13E-09	5.96E-05	1.55E-06	4.64E-07	4.11E-03	5.64E-02	1.98E-02	1.11E-04	3.89E-06	3.19E-02		
69	Shipping Calcs	1.03E+03	3.70E-06	1.91E-01	0.00E+00	0.00E+00	3.46E+01	4.29E+02	2.01E+02	2.49E+01	5.19E-02	3.36E+02		
70	49CFR173.433f		0.00%	0.02%	0.00%	0.00%	3.35%	41.61%	19.55%	2.41%	0.01%	32.65%		
71	Radionuclide		Cs-137	Ba-137m	Sr-90	Y-90							CK/LD	04/17/13
72	Activity	Ci	1.04E+01	9.88E+00	6.02E+00	6.02E+00							CK/LD	04/17/13
73	Activity Uncert	1sigma Ci	3.02E+00	2.86E+00	1.92E+00	1.92E+00							CK/LD	04/17/13
74	Mass	grams	1.18E-01	1.84E-08	4.36E-02	1.11E-05	NULL	NULL	NULL	NULL	NULL	NULL		
75	Mass Uncert	1sigma grams	3.43E-02	5.32E-09	1.39E-02	3.53E-06	NULL	NULL	NULL	NULL	NULL	NULL		
76	calc Tru Alpha Act	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NULL	NULL	NULL	NULL	NULL	NULL		
77	calc Tru Alpha Act Conc	nCi/g	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NULL	NULL	NULL	NULL	NULL	NULL		
78	calc Act	Ci	1.04E+01	9.88E+00	6.02E+00	6.02E+00	NULL	NULL	NULL	NULL	NULL	NULL		
79	calc Act Conc	nCi/g	3.49E+05	3.32E+05	2.02E+05	2.02E+05	NULL	NULL	NULL	NULL	NULL	NULL		
80	calc Pu239 FGE	g	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NULL	NULL	NULL	NULL	NULL	NULL		
81	calc Pu239 Eq Act	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NULL	NULL	NULL	NULL	NULL	NULL		
82	calc Decay Heat	watts	1.15E-02	3.89E-02	6.98E-03	3.33E-02	NULL	NULL	NULL	NULL	NULL	NULL		
83	uncert Tru Alpha Act	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NULL	NULL	NULL	NULL	NULL	NULL		
84	uncert Tru Alpha Act Conc	nCi/g	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NULL	NULL	NULL	NULL	NULL	NULL		
85	uncert Act	Ci	3.02E+00	2.86E+00	1.92E+00	1.92E+00	NULL	NULL	NULL	NULL	NULL	NULL		
86	uncert Act Conc	nCi/g	1.01E+05	9.60E+04	6.44E+04	6.44E+04	NULL	NULL	NULL	NULL	NULL	NULL		
87	uncert Pu239 FGE	g	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NULL	NULL	NULL	NULL	NULL	NULL		
88	uncert Pu239 Eq Act	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NULL	NULL	NULL	NULL	NULL	NULL		
89	uncert Decay Heat	watts	3.34E-03	1.13E-02	2.23E-03	1.06E-02	NULL	NULL	NULL	NULL	NULL	NULL		
90	Shipping Calcs		7.70E-01	0.00E+00	2.23E+00	1.11E+00	NULL	NULL	NULL	NULL	NULL	NULL		
91	49CFR173.433f		0.07%	0.00%	0.22%	0.11%	NULL	NULL	NULL	NULL	NULL	NULL		
92	Waste Material Parameter		PW	SL									CK/LD	04/17/13
93	Wgt of Mat Parms (kg or lbs)	kg	29.8	55.4									CK/LD	04/17/13
94	Radio Assay Method		14DTC1										CK/LD	04/17/13
95	Data Package Number		ANLRHDTC13002					kg					CK/LD	04/17/13
96	Assay Date		2/15/2013				lbs	0.4536					CK/LD	04/17/13
97	Charz Method ID		8RHVE2				kg	1.0000					CK/LD	04/17/13
98	Data Package Number		ANLRHVE13003										CK/LD	04/17/13
99	Charz Method Date		10/4/2012										CK/LD	04/17/13
100	Haz Codes		D004	D005	D006	D007	D008	D009	D010	D011	D019	D028	CK/LD	04/17/13
101	Haz Codes		D029	F002	F005								CK/LD	04/17/13
102	Haz Codes													
103	Haz Codes													
104	Sample ID	Headspace Gas H/M	NULL										CK/LD	04/17/13
105	Sample Type			HGHM									CK/LD	04/17/13
106	Layer No. Sampled					0							CK/LD	04/17/13
107	Date Sampled					Sample Site							CK/LD	04/17/13
108	Method ID			DTP-1.2-041									CK/LD	04/17/13
109	Data Package Number												CK/LD	04/17/13
110	CAS #		NULL	NULL										
111	Analyte												CK/LD	04/17/13
112	Concentration												CK/LD	04/17/13
113	units	%vol											CK/LD	04/17/13
114	Date Analyzed			NULL									CK/LD	04/17/13
115	B Detectable Flag													
116	D Detectable Flag													
117	E Detectable Flag													
118	J Detectable Flag													
119	U Detectable Flag												CK/LD	04/17/13
120	NA Detectable Flag		NA	NA										
121											RH WDS Master Template.xls Rev. 4			
122	Sample ID	Headspace Gas VOC									Addendum #4, SCO #1066		CK/LD	04/17/13
123	Sample Type			HGVO							Excel 2003/2007 Microsoft Windows		CK/LD	04/17/13
124	Layer No. Sampled					SARP-Flammable VOCs (ppmv)		0			XP		CK/LD	04/17/13
125	Date Sampled												CK/LD	04/17/13

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
126	Method ID			DTP-1.2-041									CK/LD	04/17/13
127	Data Package Number												CK/LD	04/17/13
128	Methanol Method ID													
129	CAS #												CK/LD	04/17/13
130	Analyte		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
131	Concentration												CK/LD	04/17/13
132	units	ppmv											CK/LD	04/17/13
133	Date Analyzed		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL			CK/LD	04/17/13
134	B Detectable Flag													
135	D Detectable Flag													
136	E Detectable Flag													
137	J Detectable Flag													
138	U Detectable Flag												CK/LD	04/17/13
139	NA Detectable Flag		NA	NA	NA	NA	NA	NA	NA	NA				
140	SARP-Flammable Calc		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
141	CAS #												CK/LD	04/17/13
142	Analyte		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
143	Concentration												CK/LD	04/17/13
144	units	ppmv											CK/LD	04/17/13
145	Date Analyzed		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL			CK/LD	04/17/13
146	B Detectable Flag													
147	D Detectable Flag													
148	E Detectable Flag													
149	J Detectable Flag													
150	U Detectable Flag												CK/LD	04/17/13
151	NA Detectable Flag		NA	NA	NA	NA	NA	NA	NA	NA				
152	SARP-Flammable Calc		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
153	CAS #												CK/LD	04/17/13
154	Analyte		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
155	Concentration												CK/LD	04/17/13
156	units	ppmv											CK/LD	04/17/13
157	Date Analyzed		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL			CK/LD	04/17/13
158	B Detectable Flag													
159	D Detectable Flag													
160	E Detectable Flag													
161	J Detectable Flag													
162	U Detectable Flag												CK/LD	04/17/13
163	NA Detectable Flag		NA	NA	NA	NA	NA	NA	NA	NA				
164	SARP-Flammable Calc		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
165	CAS #												CK/LD	04/17/13
166	Analyte		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
167	Concentration												CK/LD	04/17/13
168	units	ppmv											CK/LD	04/17/13
169	Date Analyzed		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL			CK/LD	04/17/13
170	B Detectable Flag													
171	D Detectable Flag													
172	E Detectable Flag													
173	J Detectable Flag													
174	U Detectable Flag												CK/LD	04/17/13
175	NA Detectable Flag		NA	NA	NA	NA	NA	NA	NA	NA				
176	SARP-Flammable Calc		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
177	CAS #													
178	Analyte		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
179	Concentration													
180	units	ppmv												
181	Date Analyzed		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
182	B Detectable Flag													
183	D Detectable Flag										RH WDS Master Template.xls Rev. 4			
184	E Detectable Flag										Addendum #4, SCO #1066			
185	J Detectable Flag										Excel 2003/2007 Microsoft Windows			
186	U Detectable Flag										XP			
187	NA Detectable Flag		NA	NA	NA	NA	NA	NA	NA	NA				

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
188	SARP-Flammable Calc		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
189			type	comment										
190	Comment													
191	Comment													
192	Comment													
193	Comment													
194	Comment													
195	Comment													
196	Comment													
197	Comment													
198	Comment													
199	Comment													
200														
201			Requirements Met?											
202	Free liquids <1% by volume		YES											
203	No non-rad. pyrophorics		YES											
204	Chemical compatability		YES											
205	No explosives		YES											
206	No corrosives		YES											
207	No pressurized containers		YES											
208	No sealed Containers >4 liters		YES											
209	Liner punctured/ filtered		YES											
210	Flammable VOCs <500ppmv		YES											
211	Container is in Approved Waste Stream Profile Form?	AERHDM	YES											
212	Can it be established through Process Knowledge that the concentration of flammable VOCs present in the headspace of the container is <= 500 ppm?.		YES											
213														
214														
215														
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Creta Kirks
CCP Certification Official

4-24-2013
Date

Lot #

RH WDS Master Template.xls Rev. 4
Addendum #4, SCO #1066
Excel 2003/2007 Microsoft Windows XP

Attachment 2 – Container Data Sheet

BDR Number: ANCRHDTC13002

Date:	2-15-13
Container No.:	1168
Probe Position:	30 GALLON
Instrument No.:	XCC 4110
Probe No.:	XCC 4417
Measured Background Dose Rate (mR/hr):	.2
Gross Weight (kg):	101.6
Dose Rate 1 (mR/hr):	103
Dose Rate 2 (mR/hr):	106
Dose Rate 3 (mR/hr):	123
Dose Rate 4 (mR/hr):	108
Highest measured dose rate is greater than three times the measured background.	(YES) NO

Kevin R. Klosowski	K. R. Kl	2-15-13
Printed Name	Signature	Date

08

Waste Container Dose-to-Curie Conversion Record

SCO 1165 DTC for AERHDM - 2nd Batch Debris Version 0 Microsoft Excel 2003, 2007, 2010; Microsft Windows XP Professional 2002 and 2003

Operating Procedure	CCP-TP-504	rev 13
Date of Survey	2/15/2013	
Waste Stream Designation	AERHDM	
Container Number	1168	

Shielded Containers	Top	Bottom
Type	3/4-Inch	3/4-Inch
Estimate Fill Percentages	5	5
Container Gross Weight		101.6 kg
Container Net Weight		29.8 kg

Measured Container Dose Rate		Background
Quadrant #1	103 mR/hr	2 mR/hr
Quadrant #2	106 mR/hr	
Quadrant #3	123 mR/hr	
Quadrant #4	108 mR/hr	

Average Dose Rate Minus Background 108 mR/hr

Nuclide	Curie Scaling Factors	Activity (Ci)	Grams	FGE	PECi	Watts	Uncertainty	Uncertainty in Curies	Uncertainty in Grams
U-233	8.96E-09	9.98E-08	1.02E-05	9.20E-06	2.56E-08	2.90E-09	38.9%	3.88E-08	3.98E-06
U-234	4.64E-04	5.17E-03	8.18E-01	0.00E+00	0.00E+00	1.49E-04	40.1%	2.07E-03	3.28E-01
U-235	1.40E-05	1.56E-04	7.12E+01	4.58E+01	0.00E+00	4.30E-06	36.1%	5.62E-05	2.57E+01
U-238	2.65E-06	2.95E-05	8.66E+01	0.00E+00	0.00E+00	7.47E-07	62.0%	1.83E-05	5.37E+01
Pu-238	1.68E-02	1.87E-01	1.08E-02	1.22E-03	1.70E-01	6.18E-03	66.3%	1.24E-01	7.15E-03
Pu-239	2.08E-01	2.32E+00	3.68E+01	3.68E+01	2.32E+00	7.18E-02	78.8%	1.82E+00	2.90E+01
Pu-240	9.81E-02	1.09E+00	4.75E+00	1.07E-01	1.09E+00	3.40E-02	58.2%	6.36E-01	2.77E+00
Pu-241	6.89E-01	6.71E+00	6.46E-02	1.45E-01	1.32E-01	2.14E-04	52.0%	3.49E+00	3.36E-02
Pu-242	2.53E-05	2.81E-04	7.09E-02	5.32E-04	2.56E-04	8.29E-06	46.9%	1.32E-04	3.33E-02
Am-241	1.61E-01	1.82E+00	5.25E-01	9.82E-03	1.82E+00	6.09E-02	52.4%	9.55E-01	2.75E-01
Cs-137	1.00E+00	1.04E+01	1.19E-01	0.00E+00	0.00E+00	1.16E-02	28.9%	3.02E+00	3.44E-02
Ba-137m	9.46E-01	9.88E+00	1.84E-08	0.00E+00	0.00E+00	3.90E-02	28.9%	2.86E+00	5.32E-09
Sr-90	5.78E-01	6.02E+00	4.36E-02	0.00E+00	0.00E+00	6.98E-03	31.9%	1.92E+00	1.39E-02
Y-90	5.78E-01	6.02E+00	1.11E-05	0.00E+00	0.00E+00	3.33E-02	31.9%	1.92E+00	3.53E-06
Totals		4.45E+01	2.01E+02	8.29E+01	5.53E+00	2.64E-01			

	Value	(one Sigma)	
TRU Alpha Activity Concentration	1.82E+05	8.51E+04	nCi/g
TRU Alpha Activity	5.42E+00	2.54E+00	Ci
Total Pu-239 Equiv Activity	5.53E+00	2.55E+00	Ci
Total Pu-239 Fissile Gram Equiv	8.29E+01	3.77E+01	g
Total Decay Heat	2.64E-01	9.94E-02	W
Volume Activity	3.78E-01	1.18E-01	Ci/L

Originator Kevin R. Klosowski (Print Name)

Signed K. R. Kl[illegible] Date 2-18-13

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 10-4-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☒ N/A		Final Container ☐ N/A	
Container or Package ID Number:		Container or Package ID Number: 1168	
Container Type:		Container Type: 30 GALLON CONTAINER	
Waste Matrix Code:		Waste Matrix Code: S5400	
Waste Stream:		Waste Stream: AERADM	
		Rigid Liner: ☒Y ☐N Type: 40 MIL	Rigid Liner Lid: ☐ Y ☒N
		Rigid Liner Vented or Hole Size: NA	
Percent Fill:	Percent Organic Waste:	Percent Fill: 85%	Percent Organic Waste: 0%
Layers of Confinement:	Closure Method:	Layers of Confinement: 1	Closure Method: HEAT SEALED FILTERED
Comments (e.g., filter information, NCRs): NA			

Waste Description:

BOTTOM CAN: 1055

TOP CAN: 1060

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 09-06-12		Batch Number: N/A	
Procedure #: CCP-TP-500		Revision #: 11	Video Number N/A
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: N/A	Recording Stop: N/A
Initial Container ☐ N/A		Final Container ☒N/A	
Container or Package ID Number: 1055		Container or Package ID Number:	
Container Type: 7 gallon container		Container Type:	
Waste Matrix Code: S9100		Waste Matrix Code:	
Waste Stream: A ERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 85%	Percent Organic Waste: 0%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: N/A	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): N/A			
Waste Description: 7 gallon Container (IM) Shield Pot Centering Ring (IM) Shield Pot #8246			

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Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 09-02-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒N/A	
Container or Package ID Number: 8246		Container or Package ID Number:	
Container Type: 1 Gallon Shield Pot		Container Type:	
Waste Matrix Code: S 5400		Waste Matrix Code:	
Waste Stream: AE RHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 5	Percent Organic Waste: 0	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:
Vented 1gallon 3/4" Thick lead lined Shield Pot (om) (Im)
Fuel and Cladding pieces (om) (Im)
Debris and Rubble (om) (Im)

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Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 09-06-12	Batch Number: N/A		
Procedure #: CCP-TP-500	Revision #: 11	Video Number: N/A	
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A	Recording Start: N/A	Recording Stop: N/A	
Initial Container ☐ N/A	Final Container ☒N/A		
Container or Package ID Number: 1060	Container or Package ID Number:		
Container Type: 7 gallon container	Container Type:		
Waste Matrix Code: S5400	Waste Matrix Code:		
Waste Stream: AERHDM	Waste Stream:		
	Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐Y ☐N	
	Rigid Liner Vented or Hole Size:		
Percent Fill: 85% Percent Organic Waste: 0%	Percent Fill:	Percent Organic Waste:	
Layers of Confinement: 0 Closure Method: N/A	Layers of Confinement:	Closure Method:	
Comments (e.g., filter information, NCRs): N/A			

Waste Description: 7 gallon container (IM)
Shield Pot Centering Ring (IM)
Shield Pot #8247

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Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 09-04-12		Batch Number: NA	
Procedure #: CCP TP 500		Revision #: 11	Video Number NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 8247		Container or Package ID Number:	
Container Type: 1 Gallon Shield Pot		Container Type:	
Waste Matrix Code: S S400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 5	Percent Organic Waste: 0	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:
Vented 1 gallon 3/4" Thick lead lined Shield Pot (om) (Im)
Fuel and cladding pieces (om) (Im)
Debris and Rubble (om) (Im)

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AGHCF RH-TRU 30-Gallon Waste Drum Datasheet

(The bracketed numbers in the left margin refer to the corresponding procedure step number.)

AGHCF Drum No. 1168

Section 1 — Fill out in accordance with NOD-AGHCF-OPS-303

[8.2.1] AGHCF Drum No. 1168

[8.2.14] Requisition Number: RW- 88052

[8.2.2] Drum Is Type A [ISI][1]: YES ☒ NO ☐

[8.2.5] Drum Inspection [ISI][1]: SAT ☒ UNSAT ☐

[8.2.6] Drum Vent Model No. [ISI][1]: NUCFIL-013

[8.2.6] Drum Vent Serial No. [ISI][1]: AL-1208

[8.2.21] Acceptance Criteria Met: YES ☒ NO ☐

[8.2.7] Torque Wrench for Drum Vent
ID Number: ARG 218670
Calibration Due Date: 10-1-12

MARK CLARK — FM Print Name
Mark A. Clark — FM Sign Name
7-26-12 — Date

1 [ISI] identifies an In-Service Inspection specified in the Technical Safety Requirements

Section 2 — Fill out in accordance with NOD-AGHCF-OPS-305

[37] Top Waste Can No. 1060

[37] Bottom Waste Can No. 1055

[59] William Hurley — VEO Print Name
William Hurley — VEO Sign Name
10-04-12 — Date

[59] ERIC BOND — VEO Print Name
Eric Bond — VEO Sign Name
10-4-12 — Date

[80.2] Torque Wrench for Ring Bolt
ID Number: 88733
Calibration Due Date: 6/21/2013

[86] Date Loaded: 10/4/12

[86] Tamper Seal 1 No.: 6867

[86] Tamper Seal 2 No.: 6868

[89.2] Total Wt. Loaded Drum: 218 lbs

[Step 89.3] Spring Scale for Drum Weight
ID Number: 10759
Calibration Due Date: 5/7/2013

Surface Dose-Rate Calculation Worksheet for RH-TRU FEW Drums

(This worksheet is to be completed under the direction of the PIC for each 30-gallon drum of FEW out-loaded from the AGHCF in accordance with NOD-AGHCF-OPS-305, *RH-TRU 30-Gallon Waste Drum Out-Loading.* The bracketed numbers in the left margin refer to the corresponding procedure step number.)

[96.1] Drum Number 1168 Survey date 10/4/12

[96.1] Inner shield pot configuration (circle one):

a. 1 in. top + 1 in. bottom
b. ¾ in. top + 1 in. bottom
c. 1 in. top + ¾ in. bottom
(d.) ¾ in. top + ¾ in. bottom

Maximum dose rate (R/hr) as recorded on the 30-gallon drum 8.8 R/hr

The following table will be used to determine the multiplier for generating the calculated surface dose rate for the unshielded FEW in this container, based on the location of the maximum measured dose rate

Multiplier Factors for Various Placements of 1 in. and ¾ in. Shield Pots in Drums

Configuration of shield pots in drum	Side (maximum)	Bottom	Top
a. Two 1 in. shield pots	32.2	27.9	33.6
b. One of each type – ¾ in. shield pot on top and 1 in. shield pot on bottom	17.4	27.8	16.6
c. One of each type – 1 in. shield pot on top and ¾ in. shield pot on bottom	16.9	14.2	33.7
d. Two ¾ in. shield pots	15.9	(14.1)	16.5

[96.1] Calculate the FEW surface dose rate:

Maximum dose rate on drum (R/hr) x Multiplier factor = FEW surface dose rate (R/hr)

8.8 R/hr x 14.1 = 124.08 = 124,080 mRem

(Enter actual values on the lines above to perform and document the calculation)

[96.2] Calculated by: LEE ESSENMACHER (Print name) Lee Essenmacher (Signature) 10/4/12 (Date)

[97.2] IV done by: Kyle Hale (Print name/ Signature) (Date) 10-4-12

[98] Based on the above calculations, PIC makes the following determination, checks the appropriate box, and signs off below.

The FEW surface dose rate is between 0.2 R/hr and 1,000 R/hr ☒ Yes ☐ No

If Yes, continue outloading

If No, notify FM.

[122] LEE ESSENMACHER (PIC Print Name) Lee Essenmacher (PIC Signature) 10/4/12 (Date)

Waste Isolation Pilot Plant
Container Data Report

Report Statistics

Report Version:	**2.3**
WDS Instance:	**prd05.wipp.carlsbad.nm.us**
Generated on:	**August 19, 2013 10:49 AM**
Generated by:	**KIRKES, CRETA**
Total Pages:	**6**

Selection Criteria

Container Number:	**1169**

Container: 1169
Type: 40 - RH 30 gal TBO

Extended Status: APPROVED CERT IN APPROVED CERT CANISTER EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 06/10/2013
Waste Handling Code: RH
Disposal Date: 07/10/2013

Current Location Site: WI
Generator Site: AE
Destination Site ID: WI

Certification Program ID: C2
Shipping Program ID: C2

Overpack Container: AE0157
Overpack Type: REMOVABLE-LID 72-B CANISTER
Overpack Status: CERTIFICATION DATA APPROVED

Neutron Dose Rate (mrem/hr): 0.0
Beta Gamma Dose Rate (mrem/hr): 549900.0
Total Dose Rate (mrem/hr): 549900.0

FGE (g): 9.38E01
FGE Uncertainty (g): 4.27E01

Gross Weight (kg): 102.00
Gross Weight Uncert (kg): 0.50

Decay Heat (W): 2.99E-01
Decay Heat Uncertainty (W): 1.12E-01

Shipment Data

Payload ID: **AE0157** Assembly ID: AE130746 Payload Complete? Y
Shipment Number: AER13016 Send Date: 07/01/2013 Receipt Date: 07/03/2013
Shipment Status: SHIPMENT RECEIVED AT DESTINATION

Emplacement Location

Panel: 6 Room: 1 Borehole: 007

Certification Data Values

Waste Stream Profile Code: AERHDM
Waste Type Code: MTRU
IDC Code: 001
Waste Matrix Code: S5400
WAC Revision Number: 7.3
Fill Factor (%): 85.00
Waste Stream BIR ID: AE-T009
Waste Stream MWIR ID: NONE

TRU Alpha Activity (Ci): 6.13E00
TRU Alpha Activity Uncertainty (Ci): 2.87E00
TRU Alpha Activity Concentration (Ci/g): 2.03E-04
PU-239 Equivalent Activity (PE-Ci): 6.26E00
Alpha Surface Contamination (dpm/cm^2): 0.0
Beta/Gamma Surface Contamination (dpm/cm^2): 0.0

Transportation Data Values

Closure Date: 10/08/2012
Vent Date: 10/08/2012
Process Knowledge? Y
Waste Gen Date:
Content Code: AE322C
U-235 FEM (g):
U-235 FEM Uncert (g):
Be chemically/ mechanically bound:

Shipment Purpose: DISPOSAL
Machine Compacted? N
Liner Exists? Y
Liner Hole Size(mm):
Liner Lid Present? N
Layers of Packaging 1
Aqueous Material? N

Gas Generation Data Values

Measured FGGR (mol/s)	Measured TGRR (mol/s)	Truncated FGGR Test (Y/N)	Truncated FGGR Test Period (days)

Container: 1169

Type: 40 - RH 30 gal TBO

Extended Status: APPROVED CERT IN APPROVED CERT CANISTER EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 06/10/2013
Waste Handling Code: RH
Disposal Date: 07/10/2013

PCB Waste? N
PCB Mass (kg):
PCB Concentration (ppm):
PCB Out of Service Date:
Be Present? Y
Be <= 1% by weight? Y
Be mass <= 100kg? Y
Separation OK? Y
Packing Fraction (compaction level): non-compacted

Filters

Filter Model Number	Filter Diffusivity (mol/s/ml)	Quantity	Install Date
NF013	3.7E-06	1	10/08/2012

Certification Comments

Radionuclides

Radionuclide	Activity (Ci)	Activity Uncert (Ci)	Mass (g)	Mass Uncert (g)
AM-241	2.060E00	1.080E00	5.937E-01	3.112E-01
BA-137M	1.120E01	3.240E00	2.082E-08	6.022E-09
CS-137	1.180E01	3.420E00	1.341E-01	3.886E-02
PU-238	2.110E-01	1.400E-01	1.220E-02	8.092E-03
PU-239	2.620E00	2.060E00	4.165E01	3.275E01
PU-240	1.240E00	7.200E-01	5.391E00	3.130E00
PU-241	7.600E00	3.950E00	7.308E-02	3.798E-02
PU-242	3.190E-04	1.500E-04	8.035E-02	3.778E-02
SR-90	6.810E00	2.180E00	4.935E-02	1.580E-02
U-233	1.130E-07	4.400E-08	1.158E-05	4.508E-06
U-234	5.850E-03	2.350E-03	9.256E-01	3.718E-01
U-235	1.770E-04	6.370E-05	8.082E01	2.909E01

Container: 1169
Type: 40 - RH 30 gal TBO

Extended Status: APPROVED CERT IN APPROVED CERT CANISTER EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 06/10/2013
Waste Handling Code: RH
Disposal Date: 07/10/2013

Radionuclides

Radionuclide	Activity (Ci)	Activity Uncert (Ci)	Mass (g)	Mass Uncert (g)
U-238	3.330E-05	2.070E-05	9.794E01	6.088E01
Y-90	6.810E00	2.180E00	1.252E-05	4.007E-06

Material Parameters

Material Parameter	Description	Weight (kg)
8	PLASTICS	30.20
13	STEEL CONTAINER MATERIALS	16.36
14	PLASTIC/LINERS CONTAINER MATERIALS	0.00
21	STEEL LINER MATERIALS	55.40
	Waste Weight:	30.20
	Packaging Weight:	71.76
	Total Material Weight:	101.96

Hazardous Codes

Hazardous Code	Description
D004	ARSENIC
D005	BARIUM
D006	CADMIUM
D007	CHROMIUM
D008	LEAD
D009	MERCURY
D010	SELENIUM

Container: 1169
Type: 40 - RH 30 gal TBO

Extended Status: APPROVED CERT IN APPROVED CERT CANISTER EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 06/10/2013
Waste Handling Code: RH
Disposal Date: 07/10/2013

Hazardous Codes

Hazardous Code	Description
D011	SILVER
D019	CARBON TETRACHLORIDE
D028	1,2-DICHLOROETHANE
D029	1,1-DICHLOROETHYLENE
F002	SPENT HALOGENATED SOLVENTS
F005	SPENT NON-HALOGENATED SOLVENTS

Assay Methods

Labor Code	Assay Method	Description	Assay Date
C9	14DTC1	DOSE-TO-CURIE	02/15/2013

Non-Destructive Examination (NDE)

Labor Code	NDE Method	Description	Examination Date
C2	8RHVE2	VE OF NEWLY PACKAGED RH WASTE	10/08/2012

Edit Limit Check Results

Evaluation Date: 06/11/2013 09:56:10 Overall Status: PASS

Evaluation Code	Status	Return Code	Detailed Description
DI_CERT_ALL	PASS		
DI_CERT_BE	PASS		
DI_CERT_CERT	PASS		
DI_CERT_CHARZ	PASS		
DI_CERT_ED	PASS		

Container: 1169

Type: 40 - RH 30 gal TBO

Extended Status: APPROVED CERT IN APPROVED CERT CANISTER EMPLACED
Container Status: CERTIFICATION DATA APPROVED
Certification Date: 06/10/2013
Waste Handling Code: RH
Disposal Date: 07/10/2013

Edit Limit Check Results

Evaluation Date: 06/11/2013 09:56:10 Overall Status: PASS

Evaluation Code	Status
DI_CERT_EPA	PASS
DI_CERT_PCB	PASS
DI_CERT_PERC	PASS
DI_CERT_TRAMPAC	PASS
DSA	PASS
WAC	PASS
WAP_CERT	PASS

TRAMPAC Evaluation Results

Evaluation Date: Overall Status:

Evaluation Code	Status	Return Code	Detailed Description

History

Event Date/Time	Event Description	Reason
06/11/2013 09:56:11	INSERT DATA INTO THE DATABASE	
06/11/2013 09:56:11	SUCCESSFUL SUBMISSION FOR CERT	
06/11/2013 09:57:16	APPROVED FOR CERT	
06/11/2013 13:58:00	REMOVED FROM OVERPACK	
06/18/2013 07:41:34	ASSIGNED TO OVERPACK	

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	**RH WDS Master Template.xls Rev. 4 Addendum #4, SCO #1066 Excel 2003/2007 Microsoft Windows XP**	**Units**	**data**				**comments**						**initial**	**date**
2	Shipper Site ID		C2	Location ID	Dest Program ID	Shipping Purpose					**1169**		CK/HP	04/17/13
3	Waste Stream Profile		AERHDM	AE	WI	D							CK/HP	04/17/13
4	Container Number		1169										CK/HP	04/17/13
5	Container Type		RH drum-30 tbo	drum, swb, tdop, etc., see WWIS labels for valid types.					U-235 FEM	U-235 FEM Uncert	FGGR Flag	FGGR Test Period	CK/HP	04/17/13
6	WAC Rev #		7.3	0					NULL	NULL	NULL	NULL	CK/HP	04/17/13
7	WAC Ex #						Be <=100 kg	Be <= 1%	Be Present	Aqueous Material	Be Chem/Mech Bound	Compacted Wst		
8	Cert Site		C2				Y	Y	Y	N	NULL	N	CK/HP	04/17/13
9	Cert Date		6/10/2013											
10	Waste Handling Code		RH	CH, RH									CK/HP	04/17/13
11	Waste Type Code		MTRU	TRU, MTRU									CK/HP	04/17/13
12	Waste Stream BIR ID		AE-T009				p(CI):	choose	1sigma	2sigma	95%CI		CK/HP	04/17/13
13	Waste Stream MWIR ID		NONE		default to 0 for TRU		0.6827	1sigma	1.0000	0.5000	0.5102		CK/HP	04/17/13
14	Generator Site ID		AE				0.9545	2sigma	2.0000	1.0000	1.0204		CK/HP	04/17/13
15	IDC Code		001				0.9500	95%CI	1.9600	0.9800	1.0000		CK/HP	04/17/13
16	Matrix Code		S5400	AE 322C									CK/HP	04/17/13
17	Trucon Code		AE~~3220~~	~~AE321E~~	CK 4/30/13								CK/HP	04/17/13
18	Shipping Category						WWIS Req'd CI:	1sigma	1.0000	0.5000	0.5102			
19	Tru Alpha Act	Ci	6.13E+00		6.131E+00		Fraction of MDL Reported on HGAS		1.0000				CK/HP	04/17/13
20	Tru Alpha Act Uncert	1sigma Ci	2.87E+00	1.187E+01	Tru Alpha Act + 2sigma (Ci)								CK/HP	04/17/13
21	Tru Alpha Act Conc	nCi/g	2.03E+05		2.03E+05								CK/HP	04/17/13
22	Tru Alpha Act Conc Uncert	1sigma nCi/g	9.51E+04	3.932E+05	Tru Alpha Act Conc + 2sigma (Ci)								CK/HP	04/17/13
23	Pu239 Fiss Gm Eq	g	9.38E+01		9.392E+01								CK/HP	04/17/13
24	Pu239 Fiss Gm Eq Uncert	1sigma g	4.27E+01	1.792E+02	Pu239 Fiss Gm Eq + 2sigma (Ci)								CK/HP	04/17/13
25	Pu239 Eq Act	Ci	6.26E+00		6.261E+00								CK/HP	04/17/13
26	Decay Heat	watts	2.99E-01		2.989E-01								CK/HP	04/17/13
27	Decay Heat Uncert	1sigma watts	1.12E-01	4.11E-01	Decay Heat + 1sigma (watts)								CK/HP	04/17/13
28	Layers of Packaging		1										CK/HP	04/17/13
29	Fill Factor		85	percentage	Liner Lid Present	N							CK/HP	04/17/13
30	Liner Type		1	1 = plastic drum liner									CK/HP	04/17/13
31	Liner Punctured		Y		Liner Hole Size	457.2	(mm)						CK/HP	04/17/13
32	PCB Conc		NULL				PCB Waste	PCB Mass (kg)	Out of Service				CK/HP	04/17/13
33	Closure Date		10/8/2012	Watt-years	Waste Gen Date		N	NULL	NULL				CK/HP	04/17/13
34	Vent Date		10/8/2012	0.156									CK/HP	04/17/13
35	Filter Install Date		10/8/2012										CK/HP	04/17/13
36	Filter Manufacturer		NFT										CK/HP	04/17/13
37	Filter Serial Number(s)												CK/HP	04/17/13
38	Filter Model Number	NF012,NF013,NF020,NF9026	NF013										CK/HP	04/17/13
39	Number of Filters Installed		1										CK/HP	04/17/13
40	Aspiration Method ID		3										CK/HP	04/17/13
41	Gas Gen Rate			#VALUE!	**<<Gas Gen Rate Calculated.**		Avagdro's Number:	6.022142E+23	NIST					
42	Hydrogen/Methane Gen Rate						Electron Charge	1.602176E-19 V	NIST					
43	Gas Gen Comp Date				Waste (kg)	Packaging (kg)	Total (kg)							
44	Gross Weight	kg	102.000		30.2	71.76	101.96						CK/HP	04/17/13
45	Gross Weight Uncert	1sigma kg	0.5		max. reported	mda							CK/HP	04/17/13
46	Alpha Surf Cont	dpm/100 cm^2	0		0		Minimum Detectable Activity			Shipping Calcs			CK/HP	04/17/13
47	Beta/Gamma Surf Cont	dpm/100 cm^2	0		0		Minimum Detectable Activity			Total TBq	1.87E+00		CK/HP	04/17/13
48	Neutron Dose Rate	mrem/hr	0		0		Minimum Detectable Activity			Fraction	3.89E-01		CK/HP	04/17/13
49	Beta/Gamma Dose Rate	mrem/hr	549900		549900		Minimum Detectable Activity			Highway Route Control?	No		CK/HP	04/17/13
50	Radionuclide		U-233	U-234	U-235	U-238	Pu-238	Pu-239	Pu-240	Pu-241	Pu-242	Am-241	CK/HP	04/17/13
51	Activity	Ci	1.13E-07	5.85E-03	1.77E-04	3.33E-05	2.11E-01	2.62E+00	1.24E+00	7.60E+00	3.19E-04	2.06E+00	CK/HP	04/17/13
52	Activity Uncert	1sigma Ci	4.40E-08	2.35E-03	6.37E-05	2.07E-05	1.40E-01	2.06E+00	7.20E-01	3.95E+00	1.50E-04	1.08E+00	CK/HP	04/17/13
53	Mass	grams	1.16E-05	9.26E-01	8.08E+01	9.79E+01	1.22E-02	4.17E+01	5.39E+00	7.31E-02	8.04E-02	5.94E-01		
54	Mass Uncert	1sigma grams	4.51E-06	3.72E-01	2.91E+01	6.09E+01	8.09E-03	3.28E+01	3.13E+00	3.80E-02	3.78E-02	3.11E-01		
55	calc Tru Alpha Act	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.11E-01	2.62E+00	1.24E+00	0.00E+00	3.19E-04	2.06E+00		
56	calc Tru Alpha Act Conc	nCi/g	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.99E+03	8.68E+04	4.11E+04	0.00E+00	1.06E+01	6.82E+04		
57	calc Act	Ci	1.13E-07	5.85E-03	1.77E-04	3.33E-05	2.11E-01	2.62E+00	1.24E+00	7.60E+00	3.19E-04	2.06E+00		
58	calc Act Conc	nCi/g	3.74E-03	1.94E+02	5.86E+00	1.10E+00	6.99E+03	8.68E+04	4.11E+04	2.52E+05	1.06E+01	6.82E+04		

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
59	calc Pu239 FGE	g	1.04E-05	0.00E+00	5.20E+01	0.00E+00	1.38E-03	4.17E+01	1.21E-01	1.64E-01	6.03E-04	1.11E-02		
60	calc Pu239 Eq Act	Ci	2.90E-08	0.00E+00	0.00E+00	0.00E+00	1.92E-01	2.62E+00	1.24E+00	1.49E-01	2.90E-04	2.06E+00		
61	calc Decay Heat	watts	3.29E-09	1.68E-04	4.88E-06	8.44E-07	6.99E-03	8.12E-02	3.86E-02	2.42E-04	9.40E-06	6.89E-02		
62	uncert Tru Alpha Act	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.40E-01	2.06E+00	7.20E-01	0.00E+00	1.50E-04	1.08E+00		
63	uncert Tru Alpha Act Conc	nCi/g	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.64E+03	6.82E+04	2.38E+04	0.00E+00	4.97E+00	3.58E+04		
64	uncert Act	Ci	4.40E-08	2.35E-03	6.37E-05	2.07E-05	1.40E-01	2.06E+00	7.20E-01	3.95E+00	1.50E-04	1.08E+00		
65	uncert Act Conc	nCi/g	1.46E-03	7.78E+01	2.11E+00	6.85E-01	4.64E+03	6.82E+04	2.38E+04	1.31E+05	4.97E+00	3.58E+04		
66	uncert Pu239 FGE	g	4.06E-06	0.00E+00	1.87E+01	0.00E+00	9.14E-04	3.28E+01	7.04E-02	8.55E-02	2.83E-04	5.82E-03		
67	uncert Pu239 Eq Act	Ci	1.13E-08	0.00E+00	0.00E+00	0.00E+00	1.27E-01	2.06E+00	7.20E-01	7.75E-02	1.36E-04	1.08E+00		
68	uncert Decay Heat	watts	1.28E-09	6.77E-05	1.76E-06	5.25E-07	4.64E-03	6.39E-02	2.24E-02	1.26E-04	4.42E-06	3.61E-02		
69	Shipping Calcs	1.17E+03	4.19E-06	2.17E-01	0.00E+00	0.00E+00	3.90E+01	4.84E+02	2.29E+02	2.81E+01	5.90E-02	3.81E+02		
70	49CFR173.433f		0.00%	0.02%	0.00%	0.00%	3.34%	41.52%	19.65%	2.41%	0.01%	32.65%		
71	Radionuclide		Cs-137	Ba-137m	Sr-90	Y-90							CK/HP	04/17/13
72	Activity	Ci	1.18E+01	1.12E+01	6.81E+00	6.81E+00							CK/HP	04/17/13
73	Activity Uncert	1sigma Ci	3.42E+00	3.24E+00	2.18E+00	2.18E+00							CK/HP	04/17/13
74	Mass	grams	1.34E-01	2.08E-08	4.93E-02	1.25E-05	NULL	NULL	NULL	NULL	NULL	NULL		
75	Mass Uncert	1sigma grams	3.89E-02	6.02E-09	1.58E-02	4.01E-06	NULL	NULL	NULL	NULL	NULL	NULL		
76	calc Tru Alpha Act	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NULL	NULL	NULL	NULL	NULL	NULL		
77	calc Tru Alpha Act Conc	nCi/g	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NULL	NULL	NULL	NULL	NULL	NULL		
78	calc Act	Ci	1.18E+01	1.12E+01	6.81E+00	6.81E+00	NULL	NULL	NULL	NULL	NULL	NULL		
79	calc Act Conc	nCi/g	3.91E+05	3.71E+05	2.25E+05	2.25E+05	NULL	NULL	NULL	NULL	NULL	NULL		
80	calc Pu239 FGE	g	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NULL	NULL	NULL	NULL	NULL	NULL		
81	calc Pu239 Eq Act	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NULL	NULL	NULL	NULL	NULL	NULL		
82	calc Decay Heat	watts	1.31E-02	4.41E-02	7.90E-03	3.77E-02	NULL	NULL	NULL	NULL	NULL	NULL		
83	uncert Tru Alpha Act	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NULL	NULL	NULL	NULL	NULL	NULL		
84	uncert Tru Alpha Act Conc	nCi/g	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NULL	NULL	NULL	NULL	NULL	NULL		
85	uncert Act	Ci	3.42E+00	3.24E+00	2.18E+00	2.18E+00	NULL	NULL	NULL	NULL	NULL	NULL		
86	uncert Act Conc	nCi/g	1.13E+05	1.07E+05	7.22E+04	7.22E+04	NULL	NULL	NULL	NULL	NULL	NULL		
87	uncert Pu239 FGE	g	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NULL	NULL	NULL	NULL	NULL	NULL		
88	uncert Pu239 Eq Act	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NULL	NULL	NULL	NULL	NULL	NULL		
89	uncert Decay Heat	watts	3.79E-03	1.28E-02	2.53E-03	1.21E-02	NULL	NULL	NULL	NULL	NULL	NULL		
90	Shipping Calcs		8.74E-01	0.00E+00	2.52E+00	1.26E+00	NULL	NULL	NULL	NULL	NULL	NULL		
91	49CFR173.433f		0.07%	0.00%	0.22%	0.11%	NULL	NULL	NULL	NULL	NULL	NULL		
92	Waste Material Parameter		PW	SL									CK/HP	04/17/13
93	Wgt of Mat Parms (kg or lbs)	kg	30.2	55.4									CK/HP	04/17/13
94	Radio Assay Method		14DTC1										CK/HP	04/17/13
95	Data Package Number		ANLRHDTC13002					kg					CK/HP	04/17/13
96	Assay Date		2/15/2013				lbs	0.4536					CK/HP	04/17/13
97	Charz Method ID		8RHVE2				kg	1.0000					CK/HP	04/17/13
98	Data Package Number		ANLRHVE13003										CK/HP	04/17/13
99	Charz Method Date		10/8/2012										CK/HP	04/17/13
100	Haz Codes		D004	D005	D006	D007	D008	D009	D010	D011	D019	D028	CK/HP	04/17/13
101	Haz Codes		D029	F002	F005								CK/HP	04/17/13
102	Haz Codes													
103	Haz Codes													
104	Sample ID	Headspace Gas H/M	NULL										CK/HP	04/17/13
105	Sample Type			HGHM									CK/HP	04/17/13
106	Layer No. Sampled				0								CK/HP	04/17/13
107	Date Sampled					Sample Site							CK/HP	04/17/13
108	Method ID			DTP-1.2-041									CK/HP	04/17/13
109	Data Package Number												CK/HP	04/17/13
110	CAS #		NULL	NULL										
111	Analyte												CK/HP	04/17/13
112	Concentration												CK/HP	04/17/13
113	units	%vol											CK/HP	04/17/13
114	Date Analyzed			NULL									CK/HP	04/17/13
115	B Detectable Flag													
116	D Detectable Flag													
117	E Detectable Flag													
118	J Detectable Flag													
119	U Detectable Flag												CK/HP	04/17/13
120	NA Detectable Flag		NA	NA										
121											RH WDS Master Template.xls Rev. 4			
122	Sample ID	Headspace Gas VOC									Addendum #4, SCO #1066		CK/HP	04/17/13
123	Sample Type			HGVO							Excel 2003/2007 Microsoft Windows		CK/HP	04/17/13
124	Layer No. Sampled					SARP-Flammable VOCs (ppmv)		0			XP		CK/HP	04/17/13
125	Date Sampled												CK/HP	04/17/13

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
126	Method ID			DTP-1.2-041									CK/HP	04/17/13
127	Data Package Number												CK/HP	04/17/13
128	Methanol Method ID													
129	CAS #												CK/HP	04/17/13
130	Analyte		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
131	Concentration												CK/HP	04/17/13
132	units	ppmv											CK/HP	04/17/13
133	Date Analyzed		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL			CK/HP	04/17/13
134	B Detectable Flag													
135	D Detectable Flag													
136	E Detectable Flag													
137	J Detectable Flag													
138	U Detectable Flag												CK/HP	04/17/13
139	NA Detectable Flag		NA	NA	NA	NA	NA	NA	NA	NA				
140	SARP-Flammable Calc		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
141	CAS #												CK/HP	04/17/13
142	Analyte		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
143	Concentration												CK/HP	04/17/13
144	units	ppmv											CK/HP	04/17/13
145	Date Analyzed		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL			CK/HP	04/17/13
146	B Detectable Flag													
147	D Detectable Flag													
148	E Detectable Flag													
149	J Detectable Flag													
150	U Detectable Flag												CK/HP	04/17/13
151	NA Detectable Flag		NA	NA	NA	NA	NA	NA	NA	NA				
152	SARP-Flammable Calc		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
153	CAS #												CK/HP	04/17/13
154	Analyte		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
155	Concentration												CK/HP	04/17/13
156	units	ppmv											CK/HP	04/17/13
157	Date Analyzed		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL			CK/HP	04/17/13
158	B Detectable Flag													
159	D Detectable Flag													
160	E Detectable Flag													
161	J Detectable Flag													
162	U Detectable Flag												CK/HP	04/17/13
163	NA Detectable Flag		NA	NA	NA	NA	NA	NA	NA	NA				
164	SARP-Flammable Calc		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
165	CAS #												CK/HP	04/17/13
166	Analyte		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
167	Concentration												CK/HP	04/17/13
168	units	ppmv											CK/HP	04/17/13
169	Date Analyzed		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL			CK/HP	04/17/13
170	B Detectable Flag													
171	D Detectable Flag													
172	E Detectable Flag													
173	J Detectable Flag													
174	U Detectable Flag												CK/HP	04/17/13
175	NA Detectable Flag		NA	NA	NA	NA	NA	NA	NA	NA				
176	SARP-Flammable Calc		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
177	CAS #													
178	Analyte		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
179	Concentration													
180	units	ppmv												
181	Date Analyzed		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
182	B Detectable Flag													
183	D Detectable Flag										RH WDS Master Template.xls Rev. 4			
184	E Detectable Flag										Addendum #4, SCO #1066			
185	J Detectable Flag										Excel 2003/2007 Microsoft Windows			
186	U Detectable Flag										XP			
187	NA Detectable Flag		NA	NA	NA	NA	NA	NA	NA	NA				

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
188	SARP-Flammable Calc		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL				
189			type	comment										
190	Comment													
191	Comment													
192	Comment													
193	Comment													
194	Comment													
195	Comment													
196	Comment													
197	Comment													
198	Comment													
199	Comment													
200														
201			Requirements Met?											
202	Free liquids <1% by volume		YES											
203	No non-rad. pyrophorics		YES											
204	Chemical compatability		YES											
205	No explosives		YES											
206	No corrosives		YES											
207	No pressurized containers		YES											
208	No sealed Containers >4 liters		YES											
209	Liner punctured/ filtered		YES											
210	Flammable VOCs <500ppmv		YES											
211	Container is in Approved Waste Stream Profile Form?	AERHDM	YES											
212	Can it be established through Process Knowledge that the concentration of flammable VOCs present in the headspace of the container is <= 500 ppm?.		YES											
213														
214														
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Creta Kirkes
CCP Certification Official

6-10-2013
Date

Lot #

RH WDS Master Template.xls Rev 4
Addendum #4, SCO #1066
Excel 2003/2007 Microsoft Windows XP

Attachment 2 – Container Data Sheet

BDR Number: ANLRHDTC 13002

Date:	2-15-13
Container No.:	1169
Probe Position:	30 GALLON
Instrument No.:	XCO 410
Probe No.:	XCO 447
Measured Background Dose Rate (mR/hr):	2
Gross Weight (kg):	102
Dose Rate 1 (mR/hr):	111
Dose Rate 2 (mR/hr):	140
Dose Rate 3 (mR/hr):	126
Dose Rate 4 (mR/hr):	120
Highest measured dose rate is greater than three times the measured background.	(YES) NO

Kevin R. Klosowski	K R Kl	2-15-13
Printed Name	Signature	Date

09

Waste Container Dose-to-Curie Conversion Record

SCO 1165 DTC for AERHDM - 2nd Batch Debris Version 0 Microsoft Excel 2003, 2007, 2010; Microsft Windows XP Professional 2002 and 2003

Operating Procedure	CCP-TP-504	rev 13
Date of Survey	2/15/2013	
Waste Stream Designation	AERHDM	
Container Number	1169	

Shielded Containers	Top	Bottom
Type	3/4-Inch	3/4-Inch
Estimate Fill Percentages	70	5

Container Gross Weight 102.0 kg

Container Net Weight 30.2 kg

Measured Container Dose Rate			Background	
Quadrant #1	111	mR/hr	2	mR/hr
Quadrant #2	140	mR/hr		
Quadrant #3	126	mR/hr		
Quadrant #4	120	mR/hr		

Average Dose Rate Minus Background 122.25 mR/hr

Nuclide	Curie Scaling Factors	Activity (Ci)	Grams	FGE	PECi	Watts	Uncertainty	Uncertainty in Curies	Uncertainty in Grams
U-233	8.96E-09	1.13E-07	1.16E-05	1.04E-05	2.90E-08	3.29E-09	38.9%	4.40E-08	4.50E-06
U-234	4.64E-04	5.85E-03	9.25E-01	0.00E+00	0.00E+00	1.68E-04	40.1%	2.35E-03	3.71E-01
U-235	1.40E-05	1.77E-04	8.06E+01	5.18E+01	0.00E+00	4.87E-06	36.1%	6.37E-05	2.91E+01
U-238	2.65E-06	3.33E-05	9.81E+01	0.00E+00	0.00E+00	8.45E-07	62.0%	2.07E-05	6.08E+01
Pu-238	1.68E-02	2.11E-01	1.22E-02	1.38E-03	1.92E-01	7.00E-03	66.3%	1.40E-01	8.09E-03
Pu-239	2.08E-01	2.62E+00	4.17E+01	4.17E+01	2.62E+00	8.13E-02	78.8%	2.06E+00	3.28E+01
Pu-240	9.81E-02	1.24E+00	5.38E+00	1.21E-01	1.24E+00	3.85E-02	58.2%	7.20E-01	3.13E+00
Pu-241	6.89E-01	7.60E+00	7.31E-02	1.64E-01	1.49E-01	2.42E-04	52.0%	3.95E+00	3.80E-02
Pu-242	2.53E-05	3.19E-04	8.02E-02	6.02E-04	2.90E-04	9.39E-06	46.9%	1.50E-04	3.77E-02
Am-241	1.61E-01	2.06E+00	5.94E-01	1.11E-02	2.06E+00	6.89E-02	52.4%	1.08E+00	3.11E-01
Cs-137	1.00E+00	1.18E+01	1.34E-01	0.00E+00	0.00E+00	1.31E-02	28.9%	3.42E+00	3.89E-02
Ba-137m	9.46E-01	1.12E+01	2.08E-08	0.00E+00	0.00E+00	4.41E-02	28.9%	3.24E+00	6.02E-09
Sr-90	5.78E-01	6.81E+00	4.94E-02	0.00E+00	0.00E+00	7.90E-03	31.9%	2.18E+00	1.58E-02
Y-90	5.78E-01	6.81E+00	1.25E-05	0.00E+00	0.00E+00	3.77E-02	31.9%	2.18E+00	4.00E-06
Totals		5.04E+01	2.28E+02	9.38E+01	6.26E+00	2.99E-01			

	Value	(one Sigma)	
TRU Alpha Activity Concentration	2.03E+05	9.51E+04	nCi/g
TRU Alpha Activity	6.13E+00	2.87E+00	Ci
Total Pu-239 Equiv Activity	6.26E+00	2.89E+00	Ci
Total Pu-239 Fissile Gram Equiv	9.38E+01	4.27E+01	g
Total Decay Heat	2.99E-01	1.12E-01	W
Volume Activity	4.27E-01	1.34E-01	Ci/L

Originator Kevin R. Klosowski (Print Name)

Signed K. R. Kl[illegible] Date 3-28-13

Attachment 1 – Visual Examination Data Form

Site ID: RHANL	
Examination Date: 10-08-12	Batch Number: NA
Procedure #: CCP-TP-500	Revision #: 11 / Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A	Recording Start: NA / Recording Stop: NA
Initial Container ☒N/A	Final Container ☐ N/A
Container or Package ID Number:	Container or Package ID Number: 1169
Container Type:	Container Type: 30-Gallon Container
Waste Matrix Code:	Waste Matrix Code: S5400
Waste Stream:	Waste Stream: AERHDM
	Rigid Liner: ☒Y ☐N Type: HC M.L / Rigid Liner Lid: ☐ Y ☒N
	Rigid Liner Vented or Hole Size: NA
Percent Fill: / Percent Organic Waste:	Percent Fill: 85% / Percent Organic Waste: 0%
Layers of Confinement: / Closure Method:	Layers of Confinement: 1 / Closure Method: Heat Sealed filtered
Comments (e.g., filter information, NCRs): NA	

Waste Description:

Bottom Can: 1002

Top Can: 980

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 09-06-12		Batch Number: N/A	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: N/A
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: N/A	Recording Stop: N/A
Initial Container ☐ N/A		Final Container ☒N/A	
Container or Package ID Number: 1002		Container or Package ID Number:	
Container Type: 7 gallon container		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 85%	Percent Organic Waste: 0%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: N/A	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): N/A			

Waste Description:

7 gallon container (IM)
Shield Pot centering Ring (IM)
Shield Pot # 8250

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Attachment 1 – Visual Examination Data Form

Site ID: RHIT NL			
Examination Date: 09-04-12		Batch Number: N/A	
Procedure #: CCP TP-500		Revision #: 11	Video Number: N/A
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 8250		Container or Package ID Number:	
Container Type: 1 Gallon Shield Pot		Container Type:	
Waste Matrix Code: S 5400		Waste Matrix Code:	
Waste Stream: AE RH D M		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 5	Percent Organic Waste: 0	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description: Vented 1gallon 3/4" Thick lead lined Shield Pot (om) (Im)

Fuel and Cladding pieces (Om) (Im)
Debris and Rubble (om) (Im)

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Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 05-16-12		Batch Number: N/A	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: N/A
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: N/A	Recording Stop: N/A
Initial Container ☐ N/A		Final Container ☒N/A	
Container or Package ID Number: 980		Container or Package ID Number:	
Container Type: 7 gallon container		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 85%	Percent Organic Waste: 100%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: N/A	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): N/A			

Waste Description: 7 gallon container (IM)
Shield Pot centering Ring (IM)
Shield Pot # 7258

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 05-02-12	Batch Number: NA		
Procedure #: CCP-TP-500	Revision #: 11	Video Number NA	
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A	Recording Start: NA	Recording Stop: NA	
Initial Container ☐ N/A	Final Container ☒ N/A		
Container or Package ID Number: 7258	Container or Package ID Number:		
Container Type: 1 GALLON SHIELD POT	Container Type:		
Waste Matrix Code: S5400	Waste Matrix Code:		
Waste Stream: AERHDM	Waste Stream:		
	Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N	
	Rigid Liner Vented or Hole Size:		
Percent Fill: 70	Percent Organic Waste: 30	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

VENTED 1 GALLON 3/4 INCH THICK
LEAD LINED SHIELD POT (Cm)(Im)
DEBRIS AND RUMBLE (Im) (Cm)
MET ~~MOUNDS~~ (Im)(Cm)(P)
MOUNTS G.A.R. 5-2-12

AGHCF RH-TRU 30-Gallon Waste Drum Datasheet

(The bracketed numbers in the left margin refer to the corresponding procedure step number.)

AGHCF Drum No. 1169

Section 1 — Fill out in accordance with NOD-AGHCF-OPS-303

[8.2.1] AGHCF Drum No. 1169

[8.2.14] Requisition Number: RW – 88053

[8.2.2] Drum Is Type A [ISI][1]: YES ☒ NO ☐

[8.2.5] Drum Inspection [ISI][1]: SAT ☒ UNSAT ☐

[8.2.6] Drum Vent Model No. [ISI][1]: NUCFIL-013

[8.2.6] Drum Vent Serial No. [ISI][1]: AL-1207

[8.2.7] Torque Wrench for Drum Vent
ID Number: ARG 218670
Calibration Due Date: 10-1-12

[8.2.21] Acceptance Criteria Met: YES ☒ NO ☐

MARK CLARK — FM Print Name
Mark A. Clark — FM Sign Name
7-26-12 — Date

1 [ISI] identifies an In-Service Inspection specified in the Technical Safety Requirements

Section 2 — Fill out in accordance with NOD-AGHCF-OPS-305

[37] Top Waste Can No. 980

[37] Bottom Waste Can No. 1002

[59] William H. Biley — VEO Print Name
William H. Biley — VEO Sign Name
10-8-12 — Date

[59] ERIC BOND — VEO Print Name
Eric Bond — VEO Sign Name
10-8-12 — Date

[80.2] Torque Wrench for Ring Bolt
ID Number: 88733
Calibration Due Date: 6/21/2013

[86] Date Loaded: 10/8/12

[86] Tamper Seal 1 No.: 6869

[86] Tamper Seal 2 No.: 6870

[89.2] Total Wt. Loaded Drum: 220 lbs

[Step 89.3] Spring Scale for Drum Weight
ID Number: 10759
Calibration Due Date: 5/7/2013

Surface Dose-Rate Calculation Worksheet for RH-TRU FEW Drums

(This worksheet is to be completed under the direction of the PIC for each 30-gallon drum of FEW out-loaded from the AGHCF in accordance with NOD-AGHCF-OPS-305, *RH-TRU 30-Gallon Waste Drum Out-Loading*. The bracketed numbers in the left margin refer to the corresponding procedure step number.)

[96.1] Drum Number 1169 Survey date 10/8/12

[96.1] Inner shield pot configuration (circle one):

a. 1 in. top + 1 in. bottom

b. ¾ in. top + 1 in. bottom

c. 1 in. top + ¾ in. bottom

(d) ¾ in. top + ¾ in. bottom

Maximum dose rate (R/hr) as recorded on the 30-gallon drum 39.0 R/hr

The following table will be used to determine the multiplier for generating the calculated surface dose rate for the unshielded FEW in this container, based on the location of the maximum measured dose rate

Multiplier Factors for Various Placements of 1 in. and ¾ in. Shield Pots in Drums

Configuration of shield pots in drum	Side (maximum)	Bottom	Top
a. Two 1 in. shield pots	32.2	27.9	33.6
b. One of each type – ¾ in. shield pot on top and 1 in. shield pot on bottom	17.4	27.8	16.6
c. One of each type – 1 in. shield pot on top and ¾ in. shield pot on bottom	16.9	14.2	33.7
d. Two ¾ in. shield pots	15.9	(14.1)	16.5

[96.1] Calculate the FEW surface dose rate:

Maximum dose rate on drum (R/hr) x Multiplier factor = FEW surface dose rate (R/hr)

39.0 R/hr x 14.1 = 549.9 = 549,900 mRem

(Enter actual values on the lines above to perform and document the calculation)

[96.2] Calculated by: LEE ESSENMACHER (Print name) [signature] (Signature) 10/5/12 (Date)

[97.2] IV done by: Kyle Hasle (Print name) [signature] (Signature) 10-8-12 (Date)

[98] Based on the above calculations, PIC makes the following determination, checks the appropriate box, and signs off below.

The FEW surface dose rate is between 0.2 R/hr and 1,000 R/hr ☒ **Yes** ☐ **No**

If Yes, continue outloading

If No, notify FM.

[122] LEE ESSENMACHER (PIC Print Name) [signature] (PIC Signature) 10/8/12 (Date)

GEN7

Waste Isolation Pilot Plant RECORDS INVENTORY AND DISPOSITION SCHEDULE (RIDS)	1. ☐DOE X Contractor	2. Page 1 of 45

3. Organization Unit (Creating or Custodial Unit)	4. Date
Nuclear Waste Partnership (NWP)/Central Characterization Project (CCP)/National TRU Program Certification (NTPC)/Remote Handled (RH) for All Sites **4021 National Parks Highway, GSA 212** **Carlsbad, New Mexico 88220**	06/15/2013

COPY

5. Signatures (of Appropriate Personnel)

Prepared By	Sheila Pearcy – Lead Records Custodian	Sheila Pearcy 7/23/13 Date	Records Liaison Officer	N/A	Date
Approved By	Ed Gulbransen CCP Manager	7/23/13 Date	Records Officer Approval	Michael Fox	7/23/13 Date

6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
1	**CCP RH TRAINING DOCUMENTATION FILES** Documentation pertaining to the training and qualification of CCP RH Personnel.			

Waste Isolation Pilot Plant RECORDS INVENTORY AND DISPOSITION SCHEDULE (RIDS)	1. ☐DOE X Contractor	2. Page 2 of 45

6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
1(a)	<u>CCP RH Employee Individual Training/Qualification Documentation</u> Contractor employee individual folders that contain item 29.1.a records AND also contain: attendance/completion records of training courses or sessions that include subjects dealing with hazardous materials directly applicable to the employee's job or position. Documents the training and qualification and re-qualification of CCP RH Personnel. May include but not limited to the following: appointment letters; qualification letters; correspondence; On-the-Job (OJT) records; completed exams; completed qualification cards; certificates of completion; test drum data sheets; training drum evaluation data sheets; resumes; and Waste Acceptance Plan (WAP) briefings. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **PRIVACY ACT** **Quality Assurance (QA) Records/Nonpermanent/ Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Alphabetically Inclusive Dates: 2005 to Present Location: CCP Records – Skeen Whitlock Building (SWB) and/or Waste Isolation Pilot Plant (WIPP) Records Archive (WRA)	ADM 1.29.1.b	Cut off at the time of separation or transfer of the employee. Screen out and destroy all item 1.29.1.a.(4) records. Transfer folders with remaining documents to the local Federal Records Center. Destroy 75 years after cutoff.	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.

Waste Isolation Pilot Plant RECORDS INVENTORY AND DISPOSITION SCHEDULE (RIDS)	1. ☐DOE X Contractor	2. Page 3 of 45

6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
1(b)	Employee Individual Medical Examination Contractor employee individual training folders containing ONLY the following, results of medical examinations (only pass/fail and restrictions); balance of results are to be retained in the medical file. Documentation pertaining to the eye examinations performed on the Nondestructive Examination (NDE), Helium Leak Detector (HLD), and Pressure Change Leak Testing (PCLT) personnel on an annual basis. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **EPIDEMIOLOGICAL** **PRIVACY ACT** **QA Record/Nonpermanent/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Alphabetically Inclusive Dates: 2005 to Present Location: CCP Records – SWB and/or WRA	ADM 1.29.1.a.4	Cut off at the time of separation or transfer of the employee. Screen out and destroy all item 1.29.1.a.(4) records. Transfer folders with remaining documents to the local Federal Records Center. Destroy 4 years after cutoff.	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.

Waste Isolation Pilot Plant RECORDS INVENTORY AND DISPOSITION SCHEDULE (RIDS)	1. ☐DOE X Contractor	2. Page 4 of 45

6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
1(c)	CCP Test Drum Audio/Video Media of Test Drum Qualification Contractor employee individual folders that contain item 29.1.a records AND also contain: attendance/completion records of training courses or sessions that include subjects dealing with hazardous materials directly applicable to the employee's job or position. Contains CCP audio/video media of qualification test performed by NDE personnel. This audio/video media of qualification test is performed by NDE personnel and is the second piece of the qualification. It supports the documentation captured on the supporting hard copy record(s). May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **PRIVACY ACT** **QA Record/Nonpermanent/Validated by authorized signature and date.** Media Type: Audio/Video Tape or DVD (Primary and Backup) Filing Order: Alpha-Numeric Inclusive Dates: 2005 to Present Location: CCP Records - SWB and/or WRA	ADM 1.29.1.b	Cut off at the time of separation or transfer of the employee. Screen out and destroy all item 1.29.1.a.(4) records. Transfer folders with remaining documents to the local Federal Records Center. Destroy 75 years after cutoff.	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.

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6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
1(d)	CCP NDE Test Drum Inventories Documentation pertaining to the assembly of NDE test and training drums which are used to qualify radiography operators per CCP-PO-001, CCP Transuranic (TRU) Waste Characterization QA Project Plan (QAPjP) and CCP-QP-002, CCP Qualification and Training Plan. The drum assembly is representative of the Waste Matrix Codes (WMCs) for Waste Stream Profile Forms. CCP NDE Test Drum Inventory Sheet has the Test Drum Identification Number, Date, Summary Category Group, if it has a plastic liner and the contents of the drum. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **QA Record/Nonpermanent/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Chronologically Inclusive Dates: 2005 to Present Location: CCP Records - SWB and/or WRA	Disposition Authority Pending National Archives and Records Administration (NARA) Approval	UNSCHEDULED -Do Not Destroy-	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.

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6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
1(e)	List of Qualified Individuals (LOQI) List of Qualified Individuals is a document that confirms and establishes to the field personnel who is to perform different areas of operations. It is updated each time there is a change to the qualifications of the project personnel. No longer generated as record. **QA Record/Nonpermanent/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Chronologically Inclusive Dates: 2002 to September 2008 Location: CCP Records - SWB and/or WRA	Disposition Authority Pending National Archives and Records Administration (NARA) Approval	UNSCHEDULED -Do Not Destroy-	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.
1(f)	LOQI – Non-Record List of Qualified Individuals is a document that confirms and establishes to the field personnel who is to perform different areas of operations. It is updated each time there is a change to the qualifications of the project personnel. Record is captured in the individual personnel's qualification training files. Media Type: Hard Copy Filing Order: Chronologically Inclusive Dates: September 2008 to Present Location: CCP Records - SWB and/or WRA	Non-Record	Not applicable.	Retain in CCP Record until completion of characterization process for each site or when no longer needed in project files to support daily functions. Screen and purge as needed.
2	**CCP RH CORRECTIVE ACTION MANAGEMENT DOCUMENTATION** Documentation pertaining to the identification, classification, control, and correction of conditions adverse to quality and nonconforming items, activities, and processes associated with the CCP RH – All Sites.			

Waste Isolation Pilot Plant RECORDS INVENTORY AND DISPOSITION SCHEDULE (RIDS)	1. ☐DOE X Contractor	2. Page 7 of 45

6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
2(a)	CCP RH Nonconformance Reports (NCRs) Audit and investigative case files and reports that pertain to environmental, health, and safety topics, cases or concerns. NCRs created for the CCP RH sites which document the process for identifying, documenting, controlling, evaluating, and dispositioning nonconforming items. May include Carlsbad Field Office (CBFO) notifications and supporting documentation such as copies of applicable procedures, etc. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **QA Record/Nonpermanent/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Alpha-Numeric Inclusive Dates: 2006 to Present Location: CCP Records - SWB and/or WRA	ADM 22.4	Cutoff upon completion of audit or investigation. Destroy when 75 years old.	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention
2(b)	NCR Log Reconciliation Report NCR Log Reconciliation Report documents and verifies that all NCR numbers at the end of each calendar year are reconciled against the Master Log and in the Nonconformance Report Module (NCRM). Includes as attachment the information from NCR logs. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **QA Record/Nonpermanent/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Chronologically Inclusive Dates: 2005 to Present Location: CCP Records – SWB and/or WRA	Disposition Authority Pending NARA Approval	UNSCHEDULED -Do Not Destroy-	Retain in CCP Records until completion of characterization process or when no longer needed in project files to support daily functions or audits. Transfer to the WRA for storage and retention.

Waste Isolation Pilot Plant RECORDS INVENTORY AND DISPOSITION SCHEDULE (RIDS)	1. ☐DOE X Contractor	2. Page 8 of 45

6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
2(c)	CCP RH Corrective Action Reports (CARs) Audit and investigative case files and reports that pertain to environmental, health, and safety topics, cases or concerns. CCP RH CARs created for all RH sites which document the process for identifying, documenting, controlling, evaluating, dispositioning, and verifying completion of corrective actions for conditions adverse to quality related failures, malfunctions, deficiencies, and technical inadequacies. May include supporting documentation such as copies of applicable procedures and/or Deficiency Evaluation Form if applicable, Corrective Action Plan and CBFO Notifications. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **QA Record/Nonpermanent/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Alpha-Numeric Inclusive Dates: 2006 to Present Location: CCP Records - SWB and/or WRA	ADM 22.4	Cut off upon completion of audit or investigation. Destroy when 75 years old.	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.

Waste Isolation Pilot Plant RECORDS INVENTORY AND DISPOSITION SCHEDULE (RIDS)	1. ☐DOE X Contractor	2. Page 9 of 45

6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
2(d)	CCP RH CAR Log Indexes, lists, registers, and other finding aids used only to provide access to records authorized for destruction. CAR log is a document that is used to assign unique CAR numbers. It identifies the numbers assigned for both issued and voided CARs. The numbering system helps to identify the individual CAR number, facility and facility designee number and the calendar year issued. **QA Record/Nonpermanent/Validated by authorized signature and date.** Media Type: Hard Copy/Electronic Filing Order: Chronologically Inclusive Dates: 2006 to Present Location: CCP Records - SWB and/or WRA	ADM 23.9	Destroy or delete with the related records.	Print out at the end of each calendar year. Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.
2(e)	CCP RH Trend Reports Audit and investigative case files and reports that pertain to environmental, health, and safety topics, cases or concerns. CCP RH Trend Reports are a review and evaluation of NCRs and CARs generated during the designated reporting period. Reports show negative trends such as quantities of NCRs or CARs generated by site, quantities and types of NCRs/CARs by process, identification of types of nonconformance by process, and programmatic noncompliance by trend codes. **QA Record/Nonpermanent/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Chronologically Inclusive Dates: 2006 to Present Location: CCP Records - SWB and/or WRA	ADM 22.4	Cut off upon completion of audit or investigation. Destroy when 75 years old.	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.

Waste Isolation Pilot Plant RECORDS INVENTORY AND DISPOSITION SCHEDULE (RIDS)	1. ☐DOE X Contractor	2. Page 10 of 45

6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
3	**CCP RH OPERATION LOGBOOKS** Logbooks listing significant action, daily surveillances and maintenance activities occurring during normal operations of applicable facility. Operational Logbooks are used for CCP RH personnel to document technical work processes and daily activities during characterization activities. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **QA Record/Nonpermanent/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Alpha-Numeric Inclusive Dates: 2006 to Present Location: CCP Records - SWB and/or WRA	ENV 1.e.(6)	Destroy when 75 years old.	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.
4	**CCP QA SUMMARY REPORTING, ASSESSMENT/AUDIT, AND SURVEILLANCE DOCUMENTATION** QA documentation pertaining to the reporting, assessment/audit, and surveillance activities of the CCP RH QA program.			

Waste Isolation Pilot Plant RECORDS INVENTORY AND DISPOSITION SCHEDULE (RIDS)	1. ☐DOE X Contractor	2. Page 11 of 45

6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
4(a)	CCP RH Surveillance Program Documentation Audit and investigative case files and reports that pertain to environmental, health, and safety topics, cases, or concerns. Documentation pertaining to the planning, performing, documenting, and reporting independent surveillances of TRU CCP RH waste characterization activities. Includes surveillance plan formats, surveillance reports, and surveillance checklists. May include supporting documentation. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **QA Record/Nonpermanent/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Alpha-Numeric Inclusive Dates: 2006 to Present Location: CCP Records - SWB and/or WRA	ADM 22.4	Cut off upon completion of audit or investigation. Destroy when 75 years old.	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.

Waste Isolation Pilot Plant RECORDS INVENTORY AND DISPOSITION SCHEDULE (RIDS)	1. ☐DOE X Contractor	2. Page 12 of 45

6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
4(b)	CCP RH Surveillance Log Indexes, lists, registers, and other finding aids used only to provide access to records authorized for destruction, EXCLUDING records containing abstracts or other information that can be used as an information source apart from the related records. CCP RH Surveillance log is a document that is used to assign unique surveillance numbers. The numbering system helps to identify the individual surveillance number, facility and facility designee number and the calendar year issued. **QA Record/Nonpermanent/Validated by authorized signature and date.** Media Type: Hard Copy/Electronic Filing Order: Chronologically Inclusive Dates: 2006 to Present Location: CCP Records - SWB and/or WRA	ADM 23.9	Destroy or delete with the related records.	Print out at the end of each calendar year. Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.

Waste Isolation Pilot Plant RECORDS INVENTORY AND DISPOSITION SCHEDULE (RIDS)	1. ☐DOE X Contractor	2. Page 13 of 45

6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
5	**CCP RH TRU SOFTWARE QA (SQA) Documentation** Database system development records and documentation records which support the maintenance and operation of tracking systems. CCP RH TRU SQA documentation pertains to the development, procurement, maintenance, and use of computer software that is important to the waste characterization and certification for the CCP RH. Includes but not limited to the following documentation for: Exempt Software, Commercial Off the Shelf (COTS) Software, Application within COTS, Qualified Supplier Software, Non-Qualified Supplier Software, CCP Software. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **QA Record/Nonpermanent/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Site and Alphabetically by Software Name Inclusive Dates: 2006 to Present Location: CCP Records – SWB and/or WRA	ENV 1.g(3)(b)	Destroy or delete upon authorized deletion of related system.	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.
6	**CCP RH VISUAL EXAMINATION (VE) BATCH DATA REPORTS (BDR)** VE constitutes opening a container and physically examining its contents and verifying its physical form. VE is also used to confirm that the physical form of the waste matches its waste stream description. Removal of prohibited items can be performed in this process.			

Waste Isolation Pilot Plant RECORDS INVENTORY AND DISPOSITION SCHEDULE (RIDS)	1. ☐DOE X Contractor	2. Page 14 of 45

6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
6(a)	CCP RH VE BDRs Records indicating type (classification) and degree of contamination, date of disposal, method of disposal (burial, landfill, etc.), volume, and disposal location. Records may include engineering studies, reports of unusual problems encountered during removal or treatment. CCP RH VE BDRs document the physical form of the waste and absence of prohibited items and is performed at the time the waste is actually being placed into the waste container or of video media. BDRs will include but not limited to the following: VE Data Form(s), VE Independent Technical Reviewer (ITR) Checklist, VE Site Project Manager (SPM) Checklist, VE BDR Cover Sheet, VE BDR Table of Contents, and copy of NCR if applicable. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **QA Record/Lifetime/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Alpha-Numeric Inclusive Dates: 2006 to Present Location: CCP Records - SWB and/or WRA	ENV 6.b	Permanent. Cutoff 5 years after disposal. Transfer to NARA 25 years after cutoff.	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.

Waste Isolation Pilot Plant RECORDS INVENTORY AND DISPOSITION SCHEDULE (RIDS)	1. ☐DOE X Contractor	2. Page 15 of 45

6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
6(b)	CCP RH Audio/Visual Recording DVD for VE Audio/visual recorded DVDs created for previously packaged waste. VE review is performed using this historical audio/visual media. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **QA Record/Nonpermanent/Validated by authorized signature and date.** Media Type: Audio/Visual DVDs Filing Order: Alpha-Numeric Inclusive Dates: 2006 to Present Location: CCP Records - SWB and/or WRA	Disposition Authority Pending NARA Approval	UNSCHEDULED -Do Not Destroy-	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.

Waste Isolation Pilot Plant RECORDS INVENTORY AND DISPOSITION SCHEDULE (RIDS)	1. ☐DOE X Contractor	2. Page 16 of 45

6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
6(c)	CCP RH VE Quarterly Reports Environmental monitoring reports provided to identify the progress on the environmental monitoring plans or on other related subjects. VE quarterly reports pertain to the quarterly review performed on randomly selected data completed through SPM review, within the last 3 months. The reports give information regarding the repeat of data generation level review, Validation & Verification (V&V) performed on a minimum of one randomly chosen waste container each quarter. The SPM uses this information to document that the data generation level data review is being performed according to procedures. This includes the request and results correspondence. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **QA Record/Lifetime/Validated by authorized signature on memorandum.** Media Type: Hard Copy Filing Order: Chronological and Quarter Number Inclusive Dates: 2007 to Present Location: CCP Records - SWB and/or WRA	ENV 1.d(8)(a)	Destroy when 75 years old. Cutoff when reports are superseded, obsolete, or canceled.	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.
7	**CCP RH DOSE-to-CURIE (DTC) DOCUMENTATION** DTC Process is used to determine the total TRU activity concentrations and the individual isotopic activity in containers of RH TRU waste. Various calibrated probes are used to determine the gamma dose rate.			

Waste Isolation Pilot Plant RECORDS INVENTORY AND DISPOSITION SCHEDULE (RIDS)	1. ☐DOE X Contractor	2. Page 17 of 45

6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
7(a)	CCP RH Waste DTC BDR Records indicating type (classification) and degree of contamination, date of disposal, method of disposal (burial, landfill, etc.), volume, and disposal location. Records may include engineering studies, reports of unusual problems encountered during removal or treatment. CCP RH Waste DTC BDRs are assembled data that is generated during the process and compiled to create a BDR package. The BDR includes the following: Measurement Control Report, Container Data Sheet(s), Waste Container DTC Conversion Record(s), Cover Sheet, Table of Contents, Narrative Summary, ITR Checklist, SPM Checklist and copy of NCRs if applicable. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **QA Record/Lifetime/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Alpha-Numeric Inclusive Dates: 2006 to Present Location: CCP Records - SWB and/or WRA	ENV 6.b	Permanent. Cutoff 5 years after disposal. Transfer to NARA 25 years after cutoff.	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.
7(b)	CCP RH Waste Container DTC Conversion Record CCP RH Waste Container DTC Conversion Record is the electronic file created during the DTC process. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **QA Record/Nonpermanent/Validated by authorized signature and date on associated BDR.** Media Type: Electronic – CD Filing Order: Alpha-Numeric Inclusive Dates: 2006 to Present Location: CCP Records - SWB and/or WRA	Disposition Authority Pending NARA Approval	UNSCHEDULED -Do Not Destroy-	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.

Waste Isolation Pilot Plant RECORDS INVENTORY AND DISPOSITION SCHEDULE (RIDS)	1. ☐DOE X Contractor	2. Page 18 of 45

6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
8	**CCP RH SAMPLING and ANALYSIS OF GAS SAMPLES BDRs** CCP RH Sampling and Analysis of Gas Samples BDRs are reports that document the analysis of gas samples of Volatile Organic Compounds (VOCs) in Headspace Gas (HSG) samples contained in SUMMA® canisters.			
8(a)	CCP RH Analysis of Gas Samples BDRs Records indicating type (classification) and degree of contamination, date of disposal, method of disposal (burial, landfill, etc.), volume, and disposal location. Records may include engineering studies, reports of unusual problems encountered during removal or treatment. CCP RH Analysis of Gas Samples BDRs are reports that document the analysis of gas samples of VOCs in HSG samples contained in SUMMA® canisters. May include but not limited to the following: Data Report Cover page and Table of Contents, Sample Identification Table/Analysis Request Form, Sample Custody Documents and Sample Tags, Sample Results, Quality Control (QC) Measurement Results, Calibration Results, and Data Review Checklists and SPM Project Level Checklist. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **QA Record/Lifetime/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Alpha-Numeric Inclusive Dates: 2006 to Present Location: CCP Records - SWB and/or WRA	ENV 6.b	Permanent. Cutoff 5 years after disposal. Transfer to NARA 25 years after cutoff.	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.

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6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
8(b)	CCP RH HSG BDRs – Summa Sampling Records indicating type (classification) and degree of contamination, date of disposal, method of disposal (burial, landfill, etc.), volume, and disposal location. Records may include engineering studies, reports of unusual problems encountered during removal or treatment. CCP HSG – Summa BDRs that are processed both at data generation level through Project Level V&V in the HSG-Summa Sampling process. May include but not limited to the following: Cover Sheet, Table of Contents, HSG ITR Checklist, HSG Technical Supervisor (TS) Review checklist, HSG Facility QA Officer Review Checklist, 72-hour Temperature Equilibration Plots, Chain-of-Custody/Canister Tag, Sample Drum Data Form, Shipment Request Form (or equivalent), and copy of NCR(s) if applicable. Also includes SPM Checklists. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **QA Record/Lifetime/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Alpha-Numeric Inclusive Dates: March 2004 to Present Location: CCP Records - SWB and/or WRA	ENV 6.b	Permanent. Cutoff 5 years after disposal. Transfer to NARA 25 years after cutoff.	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.

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6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
8(c)	CCP RH HSG Transportation BDRs Records indicating type (classification) and degree of contamination, date of disposal, method of disposal (burial, landfill, etc.), volume, and disposal location. Records may include engineering studies, reports of unusual problems encountered during removal or treatment. CCP RH HSG Transportation BDRs pertain to the process that implements the process to establish the concentration of flammable gas/VOCs, hydrogen, and methane in a waste container intended for shipment in the TRU Package Transporter-II, (TRUPACT-II) or HalfPACT Packaging. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **QA Record/Lifetime/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Alpha-Numeric Inclusive Dates: 2006 to Present Location: CCP Records - SWB and/or WRA	ENV 6.b	Permanent. Cutoff 5 years after disposal. Transfer to NARA 25 years after cutoff.	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.

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6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
8(d)	CCP RH HSG Transportation Initial Calibration (ICAL) This document which is the ICAL report for the process that implements the process to establish the concentration of flammable VOCs, hydrogen and methane in a waste container intended for shipment in the TRUPACT-II or HalfPACT packaging. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **QA Record/Nonpermanent/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Alpha-Numeric Inclusive Dates: 2006 to Present Location: CCP Records - SWB and/or WRA	Disposition Authority Pending NARA Approval	UNSCHEDULED -Do Not Destroy-	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.
8(e)	CCP RH HSG Transportation Method Determination Level (MDL) Reports MDL Reports is documentation that supports the process that describes and implements the process to establish the concentration of flammable gas/VOCs, hydrogen and methane in a waste container intended for shipment in the TRUPACT-II or HalfPACT packaging. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **QA Record/Nonpermanent/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Alpha-Numeric Inclusive Dates: 2006 to Present Location: CCP Records - SWB and/or WRA	Disposition Authority Pending NARA Approval	UNSCHEDULED -Do Not Destroy-	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.

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6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
8(f)	CCP RH HSG Random Sample Selection Memorandums HSG Random Selection Memorandum document the random selection for HSG sampling and analysis. It includes at a minimum a memorandum identifying the random selection with attached HSG Random Sample Selection Listing. **QA Record/Nonpermanent/Validated by authorized signature/initial and date.** Media Type: Hard Copy Filing Order: Chronological and Waste Stream Number Inclusive Dates: 2006 to Present Location: CCP Records - SWB and/or WRA	Disposition Authority Pending NARA Approval	UNSCHEDULED -Do Not Destroy-	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.
8(g)	CCP RH HSG Quarterly Reports Environmental monitoring reports provided to identify the progress on the environmental monitoring plans or on other related subjects. HSG quarterly reports pertain to the quarterly review performed on HSG data. The reports give information regarding the repeat of data generation level review. V&V performed on a minimum of one randomly chosen waste container each quarter. The SPM uses this information to document that the data generation level data review is being performed according to procedures. This includes the request and results correspondence. **QA Record/Lifetime/Validated by authorized signature/initial and date.** Media Type: Hard Copy Filing Order: Chronological Inclusive Dates: 2006 to Present Location: CCP Records - SWB and/or WRA	ENV 1.d(8)(a)	Destroy when 75 years old. Cutoff when reports are superseded, obsolete, or canceled.	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.

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6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
9	**FIELD REFERENCE STANDARD (FRS) MEMORANDUM** FRS Memorandum is collected to assess the accuracy with which the sampling equipment collects the VOC into SUMMA canisters. The FRS is collected with the first sampling event at a newly certified site and analyzed. The FRS shall contain a minimum of six analytes at concentrations within a range of 10 to 100 ppmv greater than the MDL for each compound. **QA Record/Lifetime/Validated by authorized signature/initial and date.** Media Type: Hard Copy Filing Order: Chronological Inclusive Dates: 2008 to Present Location: CCP Records - SWB and/or WRA	Disposition Authority Pending NARA Approval	UNSCHEDULED -Do Not Destroy-	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.
10	**SOLIDS SAMPLING BDRs** Documentation pertaining to the process of Solids Sampling which is the random sample collection and sample data collection.			

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6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
10(a)	Solids Sampling BDRs Records indicating type (classification) and degree of contamination, date of disposal, method of disposal (burial, landfill, etc.), volume, and disposal location. Records may include engineering studies, reports of unusual problems encountered during removal or treatment. Documentation pertaining to the process of Solids Sampling which is the random sample collection and sample data collection. The BDR may include but is not limited to the following: Sample Tracking Form, Sample Chain-of-Custody Form, Sampling ITR Checklist, Sampling TS Review Checklist, Sampling Facility QA Officer (FQAO) Review Checklist, Sampling BDR – Table of Contents, Solids Sampling BDR – Cover Sheet, Copy of CCP Waste VE Technique Data Form, Copy of NCR(s) if applicable, Temperature Data Logger Sheets, Certification of Cleanliness for Sampling Equipment, and V&V checklists. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **QA Record/Lifetime/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Alpha-Numeric Inclusive Dates: 2008 to Present Location: CCP Records - SWB and/or WRA	ENV 6.b	Permanent. Cutoff 5 years after disposal. Transfer to NARA 25 years after cutoff.	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.

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6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
10(b)	Solids Analysis BDRs – Analytical Laboratories Department (ALD) Analytical laboratory data packages consisting of documentation generated during transport and receipt of field samples, sample movement in the laboratory, preparation for analysis, laboratory analyses output, raw and processed data, analytical results, reanalysis, QC sample results and instrument calibration data, plus a summary of final results for each batch. CCP RH Analysis of Solid Sample BDRs are reports that document the analysis of solid samples of VOC, non-halogenated volatile compounds (NHVOC), semi-volatile compounds (SVOC), Metals, Actinides; Gamma; Inductively-Coupled Plasma Mass Spectrometry (ICP-MS), Liquid Scintillation Counting (LSC); Radiochemistry Analysis; and Radiostrontium. May include but not limited to the following: Data Report, Cover Page, Table of Contents, Sample Custody Documents, Sample Results, QC Results, Calibration Results, Data Review Checklists and SPM Project Level Checklist. May also include Attachment 2, CCP Records Transmittal/Receiving Form(s). **QA Record/Lifetime/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Alpha-Numeric Inclusive Dates: 2008 to Present Location: CCP Records - SWB and/or WRA	ENV 5.c.1	Destroy in 75 years.	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.

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6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
10(c)	CCP Solid Analysis BDRs – Raw Data Supporting Data Package Analytical laboratory data packages consisting of documentation generated during transport and receipt of field samples, sample movement in the laboratory, preparation for analysis, laboratory analyses output, raw and processed data, analytical results, reanalysis, QC sample results and instrument calibration data, plus a summary of final results for each batch. CCP RH Solid Analysis BDRs raw data supporting data packages that document the analysis of VOC, NHVOC, SVOC and metals in solid analysis. These packages may contain but are not limited to the following: Raw Data/Instrument Printouts, copies of applicable pages of Digestion Record and copies of applicable pages of logbooks. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **QA Record/Nonpermanent/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Alpha-Numeric Inclusive Dates: 2008 to Present Location: CCP Records - SWB and/or WRA	ENV 5.c.1	Destroy in 75 years.	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.

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6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
10(d)	Solids Sampling Random Selection Memorandum Solids Sampling Random Selection Memorandums document the random selection for solids sampling and analysis. It includes at a minimum a memorandum identifying the random selection with attached Solids Random Sample List/Waste Stream Container List. **QA Record/Nonpermanent/Validated by authorized signature/initial and date.** Media Type: Hard Copy Filing Order: Chronological Inclusive Dates: 2006 to Present Location: CCP Records - SWB and/or WRA	Disposition Authority Pending NARA Approval	UNSCHEDULED -Do Not Destroy-	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.

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6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
10(e)	Completed Chain-of-Custody Forms These data packages consist of documentation generated during transport and receipt of field samples, sample movement in the laboratory, preparation for analysis, laboratory analyses output, raw and processed data, analytical results, reanalysis, quality control sample results and instrument calibration data, plus a summary of final results for each batch. Chain-of-Custody Forms which have been completed document all transfers of sample custody from collection to disposal. The form contains at a minimum, the sample numbers, the date and times of transfers, and the signatures of the relinquishing and accepting parties. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **QA Record/Lifetime/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Alpha-Numeric Inclusive Dates: 2008 to Present Location: CCP Records - SWB and/or WRA	ENV 5.c.1	Destroy in 75 years.	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.
11	**CCP RH ACCEPTABLE KNOWLEDGE (AK) DOCUMENTATION** AK Documentation supports the knowledge used for waste characterization, which is based on the materials and processes used to generate a waste. AK includes information about the physical form of the waste, the base materials composing the waste (especially hazardous and radioactive materials) and the process that generated the waste. AK is used to define waste streams, assign summary categories, assign United States Environmental Protection Agency (EPA) hazardous waste numbers, estimate the weight fraction of cellulose, plastic, and rubber (CPR), and estimated isotopic ratios.			

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6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
11(a)	CCP RH AK Documentation Records indicating type (classification) and degree of contamination, date of disposal, method of disposal (burial, landfill, etc.), volume, and disposal location. Records may include engineering studies, reports of unusual problems encountered during removal or treatment. AK documentation is compiled, reviewed, evaluated, confirmed and reported. It supports the related AK Summary Report. The following documentation may include but is not limited to: AK Documentation Checklist; Record of Communication; AK Source Document Summary - Attachments 3's- may included attached CCP generated source documents – prior to 11/01/2010 the Attachment 3's included as attachment both the site generated and CCP generated source documents; AK Source Document Reference List; Hazardous Constituents Waste Form(s); Waste Form, Waste Material Parameters, Prohibited Items and Packaging Forms with Waste Material Parameter Evaluation Memorandum; Radionuclides Forms – may include Nondestructive Assay (NDA) Memorandum; Waste Containers List – may have additional Memorandums as addendums to the Attachment 8; Acceptable Knowledge Re-evaluation Checklist; AK Source Document Discrepancy Resolution – includes AK Source Document Source Summary Forms as attachments; CCP Waste Stream Characterization Checklist; CCP TRU Waste Correlation and Surrogate Summary Form; AK Sufficiency Determination Request - memorandum and SPM notifications (emails, letters, memorandums, etc.), as applicable. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **QA Record/Lifetime/Validated by authorized signature/initial and date.**	ENV 6.b	Permanent. Cutoff 5 years after disposal. Transfer to NARA 25 years after cutoff.	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.

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6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
	Media Type: Hard Copy Filing Order: By Site and AK Report or AK Library Inclusive Dates: 2006 to Present Location: CCP Records - SWB and/or WRA			
11(b)	AK Historical Source Documents Records indicating type (classification) and degree of contamination, date of disposal, method of disposal (burial, landfill, etc.), volume, and disposal location. Records may include engineering studies, reports of unusual problems encountered during removal or treatment. AK historical source documents are external records that have been generated by the waste generating sites. Copies are collected and submitted to support the listing of AK source documents referenced in the correlating AK Summary Report. They may be categorized as follows: Correspondence; Documents; Miscellaneous; Procedures and Published Documents; Discrepancy Resolution; and Unpublished Documents. These records must be maintained in parallel to the correlating AK Document Summaries and CCP source documents. Media Type: Electronic - PDF files, databases, video Filing Order: Site, AK Report or AK Library –Alpha-numeric Inclusive Dates: 1957 to Present Location: CCP Records - SWB and/or WRA	ENV 6.b	Permanent. Cutoff 5 years after disposal. Transfer to NARA 25 years after cutoff.	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer with related AK Record Set. Transfer to the WRA within one year for storage and retention.

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6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
11(c)	CCP RH AK Summary, Technical Reports and Plans Hazardous waste reports, hazardous substance reports, waste characterization reports, Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)/Resource Conservation and Recovery Act (RCRA) unit reports. CCP RH AK Summary Reports, Technical Reports and Plans are documentation which supports the knowledge used for waste characterization, which is based on the materials and processes used to generate a waste. AK reports include information about the physical form of the waste, the base materials composing the waste (especially hazardous and radioactive materials) and the process that generated the waste. AK reports define waste streams, assign summary categories, assign EPA hazardous waste numbers, estimate the weight fraction of CPR, and estimated isotopic ratios. May include but is not limited to the following: Documentation that demonstrates approval by designated individuals; Comments and comment resolution (attachments, Document Review Resolution (DRR), emails, letter, etc.); Document revision requests (i.e., initial markup) and DOE/CBFO submittal email within five days of project level review. **QA Record/Lifetime/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Alpha-Numeric Inclusive Dates: 2006 to Present Location: CCP Records - SWB and/or WRA	ENV 1.d(10)(a)	Permanent. Cutoff when waste is disposed of. Transfer to NARA 25 years after cutoff.	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.

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6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
11(d)	AK Accuracy Report Records indicating type (classification) and degree of contamination, date of disposal, method of disposal (burial, landfill, etc.), volume, and disposal location. Records may include engineering studies, reports of unusual problems encountered during removal or treatment. AK Accuracy Reports document that the AK accuracy is evaluated either on a lot or waste stream basis. The report documents the results of the evaluation for container in a waste stream. It may include but is not limited to Inter-Office Correspondence with attached CCP AK Accuracy Report and CCP Correlation of Containers Identification Numbers to BDR Numbers. **QA Record/Lifetime/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Site, AK Report and Waste Stream Inclusive Dates: 2006 to Present Location: CCP Records - SWB and/or WRA	ENV 6.b	Permanent. Cutoff 5 years after disposal. Transfer to NARA 25 years after cutoff.	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.

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6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
11(e)	CCP RH AK QA Equivalency Demonstration Report Records indicating type (classification) and degree of contamination, date of disposal, method of disposal (burial, landfill, etc.), volume, and disposal location. Records may include engineering studies, reports of unusual problems encountered during removal or treatment. CCP AK QA Equivalency Demonstration Report is a document that shows the decision process, the criteria for qualifying data through this method, and the criteria used for qualifying the data to demonstrate QA Equivalency. This report ensures RH TRU waste characterization information generated under a historic QA program complies with the applicable Data Quality Objectives (DQOs) and programmatic requirements specified in the RH TRU Waste Characterization Program Implementation Plan (WCPIP). This includes a procedures matrix providing a cross walk that identified the generator site plans and procedures that implement the applicable requirements of the QA Program Document (QAPD). May include but is not limited to the following records: Documentation that demonstrates approval by designated individuals; Comments and comment resolution (attachments, DRR, emails, letter, etc.); Document revision requests (i.e., initial markup) DOE/CBFO submittal email within five days of project level review; and Attachment 2, CCP Records Transmittal/Receiving Form(s). **QA Record/Lifetime/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Alpha-Numeric Inclusive Dates: 2007 to Present Location: CCP Records - SWB and/or WRA	ENV 6.b	Permanent. Cutoff 5 years after disposal. Transfer to NARA 25 years after cutoff.	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.

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6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
11(f)	CCP RH AK Characterization Reconciliation Report (CRR)Records indicating type (classification) and degree of contamination, date of disposal, method of disposal (burial, landfill, etc.), volume, and disposal location. Records may include engineering studies, reports of unusual problems encountered during removal or treatment. CCP AK CRR is a report that provides the methodology for data reconciliation with the DQOs provided in the WCPIP, following data V&V by the SPM. The reconciliation is performed at the waste stream or waste stream lot level. It includes but is not limited to the following: RH CRR Container Data Work Sheet 1, RH CRR Container Data Sheet 2, RH CRR DQOs, RH CRR QA Objectives (QAOs), RH CRR Cover Sheet, RH CRR Construction Sheet, RH CRR SPM/AKE Comment Sheet, and summary of Radiological Results by Container. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **QA Record/Lifetime/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Site, AK Summary Report and Lot Number Inclusive Dates: 2006 to Present Location: CCP Records - SWB and/or WRA	ENV 6.b	Permanent. Cutoff 5 years after disposal. Transfer to NARA 25 years after cutoff.	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.

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11(g)	CCP RH Reconciliation with Data Objective Reports Reconciliation with Data Objective Reports includes the Data Reconciliation and Reporting Routing Sheet, Reconciliation with Data Objective, WIPP Waste Stream Profile, and Characterization Information Summary. **QA Record/Lifetime/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Site, AK Summary Report, Waste Stream Inclusive Dates: 2006 to Present Location: CCP Records - SWB and/or WRA	Disposition Authority Pending NARA Approval	UNSCHEDULED -Do Not Destroy-	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.
11(h)	CCP RH HSG Summary Data Report HSG Summary Data Report includes the Correlation of Container ID Numbers to HSG Sample ID Number Form, UCL_{90} Evaluation Form, Data Evaluation Narrative, Waste Steam Lot Tentatively Identified Compounds, and SPM Narrative. It may also include the Radiography/VE Comparison Report (with copy of trending chart). **QA Record/Lifetime/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Site, AK Summary Report, Waste Stream Inclusive Dates: 2006 to Present Location: CCP Records - SWB and/or WRA	Disposition Authority Pending NARA Approval	UNSCHEDULED -Do Not Destroy-	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.

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11(i)	CCP RH AK Container Tracking Spreadsheet Any electronic or manual system that tracks and produces records of wastes, from cradle to grave, from generator, storage or transported locations, including laboratory processing. AK Container Tracking Spreadsheet is a spreadsheet that identifies the following minimum criterion for each container listed in the waste stream: Container ID, Waste Stream ID, generation date, vent date, change reason, new closure date, new vent date, container type. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **QA Record/Lifetime/Validated by authorized signature and date.** Media Type: Electronic/Hard Copy Filing Order: Site Inclusive Dates: 2006 to Present Location: CCP Records - SWB and/or WRA	ENV 1.g(3)(a)	Delete or destroy when related records are destroyed, or 75 years from creation, whichever occurs later.	Print out after completion of waste stream shipment to WIPP. Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.

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6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
12	**CCP PROCEDURES, PLANS, AND REPORTS** CCP Procedures, plans, and reports document record packages may include but is not limited to the following record: Documentation that demonstrates approval by designated individuals; Comments and comment resolution (attachments, DRR, emails, letter, etc.); Document revision requests (i.e., initial markup) and DOE/CBFO submittal email within five days of project level review. This line item is separate from AK Summary Reports and the AK QA Equivalency Demonstration Reports. **QA Record/Nonpermanent/Validated by authorized signature and date for hard copy file and login and password of authorized personnel.** Media Type: Hard Copy Filing Order: Alpha-Numeric - Procedure Numbers Inclusive Dates: 2006 to Present Location: CCP Records - SWB and/or WRA	Disposition Authority Pending NARA Approval	UNSCHEDULED -Do Not Destroy-	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.
13	**CCP RH PROCUREMENT RECORDS** Procurement records generated in the acquisition of goods and non-personnel services.			

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6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
13(a)	CCP RH Procurement Documentation CCP procurement records that were generated in the acquisition of goods and non-personnel services for RH generator sites. Includes but not limited to the following: Purchase Requisitions/Change Notices; Purchase Orders/Change Notices; Statements of Work; Specifications/Drawings: Qualified Suppliers List (QSL) and attachments; Approval/Variation Requests, and copies of the QA Grading Level Determination Checklist. This is for Quality Level 1 and 2 procurements only. **QA Record/Nonpermanent/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Purchase Order Number Inclusive Dates: 2006 to Present Location: CCP Records - SWB and/or WRA and	Disposition Authority Pending NARA Approval	UNSCHEDULED -Do Not Destroy-	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.
13(b)	CCP RH Receipt Inspection Verification Sheets (RIVS) RIVS and supporting documentation (certificates of analysis/conformance/compliance, calibration certificates, etc.) pertaining to quality source and receipt activities in support of the CCP RH's waste characterization mission. This was named Source Receipt Inspection Verification Sheets (SRIVS) but is now called as titled above – RIVS. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **QA Record/Nonpermanent/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Alpha-Numeric by Purchase Order Inclusive Dates: 2006 to Present Location: CCP Records - SWB and/or WRA	Disposition Authority Pending NARA Approval	UNSCHEDULED -Do Not Destroy-	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.

Waste Isolation Pilot Plant RECORDS INVENTORY AND DISPOSITION SCHEDULE (RIDS)	1. ☐DOE X Contractor	2. Page 39 of 45

6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
14	**STANDING ORDERS for RH Sites** Documentation that is a means in which management communicates short-term direction to operators and the documented quarterly review of standing orders. Information such as special operations, data collection, plotting process parameters and other similar short-term matters may be included in standing orders. Standing orders are not used to deviate from procedures but supplement procedures until the procedure can be revised. Includes Standing Order Log. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **QA Record/Nonpermanent/Validated by authorized initial/signature and date.** Media Type: Hard Copy Filing Order: Alpha-Numeric Inclusive Dates: 2006 to Present Location: CCP Records - SWB and/or WRA	Disposition Authority Pending NARA Approval	UNSCHEDULED -Do Not Destroy-	Retain in office until completion of characterization process for each site. Transmit to CCP Records to be maintained until no longer needed to support audits. Transfer to the WRA within one year for storage and retention.

Waste Isolation Pilot Plant RECORDS INVENTORY AND DISPOSITION SCHEDULE (RIDS)	1. ☐DOE X Contractor	2. Page 40 of 45

6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
15	**CCP RH OPERATOR AIDS** Documentation that is used to provide information useful to operators in performing their duties and the semi-annual reviews that operator aids are still necessary and current. Operator aids may be in many forms such as the latest revision of pages out of procedures, hand written notes, and information tags. Operator aids are viewed as a convenience to the operator, not administrative/technical requirements and/or direction. Operator aids assigned unique numbers may supplement approved procedures, but shall not be used in lieu of approved procedures. **QA Record/Nonpermanent/Validated by authorized initial/signature and date.** Media Type: Hard Copy Filing Order: Alpha-Numeric Inclusive Dates: 2006 to Present Location: CCP Records - SWB and/or WRA	Disposition Authority Pending NARA Approval	UNSCHEDULED -Do Not Destroy-	Retain in office until completion of characterization process for each site. Transmit to CCP Records to be maintained until no longer needed to support audits. Transfer to the WRA within one year for storage and retention.
16	**CCP RH WASTE DATA SYSTEM (WDS) FORMERLY WIPP WASTE INFORMATION SYSTEM (WWIS) and TRANSPORTATION DOCUMENTATION** The WDS is an on-line database system used to document information pertaining to waste, including but not limited to waste container characterization and certification data, produce reports, record shipment configuration details, disposal locations and disposal dates. Transportation documentation is the transportation packages created during the preparation and transport of drums for burial at the WIPP.			

Waste Isolation Pilot Plant RECORDS INVENTORY AND DISPOSITION SCHEDULE (RIDS)	1. ☐DOE X Contractor	2. Page 41 of 45

6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
16(a)	CCP RH WDS Documentation The WDS is an on-line database system used to document information pertaining to the waste, including but not limited to waste container characterization and certification data, produce reports, record shipment configuration details, disposal locations and disposal dates. CCP RH WDS package is created during the process entering data into the WDS and reporting data on TRU waste. The WDS is a database system that requires input from waste generator sites for shipment of TRU waste payload containers and payload assemblies that are intended for disposal at WIPP. CCP represents all RH sites as the generator and provides input to WDS on behalf of all RH sites. The CCP RH WDS packages contain, but are not limited to spreadsheets, reports, and correspondence associated with data CCP submits to WDS electronically. **QA Record/Lifetime/Validated by authorized initial/signature and date.** Media Type: Hard Copy Filing Order: Site and WDS Batch Number Inclusive Dates: 2006 to Present Location: CCP Records - SWB and/or WRA	Disposition Authority Pending NARA Approval	UNSCHEDULED -Do Not Destroy-	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.

Waste Isolation Pilot Plant RECORDS INVENTORY AND DISPOSITION SCHEDULE (RIDS)	1. ☐DOE X Contractor	2. Page 42 of 45

6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
16(b)	Radiological Surveys Radiological Surveys are performed to document levels of radiation, contamination conditions of the containers going through the characterization process for CCP RH. These are external records generated by the generator sites. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **QA Record/Lifetime/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Rad Survey Number Inclusive Dates: 2006 to Present Location: CCP Records - SWB and/or WRA	Disposition Authority Pending NARA Approval	UNSCHEDULED -Do Not Destroy-	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.
16(c)	Removable Lid Canister (RLC) Loading Forms RLC Loading Forms are completed during the process of loading RH containers into the RLC for shipment in the RH-TRU- 72-B Cask for the CCP. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **QA Record/Lifetime/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Alpha-Numeric Canister Number Inclusive Dates: 2006 to Present Location: CCP Records - SWB and/or WRA	Disposition Authority Pending NARA Approval	UNSCHEDULED -Do Not Destroy-	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.

Waste Isolation Pilot Plant RECORDS INVENTORY AND DISPOSITION SCHEDULE (RIDS)	1. ☐DOE X Contractor	2. Page 43 of 45

6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
17	**TRANSPORTATION DOCUMENTATION** TRU shipment records includes records prepared by the waste generator and other related documentation. CCP RH transportation packages created during the preparation and transport of drums for burial at the WIPP. May include but not limited to: Payload Container Transportation Certification Document, Uniform Hazardous Waste Manifest, Public burden Statement, Straight Bill of Lading – Short Form, Land Disposal Restriction Exemption Notification, Dunnage Certification Statement, Container Integrity Checklist and Leak Test Report. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **EPIDEMIOLOGICAL** **QA Record/Nonpermanent/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Alpha-Numeric by Shipment Number Inclusive Dates: 2006 to Present Location: CCP Records - SWB and/or WRA	ENV 2.d(4)	Destroy after 5 years.	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.
18	**CONFIGURATION MANAGEMENT DOCUMENTATION for EQUIPMENT** Configuration Management documentation for equipment pertains to the control and oversight of CCP Mobile Characterization Equipment (MCE) and transportation equipment.			

Waste Isolation Pilot Plant RECORDS INVENTORY AND DISPOSITION SCHEDULE (RIDS)	1. ☐DOE X Contractor	2. Page 44 of 45

6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
18(a)	Measuring and Test Equipment (M&TE) Documentation M&TE pertains to documents that ensure equipment used for inspection and testing are properly controlled, calibrated, and maintained. This includes but is not limited to the following: notice of Deficiency, Manufacturer's Certificate of Calibrations, Calibration Interval Documentation, Exemptions and Temporary Extensions and Evaluations/Impact Studies using Out-of-Tolerance Evaluations, as applicable. May include Attachment 2, CCP Records Transmittal/Receiving Form(s). **QA Record/Nonpermanent/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Equipment and date Inclusive Dates: 2006 to Present Location: CCP Records - SWB and/or WRA	Disposition Authority Pending NARA Approval	UNSCHEDULED -Do Not Destroy-	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.
18(b)	EPA Tier 1 and Tier 2 Documentation Tier 1 and Tier 2 documentation pertains to the characterization change authorization of the EPA approved waste characterization processes for NDA and VE. Tier changes are documented by memorandum which is the notification of the required change to the waste characterization process. May include various supporting documents. **QA Record/Nonpermanent/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Chronological Inclusive Dates: 2006 to Present Location: CCP Records - SWB and/or WRA	Disposition Authority Pending NARA Approval	UNSCHEDULED -Do Not Destroy-	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.

Waste Isolation Pilot Plant RECORDS INVENTORY AND DISPOSITION SCHEDULE (RIDS)	1. ☐DOE X Contractor	2. Page 45 of 45

6. Item No.	7. Filing Series Title, Description, Any Special Categories, Media Types, Filing Order, Inclusive Dates and Location:	8. Disposition Authority	9. Authorized Disposition Instructions	10. Transfer Instructions
19	**CONTAINER FILTER INSTALLATION FORMS & DRUM INFORMATION SHEETS** Container Filter Installation Forms and Drum Information Sheets are generated and completed by the host site at Argonne National Laboratory – East (ANL-E). Container Filter Installation Forms provide container numbers, filter information, Equipment Serial Number and Calibration Due Date. The Drum Information Sheet provides drum numbers, radiation readings, filter information, lid information, and storage cask numbers. **QA Record/Lifetime/Validated by authorized signature and date.** Media Type: Hard Copy Filing Order: Chronological Inclusive Dates: 2007 to Present Location: CCP Records - SWB and/or WRA	Disposition Authority Pending NARA Approval	UNSCHEDULED -Do Not Destroy-	Retain in CCP Records until completion of characterization process for each site or when no longer needed in project files to support daily functions or audits. Transfer to the WRA within one year for storage and retention.

GEN8

RH Program - ANLE
LIST OF QUALIFIED INDIVIDUALS
7/25/2013 8:07 AM

	Name	Position	CCP Next Training Due Date	Host Site Next Training Due Date
Visual Examination*	Beallis, Patrick	Operator/ITR (Includes Gravimetric)	05/2014	09/07/13
	Bond, Eric	Operator/ITR (Includes Gravimetric)	11/2013	09/10/13
	Harris, Monterry	Operator/ITR (Includes Gravimetric)	05/2014	09/10/13
	Pattee, Spencer Troy	Operator/ITR (Includes Gravimetric) **SME/OJT** **Expert** NCR "K" Code Designee	06/2015	Cannot perform operations until site training is complete.
	Poole, Jeff	Operator/ITR **SME/OJT** (Includes Gravimetric) NCR "K" Code Designee	02/2014	Cannot perform operations until site training is complete.
	Redman, Gary	Operator/ITR (Includes Gravimetric)	05/2014	09/07/13
	Riley, William	Operator/ITR (Includes Gravimetric)	11/2013	09/07/13
	Root, Wes	Operator/ITR (Includes Gravimetric) **SME/OJT** **Expert**	**08/2013**	09/07/13
	Ruppert, Gloria	Operator/ITR (Includes Gravimetric)	05/2014	09/10/13

*All VE Operator/ITRs are qualified to work on waste stream AERHDM.

	Name	Position	CCP Next Training Due Date	Host Site Next Training Due Date
Waste Sampling	Mojica, Tommy	Operator/ITR NCR "K" Code Designee **SME/OJT**	11/2014	Cannot perform operations until site training is complete
	Pattee, Spencer Troy	Operator/ITR **SME/OJT** NCR "K" Code Designee	01/2014	Cannot perform operations until site training is complete
	Poole, Jeff	Operator/ITR **SME/OJT** NCR "K" Code Designee	12/2013	Cannot perform operations until site training is complete.
	Root, Wes	Operator/ITR **SME/OJT**	03/2014	09/07/13

RH Program - ANLE
LIST OF QUALIFIED INDIVIDUALS
7/25/2013 8:07 AM

	Name	Position	CCP Next Training Due Date	Host Site Next Training Due Date
DTC	**Beallis, Patrick**	Operator/ITR	07/2014	09/07/13
	Carroll (Griffith), Mary	Operator/ITR **SME/OJT** NCR "K" Code Designee	04/2014	Cannot perform operations until site training is complete.
	Harris, Monterry	Operator/ITR	09/2013	09/10/13
	Klosowski, Kevin	Operator/ITR	09/2013	09/07/13
	Pattee, Spencer Troy	Operator/ITR **SME/OJT** NCR "K" Code Designee	03/2014	Cannot perform operations until site training is complete
	Root, Wes	Operator/ITR **SME/OJT**	**08/2013**	09/07/13

GEN9

Remote Handled (RH) Site Project Manager (SPM) Qualification Card

Name: Laura Nelson	**Badge Number:** [redacted]
Email Address: [redacted]	

Education/Experience	
Resume documenting education and experience on file with Central Characterization Project (CCP) Training.	Michele Bittlett 6/22/10 CCP Training Date

Job Specific Training	
Qualification Limit	There is no qualification limit for this position. This qualification is a one-time-only requirement. Upon completion of this core qualification card, the Trainee is qualified to perform Site Project Manager (SPM) duties for Remote Handled Waste. Unsatisfactory performance will result in disqualification. If unsatisfactory performance is determined, the qualification card and on-the-job training (OJT) process must be completed to re-establish qualification.
Requalification Requirements	Not required. See above statement.

Indoctrination

Initial/Indoctrination Reading:

1. DOE / WIPP 02-3214, *Remote-Handled TRU Waste Characterization Program Implementation Plan (WCPIP)*
2. CCP-CM-001, *CCP Equipment Change Authorization and Documentation*
3. CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*
4. CCP-PO-002, *CCP Transuranic Waste Certification Plan*
5. CCP-PO-008, *CCP Quality Assurance Interface with the WTS Quality Assurance Program*
6. CCP-PO-505, *CCP Remote-Handled Transuranic Waste Authorized Methods for Payload Control (CCP RH-TRAMPAC)*
7. CCP-QP-002, *CCP Training and Qualification Plan*
8. CCP-QP-004, *CCP Corrective Action Management*
9. CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control*
10. CCP-QP-006, *CCP Corrective Action Reporting and Control*
11. CCP-QP-008, *CCP Records Management*
12. CCP-QP-010, *CCP Document Preparation, Approval and Control*
13. CCP-QP-011, *CCP Laboratory Logbooks*
14. CCP-QP-015, *CCP Procurement*
15. CCP-QP-016, *CCP Control of Measuring and Testing Equipment*
16. CCP-QP-018, *CCP Management Assessment*
17. CCP-QP-022, *CCP Software Quality Assurance Plan*
18. CCP-QP-023, *CCP Handling, Storage, and Shipping*
19. CCP-QP-027, *CCP Test Control*
20. CCP-QP-028, *CCP Records Filing, Inventorying, Scheduling, and Dispositioning*

Remote Handled (RH) Site Project Manager (SPM) Qualification Card

Name: Laura Nelson **Badge Number:** [redacted]

Email Address: [redacted]

21. CCP-QP-030, *CCP Written Practice for the Qualification of CCP Helium Leak Detection Personnel*
22. CCP-QP-036, *CCP Qualification of Acceptable Knowledge for Remote-Handled Transuranic Waste Through a Quality Assurance Equivalency Demonstration*
23. CCP-TP-001, *CCP Project Level Data Validation and Verification*
24. CCP-TP-002, *CCP Reconciliation of DQOs and Reporting Characterization Data*
25. CCP-TP-003, *CCP Data Analysis for S3000, S4000, and S5000 Characterization*
26. CCP-TP-005, *CCP Acceptable Knowledge Documentation*
27. CCP-TP-028, *CCP Radiographic Test and Training Drum Construction*
28. CCP-TP-056, *CCP HSG Performance Demonstration Plan*
29. CCP-TP-058, *CCP NDA Performance Demonstration Program*
30. CCP-TP-162, *CCP Random Selection of Containers for Solids and Headspace Gas Sampling and Analysis*
31. CCP-TP-163, *CCP Standard Waste Visual Examination*
32. CCP-TP-500, *CCP Remote-Handled Waste Visual Examination*
33. CCP-TP-504, *CCP Dose-to-Curie Survey Procedure for Remote-Handled Transuranic Waste*
34. CCP-TP-506, *CCP Preparation of the Remote-Handled Transuranic Waste Acceptable Knowledge Characterization Reconciliation Report*
35. CCP-TP-508, *CCP Standard Real-Time Radiography Inspection Procedure*
36. CCP-TP-509, *CCP Remote-Handled Transuranic Container Tracking*
37. CCP-TP-510, *CCP Remote-Handled Radiography Test and Training Drum Requirements*
38. CCP-TP-511, *CCP Peer Review*
39. CCP-TP-512, *CCP Remote-Handled Waste Sampling*
40. CCP-TP-530, *CCP RH TRU Waste Certification and WWIS Data Entry*

I have read the listed initial/indoctrination reading and understand my responsibilities as applicable to the procedures above.

Laura Nelson — Trainee Signature — 6/21/10 — Date

Document	Additional Training Requirements		
CCP-PO-001	1. WAP/QAPjP Briefing and Test 4/1/10	Michele Billett — CCP Training	6/21/10 Date
	2. Hazardous Waste Number Assignments Briefing and Test 4/1/10	Michele Billett — CCP Training	6/21/10 Date
	3. Solid and Soils Sampling and Analysis for Site Project Managers (SPM) Briefing	Hilari J. Neely — CCP SPM	6-22-10 Date

Remote Handled (RH) Site Project Manager (SPM) Qualification Card

Name: Laura Nelson			**Badge Number:** [redacted]
Email Address: [redacted]			
	4. Statistical Sampling Briefing	CCP SPM	6/22/10 Date
	5. NCR/CAR Briefing (Provided by CCP/QA Organization)	CCP/QA Organization	6/22/10 Date
CCP-VE-101	6. Visual Examination (VE) TRU Waste Characterization Briefing	Larry Porter CCP SPM	Larry Porter 6/22/10 Date
CCP-RTR-101	7. Real-Time Radiography TRU Waste Characterization Briefing.	Larry Porter CCP SPM	Larry Porter 6/22/10 Date
	8. Incompatibles Determination Training Module	Larry Porter CCP SPM	Larry Porter 6/22/10 Date

Formal Training	OJT Knowledge Requirements	Subject Matter Expert (SME) Signature/Date
DOE/WIPP 02-3214	1. Define Environmental Protection Agency's (EPA) definition of Visual Examination (VE) of record. Provide an example.	Gene Quinn 6/17/10
	2. Explain how CCP-TP-500 satisfies the EPA and New Mexico Environmental Department (NMED) criteria.	Gene Quinn 6/17/10
	3. State the Data Quality Objectives (DQO) and Quality Assurance Objectives (QAO) for each characterization method (e.g., Dose-to-Curie, VE).	Gene Quinn 6/17/10
	4. State the purpose of CCP-TP-506.	Gene Quinn 6/17/10
CCP-PO-001	5. Define the term "prohibited item" and give two examples of prohibited items.	Gene Quinn 6/17/10
	6. Identify the document allowing WIPP to receive and store TRU-mixed waste.	Gene Quinn 6/17/10

Remote Handled (RH) Site Project Manager (SPM) Qualification Card

Name: Laura Nelson		Badge Number: [redacted]
Email Address: [redacted]		
	7. Identify and describe the four major methods used by CCP to characterize TRU waste.	Lane Quinta 6/17/10
	8. State three (3) instances when a nonconformance report (NCR) is required for Real-Time Radiography (RTR).	Lane Quinta 6/17/10
	9. State when an NCR is written for VE.	Lane Quinta 6/17/10
	10. State when an NCR is written for Headspace Gas (HSG) Sampling and Analysis.	Lane Quinta 6/17/10
	11. State the difference between a "Z" qualifier and a "J" qualifier.	Lane Quinta 6/17/10
	12. State when a "B" qualifier is used.	Lane Quinta 6/17/10
	13. State when a replicate waste drum is run in RTR.	Lane Quinta 6/17/10
CCP-PO-002	14. State which sites are authorized to ship PCB waste.	Lane Quinta 6/17/10
	15. State the maximum allowed curies per liter activity level (averaged over the volume of the canister).	Lane Quinta 6/17/10
	16. State if machine-compacted waste is allowed to ship to the Waste Isolation Pilot Plant (WIPP).	Lane Quinta 6/17/10
CCP-QP-005	17. State one major purpose for the nonconformance control program.	Lane Quinta 6/17/10
	18. Identify who can initiate an NCR.	Lane Quinta 6/17/10
CCP-QP-008	19. List the responsibilities of record generators.	Lane Quinta 6/17/10

Remote Handled (RH) Site Project Manager (SPM) Qualification Card

Name: Laura Nelson		Badge Number: [redacted]
Email Address: [redacted]		
CCP-QP-010	20. State the storage and control requirements for CCP records.	[illegible] 6/17/10
	21. Explain the process and proper method to make corrections or revisions to CCP records.	[illegible] 6/17/10
	22. State the importance of using approved documents.	[illegible] 6/17/10
	23. State when to verify a document revision.	[illegible] 6/17/10
CCP-PO-505	24. Discuss the differences in the transportation requirement for RH-TRU 72-B and CNS 10-160B versus the TRUPACT-II.	[illegible] 6/17/10
CCP-TP-511	25. State the peer review requirements.	[illegible] 6/17/10
CCP-TP-512	26. Discuss the QAOs for radiochemistry and ICP-MS batch data report (BDR).	[illegible] 6/17/10
Formal Training	**OJT Practical Requirements**	**SME Signature/Date**
CCP-TP-002	1. Demonstrate proficiency of characterization information summary reports.	[illegible] 6/17/10
CCP-TP-500	2. Demonstrate proficiency in review of the RH visual examination BDRs.	[illegible] 6/17/10
CCP-TP-504	3. Demonstrate proficiency in the review of 'Dose-to-Curie" BDR.	[illegible] 6/17/10
CCP-TP-506	4. Complete a Characterization Reconciliation Report (CRR).	[illegible] 6/17/10

Remote Handled (RH)
Site Project Manager (SPM)
Qualification Card

Name: Laura Nelson		**Badge Number:** [redacted]
Email Address: [redacted]		
CCP-TP-508	5. Demonstrate proficiency in review of the RH Real-time Radiography (RTR) BDRs.	[illegible] 6/17/10
	6. Demonstrate the verification of a container meeting the applicable content code limit.	[illegible] 6/17/10
CCP-TP-512	7. Demonstrate proficiency in the review of "Remote-Handled Waste Sample" BDR.	[illegible] 6/17/10

Remote Handled (RH) Site Project Manager (SPM) Qualification Card

Name: Laura Nelson	**Badge Number:** [redacted]
Email Address: [redacted]	

Approvals	
I have completed formal training and received on-the-job training for this position. I fully understand my responsibilities as a RH SPM.	LAURA NELSON Laura Nel 6/22/10 Trainee *(printed name and signature)* Date
I have monitored the training of this individual and believe they are ready to perform the duties of a RH SPM. *(Signature validation by the SME/OJT instructor(s) involved in the training of this individual)*	Irene Quintana Irene Q Tra 6/21/10 SME/OJT Instructor *(printed name and signature)* Date N/A SME/OJT Instructor *(printed name and signature)* Date
I approve this employee to perform the duties of a RH SPM.	LQ 4/20/11 * Irene Quintana Irene Q Tra 6/21/10 CCP Lead or Alternate SPM *(printed name and signature)* Date

Approved for Content & Format: **Approval on file** **6/17/2010**
RH SPM SME *(printed name and signature)* Date

Approved for Content: **Approval on file** **6/17/2010**
CCP Lead or Alternate SPM *(printed name and signature)* Date

Approved for Use: **Approval on file** **6/17/2010**
CCP Manager Responsible for Training *(printed name and signature)* Date

* Briefings under the additional Training Requirement was performed 6/22/10. The CCP Lead or alternate SPM date of 6/21/10 was recorded inadvertently. LQ 4/22/11

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PAGE

COPY

Remote-Handled (RH)
Waste Radiological Characterization Technical Staff
Qualification Card

Name: Derek Ott	**Badge Number:** [redacted]
Email Address: [redacted]	

Education/Experience	
Resume documenting education and experience on file with Central Characterization Project (CCP) Training.	[signature] 11/8/10 CCP Training Date

Job Specific Training	
Qualification Limit	There is no qualification limit for this position. This qualification is a one-time-only requirement. Upon completion of this qualification card, the Trainee is qualified to perform the function of Remote-Handled (RH) Waste Radiological Characterization. Unsatisfactory performance will result in disqualification by the CCP Manager Responsible for Training. The candidate must successfully complete the entire qualification card to reestablish qualification.
	Initial/Indoctrination Reading: 1. DOE/WIPP 02-3214, *Remote-handled TRU Waste Characterization Program Implementation Plan* 2. CCP-QP-002, *CCP Training and Qualification Plan* 3. CCP-QP-008, *CCP Records Management* 4. CCP-QP-010, *CCP Document Preparation, Approval, and Control* 5. CCP-QP-022, *Software Quality Assurance Plan* 6. CCP-TP-504, *CCP Dose-To-Curie Survey Procedure for RH TRU Waste* 7. CCP-PO-505, *CCP Remote-Handled Transuranic Waste Authorized Methods for Payload Control (CCP RH-TRAMPAC)* 8. CCP-TP-512, *CCP RH Waste Sampling* 9. CCP-TP-513, *CCP Procedure for Dimensional or Gravimetric Measurements for Radiological Characterization for Remote-Handled Transuranic Waste*
I have read the listed initial/indoctrination reading and understand my responsibilities as applicable to procedures above.	[signature] 11/8/2010 Trainee Signature Date

Remote-Handled (RH)
Waste Radiological Characterization Technical Staff
Qualification Card

Name: Derek Ott	**Badge Number:** [redacted]
Email Address: [redacted]	

Approvals		
I have completed initial/indoctrination reading for my job position. I fully understand my responsibilities for performing RH Waste Radiological Characterization.	Derek Ott	11/8/2010
	Trainee *(printed name and signature)*	Date
I approve this employee to perform the duties of RH Waste Radiological Characterization.	[signature]	11/8/2010
	Cognizant Engineer *(printed name and signature)*	Date
	Irene Quintana [signature]	11/8/10
	CCP Lead or Alternate Site Project Manager (SPM) *(printed name and signature)*	Date

Approved for Content & Format:

Approval on file — **11/4/2010**
Cognizant Engineer *(printed name and signature)* — Date

Approved for Content:

Approval on file — **11/4/2010**
CCP Lead or Alternate SPM *(printed name and signature)* — Date

Approved for Use:

Approval on file — **11/4/2010**
CCP Manager Responsible for Training *(printed name and signature)* — Date

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Remote-Handled (RH)
Waste Radiological Characterization Technical Staff
Qualification Card

Name: Jene N. Vance	**Badge Number:** [redacted]
Email Address: [redacted]	

Education/Experience	
Resume documenting education and experience on file with Central Characterization Project (CCP) Training.	Michelle Billett 8/8/14 CCP Training Date
Job Specific Training	
Qualification Limit	There is no qualification limit for this position. This qualification is a one-time-only requirement. Upon completion of this qualification card, the Trainee is qualified to perform the function of Remote-Handled (RH) Waste Radiological Characterization. Unsatisfactory performance will result in disqualification by the CCP Manager Responsible for Training. The candidate must successfully complete the entire qualification card to reestablish qualification.
	Initial/Indoctrination Reading: 1. DOE/WIPP 02-3214; *Remote-handled TRU Waste Characterization Program Implementation Plan* 2. CCP-QP-002, *CCP Training and Qualification Plan* 3. CCP-QP-008, *CCP Records Management* 4. CCP-QP-010, *CCP Document Preparation, Approval, and Control* 5. CCP-QP-022, *Software Quality Assurance Plan* 6. CCP-TP-504, *CCP Dose-To-Curie Survey Procedure for RH TRU Waste* 7. CCP-PO-505, *CCP Remote-Handled Transuranic Waste Authorized Methods for Payload Control (CCP RH-TRAMPAC)* 8. CCP-TP-512, *CCP RH Waste Sampling* 9. CCP-TP-513, *CCP Procedure for Dimensional or Gravimetric Measurements for Radiological Characterization for Remote-Handled Transuranic Waste*
I have read the listed initial/indoctrination reading and understand my responsibilities as applicable to procedures above.	Jene Vance 8/6/14 Trainee Signature Date

Remote-Handled (RH)
Waste Radiological Characterization Technical Staff
Qualification Card

Name: Jene N. Vance **Badge Number:** [redacted]

Email Address: [redacted]

Approvals	
I have completed initial/indoctrination reading for my job position. I fully understand my responsibilities for performing RH Waste Radiological Characterization.	Jene Vance Jene Vance 8/8/11 Trainee *(printed name and signature)* Date
I approve this employee to perform the duties of RH Waste Radiological Characterization.	Joe P. Harvell 8/8/2011 Cognizant Engineer *(printed name and signature)* Date
	Laura Nelson Laura Nelson 8/8/2011 CCP Lead or Alternate Site Project Manager (SPM) *(printed name and signature)* Date

Approved for Content & Format:

Approval on file **11/4/2010**
Cognizant Engineer *(printed name and signature)* Date

Approved for Content:

Approval on file **11/4/2010**
CCP Lead or Alternate SPM *(printed name and signature)* Date

Approved for Use:

Approval on file **11/4/2010**
CCP Manager Responsible for Training *(printed name and signature)* Date

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Remote Handled (RH) Waste Sampling Operator/Independent Technical Reviewer (ITR) Qualification Card

Name: Jeff Poole	**Badge Number:** [redacted]
Email Address: [redacted]	

Education/Experience	
Resume documenting education and experience on file with Central Characterization Project (CCP) Training	CCP Training — Date: 12/12/11

Job Specific Training

☐ **Initial Qualification** ☒ **Requalification**

Qualification Limit	**This qualification is valid for two (2) years.** If necessary, additional training may be required by the CCP Site Project Manager (SPM) or the CCP Manager Responsible for Training. Unsatisfactory performance will result in disqualification by the CCP Manager Responsible for Training. The candidate must successfully complete the entire CCP qualification card to reestablish qualification.
Requalification Requirements	Items required for requalification are identified by text.

Indoctrination

(Required at initial qualification, or in the event of requalification after disqualification only)

Initial/Required Reading:

1. All applicable RH Sampling and Analysis Plans
2. DOE/WIPP 02-3214; *Remote-Handled TRU Waste Characterization Program Implementation Plan*
3. CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*
4. CCP-PO-002, *CCP Transuranic Waste Certification Plan*
5. CCP-QP-002, *CCP Training and Qualification Plan*
6. CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control*
7. CCP-QP-008, *CCP Records Management*
8. CCP-TP-509, *CCP Remote Handled Transuranic Container Tracking*
9. CCP-TP-512, *CCP Remote Handled Waste Sampling*

I have read the listed initial/indoctrination reading and understand my responsibilities as applicable to the procedures above.	Trainee Signature: N/A — Date

Remote Handled (RH) Waste Sampling Operator/Independent Technical Reviewer (ITR) Qualification Card

Name: Jeff Poole	**Badge Number:** [redacted]
Email Address: [redacted]	

Document	Additional Training Requirements	
CCP-PO-001	1. WAP/QAPjP briefing and test. *(One-time requirement.)*	CCP Training — Date: 12/12/11

Formal Training	On-the-Job Training (OJT) Knowledge Requirements *(Required at initial qualification, or in the event of requalification after disqualification only)*	Subject Matter Expert (SME)/OJT Signature/Date
CCP-QP-002	1. State the purpose of the List of Qualified Individuals (LOQI).	N/A 12-12-11
CCP-QP-005	2. State who has the responsibility of originating a nonconformance report (NCR) of nonconforming items, systems, or equipment.	
	3. Describe how nonconforming items are documented.	
	4. Describe how nonconforming items are controlled to prevent their use.	
	5. Describe the purpose for the NCR process.	
	6. State who has the responsibility to validate the NCR once initiated.	
	7. Describe how to revise an NCR.	
	8. Describe how to void an NCR.	
CCP-QP-008	9. List the responsibilities of record generators.	
	10. State the storage and control requirements for CCP records.	
	11. Explain the proper method to correct errors on records.	

Remote Handled (RH) Waste Sampling Operator/Independent Technical Reviewer (ITR) Qualification Card

Name: Jeff Poole	**Badge Number:** [redacted]
Email Address: [redacted]	

CCP-TP-512	12. Determine the process necessary for corrections or revisions of CCP records.	N/A SP 12-12-11
	13. Describe the process for generation, protection, and preservation of electronic records.	
	14. Define a duplicate sample and describe how it is performed.	
	15. Describe the process of collecting volatile organic compounds. Why is it important?	
	16. Identify the prerequisite actions that must be met prior to sampling.	
	17. Describe why it is important to ensure sampling and analysis plans for the waste stream have been approved.	
	18. Describe the steps involved in exposing the waste.	
	19. Describe the actions to be taken if the sampling equipment or sample collection container package has been damaged.	
	20. Describe when the transfer of custody is complete.	
	21. Describe the methods of delivering samples to the Analytical Lab.	

Formal Training	OJT Practical Requirements[1] *(Required at initial qualification and at requalification)*			SME/OJT Signature/Date
CCP-TP-512	1. Ensure that the sampling equipment has been certified as radiologically uncontaminated.	P	S	[signature] 12-12-11
	2. Perform balance verification.	P	S	[signature] 12-12-11
	3. Ensure sampling equipment is prepared correctly.	P	S	[signature] 12-12-11
	4. Inspect sampling equipment plastic bags for damage.	P	S	[signature] 12-12-11

Remote Handled (RH) Waste Sampling Operator/Independent Technical Reviewer (ITR) Qualification Card

Name: Jeff Poole

Badge Number: [redacted]

Email Address: [redacted]

	5. Transfer sample containers and equipment to sampling area.	(P)	S	12-12-11
	6. Complete Attachment 1 for the sample.	(P)	S	12-12-11
	7. Stage the container for receipt of sample material.	(P)	S	12-12-11
	8. Collect waste material and place in appropriate container.	(P)	S	12-12-11
	9. Wipe down sample container.	P	(S)	12-12-11
	10. Initiate Chain of Custody (COC).	(P)	S	12-12-11
	11. Record TID number on documentation.	(P)	S	12-12-11
	12. Prepare and review the batch data report (BDR).	(P)	S	12-12-11
	13. Perform independent technical review (ITR) of sampling BDR.	P	(S)	12-12-11

[1] Actual performance of this requirement may not be possible at the time of qualification. Simulation of this requirement is acceptable where the option is given on the qualification card. Circle "P" if actually performed or "S" if requirement was simulated.

Remote Handled (RH) Waste Sampling Operator/Independent Technical Reviewer (ITR) Qualification Card

Name: Jeff Poole **Badge Number:** [redacted]

Email Address: [redacted]

Approvals	
I have completed formal training and received on-the-job training for this position. I fully understand my responsibilities as an RH Waste Sampling Operator/ITR.	Jeffrey Poole J.S. Poole 12-12-11 Trainee *(printed name and signature)* Date
I have monitored the training of this individual and believe they are ready to perform the duties of an RH Waste Sampling Operator/ITR. *(Validation by the SME/OJT instructor(s) involved in the training of this individual).*	Spencer Potter [signature] 12-12-11 SME/OJT Instructor *(printed name and signature)* Date
	N/A SME/OJT Instructor *(printed name and signature)* Date
I approve this employee to perform the duties of an RH Waste Sampling Operator/ITR.	[illegible] [illegible] CCP Lead or Alternate SPM *(printed name and signature)* Date

Approved for Content & Format: Approval on file 7/20/2010
RH Waste Sampling SME/OJT *(printed name and signature)* Date

Approved for Content & Format: Approval on file 7/20/2010
Cognizant Engineer *(printed name and signature)* Date

Approved for Content: Approval on file 7/20/2010
CCP Lead or Alternate SPM *(printed name and signature)* Date

Approved for Use: Approval on file 7/20/2010
CCP Manager Responsible for Training *(printed name and signature)* Date

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Remote Handled (RH) Waste Sampling Operator/Independent Technical Reviewer (ITR) Qualification Card

Name: Tommy Mojica

Education/Experience		
Resume documenting education and experience on file with Central Characterization Project (CCP) Training	Cheryl Almaje CCP Training	11-01-12 Date

Job Specific Training

☐ **Initial Qualification** ☑ **Requalification** ☐ **Full Requalification**

Qualification Limit	**This qualification is valid for two (2) years.** If necessary, additional training may be required by the CCP Site Project Manager (SPM) or the CCP Manager Responsible for Training. Unsatisfactory performance will result in disqualification by the CCP Manager Responsible for Training. The candidate must successfully complete the entire CCP qualification card to reestablish qualification.
Requalification Requirements	Items required for requalification are identified by text.

Indoctrination
(Required at initial qualification and full requalification)

Initial/Indoctrination Reading:

1. All applicable RH Sampling and Analysis Plans
2. DOE/WIPP 02-3214; *Remote-Handled TRU Waste Characterization Program Implementation Plan*
3. CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*
4. CCP-PO-002, *CCP Transuranic Waste Certification Plan*
5. CCP-QP-002, *CCP Training and Qualification Plan*
6. CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control*
7. CCP-QP-008, *CCP Records Management*
8. CCP-TP-509, *CCP Remote Handled Transuranic Container Tracking*
9. CCP-TP-512, *CCP Remote Handled Waste Sampling*

I have read the listed initial/indoctrination reading and understand my responsibilities as applicable to the procedures above.	Trainee Signature	8-27-12 Date

Remote Handled (RH) Waste Sampling Operator/Independent Technical Reviewer (ITR) Qualification Card

Name: Tommy Mojica

Document	Additional Training Requirements	
CCP-PO-001	1. WAP/QAPjP Briefing and Test. *(One-time requirement.)*	Cheryl Armijo 11-01-12 CCP Training Date

Formal Training	On-the-Job Training (OJT) Knowledge Requirements *(Required at initial qualification and full requalification)*	Subject Matter Expert (SME)/OJT Signature/Date
CCP-QP-002	1. State the purpose of the List of Qualified Individuals (LOQI).	
CCP-QP-005	2. State who has the responsibility of originating a nonconformance report (NCR) of nonconforming items, systems, or equipment.	
	3. Describe how nonconforming items are documented.	
	4. Describe how nonconforming items are controlled to prevent their use.	
	5. Describe the purpose for the NCR process.	
	6. State who has the responsibility to validate the NCR once initiated.	NA 8-27-12
	7. Describe how to revise an NCR.	
	8. Describe how to void an NCR.	
CCP-QP-008	9. List the responsibilities of record generators.	
	10. State the storage and control requirements for CCP records.	
	11. Explain the proper method to correct errors on records.	
	12. Determine the process necessary for corrections or revisions of CCP records.	
	13. Describe the process for generation, protection, and preservation of electronic records.	

Remote Handled (RH) Waste Sampling Operator/Independent Technical Reviewer (ITR) Qualification Card

Name: Tommy Mojica

CCP-TP-512	14. Define a duplicate sample and describe how it is performed.	NA 8-27-12
	15. Describe the process of collecting volatile organic compounds. Why is it important?	
	16. Identify the prerequisite actions that must be met prior to sampling.	
	17. Describe why it is important to ensure sampling and analysis plans for the waste stream have been approved.	
	18. Describe the steps involved in exposing the waste.	
	19. Describe the actions to be taken if the sampling equipment or sample collection container package has been damaged.	
	20. Describe when the transfer of custody is complete.	
	21. Describe the methods of delivering samples to the Analytical Lab.	

Formal Training	OJT Practical Requirements[1] *(Always Required)*			SME/OJT Signature/Date
CCP-TP-512	1. Ensure that the sampling equipment has been certified as radiologically uncontaminated.	(P)	S	J. Wesley Root 08-28-12
	2. Perform balance verification.	P	(S)	J. Wesley Root 08-28-12
	3. Ensure sampling equipment is prepared correctly.	(P)	S	J. Wesley Root 08-28-12
	4. Inspect sampling equipment plastic bags for damage.	(P)	S	J. Wesley Root 08-28-12
	5. Transfer sample containers and equipment to sampling area.	(P)	S	J. Wesley Root 08-28-12
	6. Complete Attachment 1 for the sample.	(P)	S	J. Wesley Root 08-29-12
	7. Stage the container for receipt of sample material.	(P)	S	J. Wesley Root 08-29-12
	8. Collect waste material and place in appropriate container.	(P)	S	J. Wesley Root 08-29-12

Remote Handled (RH) Waste Sampling Operator/Independent Technical Reviewer (ITR) Qualification Card

Name: Tommy Mojica

	9. Wipe down sample container.	P	S	J. Wesley Root 08-29-12
	10. Initiate Chain of Custody (COC).	P	S	J. Wesley Root 08-29-12
	11. Record TID number on documentation.	P	S	J. Wesley Root 08-29-12
	12. Prepare and review the batch data report (BDR).	P	S	J. Wesley Root 08-29-12
	13. Perform independent technical review (ITR) of sampling BDR.	P	S	J. Wesley Root 08-30-12

[1] For simulated steps that involve the recording of information, the steps can be satisfied by the trainee's ability to identify the specific location in the correct record form where actual data would be entered, and explain where the information would be obtained. All required calculations will actually be performed; for simulations, representative data will be used in lieu of actual data. Circle "P" if actually performed or "S" if requirement was simulated.

Remote Handled (RH)
Waste Sampling
Operator/Independent Technical Reviewer (ITR)
Qualification Card

Name: Tommy Mojica

Approvals		
I have completed formal training and received OJT for this position. I fully understand my responsibilities as an RH Waste Sampling Operator/ITR.	Tommy Mojica	8-30-12
	Trainee *(printed name and signature)*	Date
I have monitored the training of this individual and believe they are ready to perform the duties of an RH Waste Sampling Operator/ITR. *(Validation by the SME/OJT instructor(s) involved in the training of this individual).*	F. Wesley Root	08-30-12
	SME/OJT Instructor *(printed name and signature)*	Date
	Spencer Pattee	08 30-12
	SME/OJT Instructor *(printed name and signature)*	Date
I approve this employee to perform the duties of an RH Waste Sampling Operator/ITR.	Irene Quintana	11/1/12
	CCP Lead or Alternate SPM *(printed name and signature*	Date

Approved for Content & Format:	**Spencer Troy Pattee (Approval on File)**	**07/20/2012**
	SME/OJT	Date
Approved for Applicability, Content & Format:	**Charles Turner (Approval on File)**	**07/20/2012**
	Cognizant Engineer	Date
Approved for Content:	**Irene Quintana (Approval on File)**	**07/20/2012**
	CCP Lead or Alternate SPM	Date
Approved for Applicability, Content, Format, & Use:	**A.J. Fisher (Approval on File)**	**07/20/2012**
	CCP Manager Responsible for Training	Date

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Visual Examination (VE) Operator/Independent Technical Reviewer (ITR) for Remote-Handled (RH) Waste Qualification Card

Name: Patrick Beallis

Email Address: [redacted]

Additional Training Requirements	
1. WAP/QAPjP Briefing and Test. *(One-time requirement)*	Michele Billett 5/22/12 CCP Training Date
2. Visual Examination (VE) TRU Waste Characterization Briefing for Contact-Handled (CH) & Remote-Handled (RH) Waste *(Required at initial and each requalification)*	Michele Billett 5/22/12 CCP Training Date
3. CCP VE Comprehensive Exam (score 80% or higher) administered by CCP Training. *(To be administered at initial and each requalification)*	Michele Billett 5/22/12 CCP Training Date

Formal Training	On-the-Job Training (OJT) Knowledge Requirements *(Required at initial qualification and full requalification)*	Visual Examination Expert (VEE) Subject Matter Expert (SME)/OJT Signature/Date
CCP-PO-001	1. List the VE Quality Assurance Objectives (QAOs) per the WAP.	
	2. List the VE Data Quality Objectives (DQOs) per the WAP.	
DOE/WIPP 02-3214	3. List the VE QAOs per the PIP.	
	4. List the VE DQOs per the PIP.	
CCP-QP-002	5. State the purpose of the List of Qualified Individuals (LOQI).	
CCP-QP-005	6. State when a nonconformance report (NCR) should be prepared and who is responsible to initiate it.	N/A
	7. Describe how nonconforming items are documented.	
	8. Describe how nonconforming items are controlled to prevent their use.	
	9. State who has the responsibility to validate the NCR once initiated.	
	10. Describe how to revise a NCR.	
	11. Describe how to void a NCR.	
CCP-QP-006	12. Describe the purpose of the corrective action report (CAR) process.	

Visual Examination (VE) Operator/Independent Technical Reviewer (ITR) for Remote-Handled (RH) Waste Qualification Card

Name: Patrick Beallis

Email Address: [redacted]

	13. State the person responsible for originating a CAR.	
	14. Describe how corrective actions are documented.	
	15. State who has the responsibility to validate the CAR once initiated.	
	16. Describe actions CCP personnel may take when conditions adverse to quality are discovered.	
CCP-QP-008	17. List the responsibilities of record generators.	
	18. State the storage and control requirements for CCP records.	
	19. Explain the process and proper method to make corrections or revisions to CCP records.	
CCP-QP-010	20. State the importance of using approved documents.	
	21. State when to verify a document revision.	
CCP-QP-016	22. List the Measuring & Testing Equipment (M&TE) items used during VE.	
CCP-TP-500/ CCP-VE-101 Briefing	23. Explain the purpose of VE and the roles and responsibilities of the VE Operator.	N/A
	24. Identify who is responsible for overall direction and implementation of the VE of that facility.	
	25. Define the two phases of VE technique for remote-handled waste.	
	26. State the number of waste containers allowed per Batch Data Report (BDR).	
	27. Define "layers of confinement."	
	28. State the authorized methods to close a liner bag.	
	29. State the action to be taken if a condition adverse to quality arises.	
	30. State the waste material parameters (WMP).	
	31. Describe the information that should be recorded when describing waste items.	

Visual Examination (VE) Operator/Independent Technical Reviewer (ITR) for Remote-Handled (RH) Waste Qualification Card

Name: Patrick Beallis

Email Address: [redacted]

	32. State five (5) examples of prohibited items.			
	33. Describe how a non-transparent container is handled when liquid is suspected.			
	34. State the acceptable liquid limits in a characterized container.			
	35. Explain the responsibilities and functions of the Independent Technical Review (ITR).			N/A
	36. Define layers of confinement.			
	37. Describe how to determine Volume Utilization Percentage (VUP).			
	38. State the allowable fill percent increments.			
Formal Training	**OJT Practical Requirements[1]** *(Required at initial qualification, requalification, and full requalification)* *(This section must be performed in the presence of a VEE for initial and requalification)*			**VEE SME/OJT Signature/Date**
CCP-TP-500	1. Prepare the recording equipment. *(This activity is at the discretion of the SME instructor)*	P	S	N/A
	2. Complete CCP-TP-500 Attachment 1.	(P)	S	J. Wesley Root 5-2-12
	3. Prepare a BDR.	(P)	S	J. Wesley Root 5-3-12
	4. Determine the VUP.	(P)	S	J. Wesley Root 5-2-12
	5. Complete an ITR.	(P)	S	J. Wesley Root 5-4-12
	6. Determine Waste Material Parameter (WMP).	(P)	S	J. Wesley Root 5-2-12
	7. Verify the physical form of the waste matches the waste stream ID.	(P)	S	J. Wesley Root 5-2-12
CCP-TP-513	8. Perform a dimensional or gravimetric measurement and determine the measurement acceptability[2].	(P)	S	J. Wesley Root 5-15-12

[1] For simulated steps that involve the recording of information, the steps can be satisfied by the trainee's ability to identify the specific location in the correct record form where actual data would be entered, and explain where the information would be obtained. All required calculations will actually be performed: for simulations, representative data will be used in lieu of actual data. Circle "P" if actually performed or "S" if requirement was simulated.

[2] Procedure CCP-TP-513 is not applicable at all sites. The OJT Practical Requirement for this procedure is only required if the procedure is invoked.

Visual Examination (VE) Operator/Independent Technical Reviewer (ITR) for Remote-Handled (RH) Waste Qualification Card

Name: Patrick Beallis

Email Address: [redacted]

Approvals	
I have completed formal training and received OJT for this position. I fully understand my responsibilities as a RH VE Operator/ITR.	Pat Beallis Pat Beallis 05-15-12 Trainee *(printed name and signature)* Date
I have monitored the training of this individual and believe they are ready to perform the duties of a RH VE Operator/ITR. *(Validation by the RH VEE SME/OJT instructor(s) involved in the training of this individual).*	F. Wesley Root F. Wesley Root 05-15-12 RH VEE SME/OJT Instructor *(printed name and signature)* Date
	N/A RH VEE SME/OJT Instructor *(printed name and signature)* Date
I approve this employee to perform the duties of a RH VE Operator/ITR.	Mark Pearcy Mark Pearcy 5/22/2012 CCP Lead or Alternate RH SPM *(printed name and signature)* Date

Approved for Content & Format:	**Wes Root (Approval on file)** RH VEE SME/OJT	**4/9/2012** Date
Approved for Content & Format:	**Andrew Stallings (Approval on file)** Cognizant Engineer	**4/9/2012** Date
Approved for Content:	**Irene Quintana (Approval on file)** CCP Lead or Alternate RH SPM	**4/9/2012** Date
Approved for Use:	**AJ Fisher (Approval on file)** CCP Manager Responsible for Training	**4/9/2012** Date

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Visual Examination (VE) Operator/Independent Technical Reviewer (ITR) for Remote-Handled (RH) Waste Qualification Card

Name: Gloria Ruppert

Email Address: [redacted]

Job Specific Training

☐ **Initial Qualification** ☑ **Requalification** ☐ **Full Requalification**

Qualification Limit	**This qualification is valid for two (2) years.** If necessary, additional training may be required by the CCP Lead Site Project Manager (SPM) or the CCP Manager Responsible for Training. Unsatisfactory performance will result in disqualification by the CCP Manager Responsible for Training. The candidate must successfully complete the entire CCP qualification card to reestablish qualification.
Requalification Requirements	Items required for requalification are identified by text.

Indoctrination

(Required at initial qualification and full requalification)

Initial/Indoctrination Reading:

1. DOE/WIPP 02-3214, *Remote-Handled TRU Waste Characterization Program Implementation Plan*
2. CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*
3. CCP-PO-002, *CCP Transuranic Waste Certification Plan*
4. CCP-PO-505, *CCP Remote-Handled Transuranic Waste Authorized Methods for Payload Control(CCP RH-TRAMPAC)*
5. CCP-QP-002, *CCP Training and Qualification Plan*
6. CCP-QP-004, *CCP Corrective Action Management*
7. CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control*
8. CCP-QP-006, *CCP Corrective Action Reporting and Control*
9. CCP-QP-008, *CCP Records Management*
10. CCP-QP-010, *CCP Document Preparation Approval and Control*
11. CCP-QP-016, *CCP Control of Measuring, Testing, and Data Collection Equipment*
12. CCP-QP-023, *CCP Handling, Storage, and Shipping*
13. CCP-TP-163, *CCP Standard VE of Records*
14. CCP-TP-500, *CCP Remote-Handled Waste Visual Examination*
15. CCP-TP-513, *CCP Procedure for Radiological Documentation Package for Dimensional or Gravimetric Radiological Characterization for Remote-Handled Transuranic Waste*

I have read the listed initial/indoctrination reading and understand my responsibilities as applicable to the procedures above.	Gloria A. Ruppert Trainee	05-01-12 Date

Visual Examination (VE) Operator/Independent Technical Reviewer (ITR) for Remote-Handled (RH) Waste Qualification Card

Name: Gloria Ruppert

Email Address: [redacted]

Additional Training Requirements		
1. WAP/QAPjP Briefing and Test. *(One-time requirement)*	Michele Billett	5/22/12
2. Visual Examination (VE) TRU Waste Characterization Briefing for Contact-Handled (CH) & Remote-Handled (RH) Waste *(Required at initial and each requalification)*	Michele Billett	5/22/12
3. CCP VE Comprehensive Exam (score 80% or higher) administered by CCP Training. *(To be administered at initial and each requalification)*	Michele Billett	5/22/12
	CCP Training	Date

Formal Training	On-the-Job Training (OJT) Knowledge Requirements *(Required at initial qualification and full requalification)*	Visual Examination Expert (VEE) Subject Matter Expert (SME)/OJT Signature/Date
CCP-PO-001	1. List the VE Quality Assurance Objectives (QAOs) per the WAP.	
	2. List the VE Data Quality Objectives (DQOs) per the WAP.	
DOE/WIPP 02-3214	3. List the VE QAOs per the PIP.	
	4. List the VE DQOs per the PIP.	
CCP-QP-002	5. State the purpose of the List of Qualified Individuals (LOQI).	N/A
CCP-QP-005	6. State when a nonconformance report (NCR) should be prepared and who is responsible to initiate it.	
	7. Describe how nonconforming items are documented.	
	8. Describe how nonconforming items are controlled to prevent their use.	
	9. State who has the responsibility to validate the NCR once initiated.	
	10. Describe how to revise a NCR.	
	11. Describe how to void a NCR.	
CCP-QP-006	12. Describe the purpose of the corrective action report (CAR) process.	

Visual Examination (VE) Operator/Independent Technical Reviewer (ITR) for Remote-Handled (RH) Waste Qualification Card

Name: Gloria Ruppert

Email Address: [redacted]

	13. State the person responsible for originating a CAR.	
	14. Describe how corrective actions are documented.	
	15. State who has the responsibility to validate the CAR once initiated.	
	16. Describe actions CCP personnel may take when conditions adverse to quality are discovered.	
CCP-QP-008	17. List the responsibilities of record generators.	
	18. State the storage and control requirements for CCP records.	
	19. Explain the process and proper method to make corrections or revisions to CCP records.	
CCP-QP-010	20. State the importance of using approved documents.	
	21. State when to verify a document revision.	N A
CCP-QP-016	22. List the Measuring & Testing Equipment (M&TE) items used during VE.	
CCP-TP-500/ CCP-VE-101 Briefing	23. Explain the purpose of VE and the roles and responsibilities of the VE Operator.	
	24. Identify who is responsible for overall direction and implementation of the VE of that facility.	
	25. Define the two phases of VE technique for remote-handled waste.	
	26. State the number of waste containers allowed per Batch Data Report (BDR).	
	27. Define "layers of confinement."	
	28. State the authorized methods to close a liner bag.	
	29. State the action to be taken if a condition adverse to quality arises.	
	30. State the waste material parameters (WMP).	
	31. Describe the information that should be recorded when describing waste items.	

Visual Examination (VE) Operator/Independent Technical Reviewer (ITR) for Remote-Handled (RH) Waste Qualification Card

Name: Gloria Ruppert

Email Address: [redacted]

	32. State five (5) examples of prohibited items.			
	33. Describe how a non-transparent container is handled when liquid is suspected.			
	34. State the acceptable liquid limits in a characterized container.			
	35. Explain the responsibilities and functions of the Independent Technical Review (ITR).			N A
	36. Define layers of confinement.			
	37. Describe how to determine Volume Utilization Percentage (VUP).			
	38. State the allowable fill percent increments.			
Formal Training	**OJT Practical Requirements**[1] *(Required at initial qualification, requalification, and full requalification)* *(This section must be performed in the presence of a VEE for initial and requalification)*			**VEE SME/OJT Signature/Date**
CCP-TP-500	1. Prepare the recording equipment. *(This activity is at the discretion of the SME instructor)*	P	S	N/A
	2. Complete CCP-TP-500 Attachment 1.	(P)	S	J. Wesley Root 5-2-12
	3. Prepare a BDR.	(P)	S	J. Wesley Root 5-4-12
	4. Determine the VUP.	(P)	S	J. Wesley Root 5-2-12
	5. Complete an ITR.	(P)	S	J. Wesley Root 5-4-12
	6. Determine Waste Material Parameter (WMP).	(P)	S	J. Wesley Root 5-2-12
	7. Verify the physical form of the waste matches the waste stream ID.	(P)	S	J. Wesley Root 5-2-12
CCP-TP-513	8. Perform a dimensional or gravimetric measurement and determine the measurement acceptability[2].	(P)	S	J. Wesley Root 5-7-12

[1] For simulated steps that involve the recording of information, the steps can be satisfied by the trainee's ability to identify the specific location in the correct record form where actual data would be entered, and explain where the information would be obtained. All required calculations will actually be performed: for simulations, representative data will be used in lieu of actual data. Circle "P" if actually performed or "S" if requirement was simulated.

[2] Procedure CCP-TP-513 is not applicable at all sites. The OJT Practical Requirement for this procedure is only required if the procedure is invoked.

Visual Examination (VE) Operator/Independent Technical Reviewer (ITR) for Remote-Handled (RH) Waste Qualification Card

Name: Gloria Ruppert

Email Address: [redacted]

Approvals	
I have completed formal training and received OJT for this position. I fully understand my responsibilities as a RH VE Operator/ITR.	GLORIA RUPPERT Gloria Ruppert 5-11-12 Trainee *(printed name and signature)* Date
I have monitored the training of this individual and believe they are ready to perform the duties of a RH VE Operator/ITR. *(Validation by the RH VEE SME/OJT instructor(s) involved in the training of this individual).*	F. Wesley Root F. Wesley Root 05-16-12 RH VEE SME/OJT Instructor *(printed name and signature)* Date
	N/A RH VEE SME/OJT Instructor *(printed name and signature)* Date
I approve this employee to perform the duties of a RH VE Operator/ITR.	Mark Pearcy Mark Pearcy 5/22/2012 CCP Lead or Alternate RH SPM *(printed name and signature)* Date

Approved for Content & Format:	**Wes Root (Approval on file)** RH VEE SME/OJT	**4/9/2012** Date
Approved for Content & Format:	**Andrew Stallings (Approval on file)** Cognizant Engineer	**4/9/2012** Date
Approved for Content:	**Irene Quintana (Approval on file)** CCP Lead or Alternate RH SPM	**4/9/2012** Date
Approved for Use:	**AJ Fisher (Approval on file)** CCP Manager Responsible for Training	**4/9/2012** Date

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Visual Examination (VE) Operator/Independent Technical Reviewer (ITR) for Remote-Handled (RH) Waste Qualification Card

Name: Monterry Harris

Email Address: [redacted]

Job Specific Training

☑ **Initial Qualification** ☐ **Requalification** ☐ **Full Requalification**

Qualification Limit	**This qualification is valid for two (2) years.** If necessary, additional training may be required by the CCP Lead Site Project Manager (SPM) or the CCP Manager Responsible for Training. Unsatisfactory performance will result in disqualification by the CCP Manager Responsible for Training. The candidate must successfully complete the entire CCP qualification card to reestablish qualification.
Requalification Requirements	Items required for requalification are identified by text.

Indoctrination

(Required at initial qualification and full requalification)

Initial/Indoctrination Reading:

1. DOE/WIPP 02-3214, *Remote-Handled TRU Waste Characterization Program Implementation Plan*
2. CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*
3. CCP-PO-002, *CCP Transuranic Waste Certification Plan*
4. CCP-PO-505, *CCP Remote-Handled Transuranic Waste Authorized Methods for Payload Control(CCP RH-TRAMPAC)*
5. CCP-QP-002, *CCP Training and Qualification Plan*
6. CCP-QP-004, *CCP Corrective Action Management*
7. CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control*
8. CCP-QP-006, *CCP Corrective Action Reporting and Control*
9. CCP-QP-008, *CCP Records Management*
10. CCP-QP-010, *CCP Document Preparation Approval and Control*
11. CCP-QP-016, *CCP Control of Measuring, Testing, and Data Collection Equipment*
12. CCP-QP-023, *CCP Handling, Storage, and Shipping*
13. CCP-TP-163, *CCP Standard VE of Records*
14. CCP-TP-500, *CCP Remote-Handled Waste Visual Examination*
15. CCP-TP-513, *CCP Procedure for Radiological Documentation Package for Dimensional or Gravimetric Radiological Characterization for Remote-Handled Transuranic Waste*

I have read the listed initial/indoctrination reading and understand my responsibilities as applicable to the procedures above.	Monterry Harris Trainee	4-17-12 Date

Visual Examination (VE) Operator/Independent Technical Reviewer (ITR) for Remote-Handled (RH) Waste Qualification Card

Name: Monterry Harris

Email Address: [redacted]

Additional Training Requirements	
1. WAP/QAPjP Briefing and Test. *(One-time requirement)*	Michele Billett 5/22/12 CCP Training Date
2. Visual Examination (VE) TRU Waste Characterization Briefing for Contact-Handled (CH) & Remote-Handled (RH) Waste *(Required at initial and each requalification)*	Michele Billett 5/22/12 CCP Training Date
3. CCP VE Comprehensive Exam (score 80% or higher) administered by CCP Training. *(To be administered at initial and each requalification)*	Michele Billett 5/22/12 CCP Training Date

Formal Training	On-the-Job Training (OJT) Knowledge Requirements *(Required at initial qualification and full requalification)*	Visual Examination Expert (VEE) Subject Matter Expert (SME)/OJT Signature/Date
CCP-PO-001	1. List the VE Quality Assurance Objectives (QAOs) per the WAP.	4-17-12
	2. List the VE Data Quality Objectives (DQOs) per the WAP.	4-17-12
DOE/WIPP 02-3214	3. List the VE QAOs per the PIP.	4-17-12
	4. List the VE DQOs per the PIP.	4-17-12
CCP-QP-002	5. State the purpose of the List of Qualified Individuals (LOQI).	4-17-12
CCP-QP-005	6. State when a nonconformance report (NCR) should be prepared and who is responsible to initiate it.	4-17-12
	7. Describe how nonconforming items are documented.	4-17-12
	8. Describe how nonconforming items are controlled to prevent their use.	4-17-12
	9. State who has the responsibility to validate the NCR once initiated.	4-17-12
	10. Describe how to revise a NCR.	4-17-12
	11. Describe how to void a NCR.	4-17-12
CCP-QP-006	12. Describe the purpose of the corrective action report (CAR) process.	4-17-12

Visual Examination (VE) Operator/Independent Technical Reviewer (ITR) for Remote-Handled (RH) Waste Qualification Card

Name: Monterry Harris

Email Address: [redacted]

	13. State the person responsible for originating a CAR.	4-17-12
	14. Describe how corrective actions are documented.	4-17-12
	15. State who has the responsibility to validate the CAR once initiated.	4-17-12
	16. Describe actions CCP personnel may take when conditions adverse to quality are discovered.	4-17-12
CCP-QP-008	17. List the responsibilities of record generators.	4-17-12
	18. State the storage and control requirements for CCP records.	4-17-12
	19. Explain the process and proper method to make corrections or revisions to CCP records.	4-17-12
CCP-QP-010	20. State the importance of using approved documents.	4-17-12
	21. State when to verify a document revision.	4-17-12
CCP-QP-016	22. List the Measuring & Testing Equipment (M&TE) items used during VE.	4-17-12
CCP-TP-500/ CCP-VE-101 Briefing	23. Explain the purpose of VE and the roles and responsibilities of the VE Operator.	4-19-12
	24. Identify who is responsible for overall direction and implementation of the VE of that facility.	4-19-12
	25. Define the two phases of VE technique for remote-handled waste.	4-19-12
	26. State the number of waste containers allowed per Batch Data Report (BDR).	4-19-12
	27. Define "layers of confinement."	4-19-12
	28. State the authorized methods to close a liner bag.	4-19-12
	29. State the action to be taken if a condition adverse to quality arises.	4-19-12
	30. State the waste material parameters (WMP).	4-19-12
	31. Describe the information that should be recorded when describing waste items.	4-19-12

Visual Examination (VE) Operator/Independent Technical Reviewer (ITR) for Remote-Handled (RH) Waste Qualification Card

Name: Monterry Harris

Email Address: [redacted]

	32. State five (5) examples of prohibited items.	4-19-12
	33. Describe how a non-transparent container is handled when liquid is suspected.	4-19-12
	34. State the acceptable liquid limits in a characterized container.	4-19-12
	35. Explain the responsibilities and functions of the Independent Technical Review (ITR).	4-19-12
	36. Define layers of confinement.	4-19-12
	37. Describe how to determine Volume Utilization Percentage (VUP).	4-19-12
	38. State the allowable fill percent increments.	4-19-12

Formal Training	OJT Practical Requirements[1] *(Required at initial qualification, requalification, and full requalification)* *(This section must be performed in the presence of a VEE for initial and requalification)*			VEE SME/OJT Signature/Date
CCP-TP-500	1. Prepare the recording equipment. *(This activity is at the discretion of the SME instructor)*	P	S	N/A
	2. Complete CCP-TP-500 Attachment 1.	(P)	S	4-27-12
	3. Prepare a BDR.	(P)	S	4-27-12
	4. Determine the VUP.	(P)	S	4-27-12
	5. Complete an ITR.	(P)	S	4-27-12
	6. Determine Waste Material Parameter (WMP).	(P)	S	4-27-12
	7. Verify the physical form of the waste matches the waste stream ID.	(P)	S	4-27-12
CCP-TP-513	8. Perform a dimensional or gravimetric measurement and determine the measurement acceptability[2].	(P)	S	4-27-12

[1] For simulated steps that involve the recording of information, the steps can be satisfied by the trainee's ability to identify the specific location in the correct record form where actual data would be entered, and explain where the information would be obtained. All required calculations will actually be performed: for simulations, representative data will be used in lieu of actual data. Circle "P" if actually performed or "S" if requirement was simulated.

[2] Procedure CCP-TP-513 is not applicable at all sites. The OJT Practical Requirement for this procedure is only required if the procedure is invoked.

Visual Examination (VE) Operator/Independent Technical Reviewer (ITR) for Remote-Handled (RH) Waste Qualification Card

Name: Monterry Harris

Email Address: [redacted]

Approvals	
I have completed formal training and received OJT for this position. I fully understand my responsibilities as a RH VE Operator/ITR.	Monterry Harris Monterry Harris 5-2-12 Trainee *(printed name and signature)* Date
I have monitored the training of this individual and believe they are ready to perform the duties of a RH VE Operator/ITR. *(Validation by the RH VEE SME/OJT instructor(s) involved in the training of this individual).*	Spencer Pattee 5-2-12 RH VEE SME/OJT Instructor *(printed name and signature)* Date F. Wesley Root F. Wesley Root 5-4-12 ~~N/A~~ WR 5-4-12 RH VEE SME/OJT Instructor *(printed name and signature)* Date
I approve this employee to perform the duties of a RH VE Operator/ITR.	Mark Pearcy Mark Pearcy 5/22/2012 CCP Lead or Alternate RH SPM *(printed name and signature)* Date

Approved for Content & Format:	**Wes Root (Approval on file)** RH VEE SME/OJT	**4/9/2012** Date
Approved for Content & Format:	**Andrew Stallings (Approval on file)** Cognizant Engineer	**4/9/2012** Date
Approved for Content:	**Irene Quintana (Approval on file)** CCP Lead or Alternate RH SPM	**4/9/2012** Date
Approved for Use:	**AJ Fisher (Approval on file)** CCP Manager Responsible for Training	**4/9/2012** Date

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Visual Examination (VE) Operator/Independent Technical Reviewer (ITR) for Remote-Handled (RH) Waste Qualification Card

Name: Gary Redman

Email Address: [redacted]

Job Specific Training

☐ **Initial Qualification** ☑ **Requalification** ☐ **Full Requalification**

Qualification Limit	**This qualification is valid for two (2) years.** If necessary, additional training may be required by the CCP Lead Site Project Manager (SPM) or the CCP Manager Responsible for Training. Unsatisfactory performance will result in disqualification by the CCP Manager Responsible for Training. The candidate must successfully complete the entire CCP qualification card to reestablish qualification.
Requalification Requirements	Items required for requalification are identified by text.

Indoctrination

(Required at initial qualification and full requalification)

Initial/Indoctrination Reading:

1. DOE/WIPP 02-3214, *Remote-Handled TRU Waste Characterization Program Implementation Plan*
2. CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*
3. CCP-PO-002, *CCP Transuranic Waste Certification Plan*
4. CCP-PO-505, *CCP Remote-Handled Transuranic Waste Authorized Methods for Payload Control(CCP RH-TRAMPAC)*
5. CCP-QP-002, *CCP Training and Qualification Plan*
6. CCP-QP-004, *CCP Corrective Action Management*
7. CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control*
8. CCP-QP-006, *CCP Corrective Action Reporting and Control*
9. CCP-QP-008, *CCP Records Management*
10. CCP-QP-010, *CCP Document Preparation Approval and Control*
11. CCP-QP-016, *CCP Control of Measuring, Testing, and Data Collection Equipment*
12. CCP-QP-023, *CCP Handling, Storage, and Shipping*
13. CCP-TP-163, *CCP Standard VE of Records*
14. CCP-TP-500, *CCP Remote-Handled Waste Visual Examination*
15. CCP-TP-513, *CCP Procedure for Radiological Documentation Package for Dimensional or Gravimetric Radiological Characterization for Remote-Handled Transuranic Waste*

I have read the listed initial/indoctrination reading and understand my responsibilities as applicable to the procedures above.	N/A	
	Trainee	Date

Visual Examination (VE) Operator/Independent Technical Reviewer (ITR) for Remote-Handled (RH) Waste Qualification Card

Name: Gary Redman

Email Address: [redacted]

Additional Training Requirements		
1. WAP/QAPjP Briefing and Test. *(One-time requirement)*	Michele Billett 5/22/12 N/A MB 5-22-12	CCP Training / Date
2. Visual Examination (VE) TRU Waste Characterization Briefing for Contact-Handled (CH) & Remote-Handled (RH) Waste *(Required at initial and each requalification)*	Michele Billett 5/22/12	CCP Training / Date
3. CCP VE Comprehensive Exam (score 80% or higher) administered by CCP Training. *(To be administered at initial and each requalification)*	Michele Billett 5/22/12	CCP Training / Date

Formal Training	On-the-Job Training (OJT) Knowledge Requirements *(Required at initial qualification and full requalification)*	Visual Examination Expert (VEE) Subject Matter Expert (SME)/OJT Signature/Date
CCP-PO-001	1. List the VE Quality Assurance Objectives (QAOs) per the WAP.	
	2. List the VE Data Quality Objectives (DQOs) per the WAP.	
DOE/WIPP 02-3214	3. List the VE QAOs per the PIP.	
	4. List the VE DQOs per the PIP.	
CCP-QP-002	5. State the purpose of the List of Qualified Individuals (LOQI).	
CCP-QP-005	6. State when a nonconformance report (NCR) should be prepared and who is responsible to initiate it.	N
	7. Describe how nonconforming items are documented.	A
	8. Describe how nonconforming items are controlled to prevent their use.	
	9. State who has the responsibility to validate the NCR once initiated.	
	10. Describe how to revise a NCR.	
	11. Describe how to void a NCR.	
CCP-QP-006	12. Describe the purpose of the corrective action report (CAR) process.	

Visual Examination (VE) Operator/Independent Technical Reviewer (ITR) for Remote-Handled (RH) Waste Qualification Card

Name: Gary Redman

Email Address: [redacted]

	13. State the person responsible for originating a CAR.	
	14. Describe how corrective actions are documented.	
	15. State who has the responsibility to validate the CAR once initiated.	
	16. Describe actions CCP personnel may take when conditions adverse to quality are discovered.	
CCP-QP-008	17. List the responsibilities of record generators.	
	18. State the storage and control requirements for CCP records.	
	19. Explain the process and proper method to make corrections or revisions to CCP records.	
CCP-QP-010	20. State the importance of using approved documents.	
	21. State when to verify a document revision.	N
CCP-QP-016	22. List the Measuring & Testing Equipment (M&TE) items used during VE.	A
CCP-TP-500/ CCP-VE-101 Briefing	23. Explain the purpose of VE and the roles and responsibilities of the VE Operator.	
	24. Identify who is responsible for overall direction and implementation of the VE of that facility.	
	25. Define the two phases of VE technique for remote-handled waste.	
	26. State the number of waste containers allowed per Batch Data Report (BDR).	
	27. Define "layers of confinement."	
	28. State the authorized methods to close a liner bag.	
	29. State the action to be taken if a condition adverse to quality arises.	
	30. State the waste material parameters (WMP).	
	31. Describe the information that should be recorded when describing waste items.	

Visual Examination (VE) Operator/Independent Technical Reviewer (ITR) for Remote-Handled (RH) Waste Qualification Card

Name: Gary Redman

Email Address: [redacted]

	32. State five (5) examples of prohibited items.	N/A
	33. Describe how a non-transparent container is handled when liquid is suspected.	
	34. State the acceptable liquid limits in a characterized container.	
	35. Explain the responsibilities and functions of the Independent Technical Review (ITR).	
	36. Define layers of confinement.	
	37. Describe how to determine Volume Utilization Percentage (VUP).	
	38. State the allowable fill percent increments.	

Formal Training	OJT Practical Requirements[1] *(Required at initial qualification, requalification, and full requalification)* *(This section must be performed in the presence of a VEE for initial and requalification)*			VEE SME/OJT Signature/Date
CCP-TP-500	1. Prepare the recording equipment. *(This activity is at the discretion of the SME instructor)*	P	S	N/A
	2. Complete CCP-TP-500 Attachment 1.	(P)	S	[signature] 4/25/12
	3. Prepare a BDR.	(P)	S	[signature] 4/25/12
	4. Determine the VUP.	(P)	S	[signature] 4/25/12
	5. Complete an ITR.	(P)	S	[signature] 4/25/12
	6. Determine Waste Material Parameter (WMP).	(P)	S	[signature] 4/25/12
	7. Verify the physical form of the waste matches the waste stream ID.	(P)	S	[signature] 4/25/12
CCP-TP-513	8. Perform a dimensional or gravimetric measurement and determine the measurement acceptability[2].	(P)	S	[signature] 4/25/12

[1] For simulated steps that involve the recording of information, the steps can be satisfied by the trainee's ability to identify the specific location in the correct record form where actual data would be entered, and explain where the information would be obtained. All required calculations will actually be performed: for simulations, representative data will be used in lieu of actual data. Circle "P" if actually performed or "S" if requirement was simulated.

[2] Procedure CCP-TP-513 is not applicable at all sites. The OJT Practical Requirement for this procedure is only required if the procedure is invoked.

Visual Examination (VE) Operator/Independent Technical Reviewer (ITR) for Remote-Handled (RH) Waste Qualification Card

Name: Gary Redman

Email Address: [redacted]

Approvals	
I have completed formal training and received OJT for this position. I fully understand my responsibilities as a RH VE Operator/ITR.	Gary Redman / Gary Redman 04/30/12 Trainee *(printed name and signature)* Date
I have monitored the training of this individual and believe they are ready to perform the duties of a RH VE Operator/ITR. *(Validation by the RH VEE SME/OJT instructor(s) involved in the training of this individual).*	Spencer Pattee 04/30/12 RH VEE SME/OJT Instructor *(printed name and signature)* Date F. Wesley Root F. Wesley Root 5-4-12 ~~N/A~~ WR 5-4-12 RH VEE SME/OJT Instructor *(printed name and signature)* Date
I approve this employee to perform the duties of a RH VE Operator/ITR.	Mark Pearcy Mark Pearcy 5/22/2012 CCP Lead or Alternate RH SPM *(printed name and signature)* Date

Approved for Content & Format:	**Wes Root (Approval on file)** RH VEE SME/OJT	**4/9/2012** Date
Approved for Content & Format:	**Andrew Stallings (Approval on file)** Cognizant Engineer	**4/9/2012** Date
Approved for Content:	**Irene Quintana (Approval on file)** CCP Lead or Alternate RH SPM	**4/9/2012** Date
Approved for Use:	**AJ Fisher (Approval on file)** CCP Manager Responsible for Training	**4/9/2012** Date

GEN10

GEN10

COPY

Acceptable Knowledge Expert (AKE) Qualification Card

Name: Chris Chancellor	**Badge Number:** [redacted]
Email Address: [redacted]	

Education / Experience	
Resume documenting education and experience on file with Central Characterization Project (CCP) Training.	Michele Billett 6/16/11 CCP Training Date

Job Specific Training	
Qualification Limit	There is no qualification time limit for this position. It is a one-time only requirement. Upon completion of this qualification card, the Trainee is qualified to perform all Acceptable Knowledge Expert duties, including the development of acceptable knowledge reports. If necessary, additional training may be required by the CCP Lead Site Project Manager (SPM) or the CCP Manager Responsible for Training. Unsatisfactory performance will result in disqualification by the CCP Manager Responsible for Training. The candidate must successfully complete the entire CCP qualification card to re-establish qualification.
Requalification Requirements	Not required. See above statement.

Indoctrination	
WAP/QAPjP Briefing and Test. 9/30/08	Michele Billett 6/13/11 CCP Training Date
	Initial/Indoctrination Reading: 1. NM4890139088, *Waste Isolation Pilot Plant Hazardous Waste Facility Permit* 2. DOE/WIPP-02-3122, *Transuranic Waste Acceptance Criteria for the Waste Isolation Pilot Plant* 3. DOE/WIPP 02-3214, *Remote-Handled TRU Waste Characterization Program Implementation Plan* 4. DOE/CBFO-94-1012, *U.S. Department of Energy Carlsbad Field Office Quality Assurance Program Document* 5. CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan* 6. CCP-PO-002, *CCP Transuranic Waste Certification Plan* 7. CCP-PO-003, *CCP Transuranic Authorized Methods for Payload Control (CCP CH-TRAMPAC)* 8. CCP-PO-505, *CCP Remote-Handled Transuranic Waste Authorized Methods for Payload Control (CCP RH-TRAMPAC)* 9. CCP-QP-004, *CCP Corrective Action Management* 10. CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control* 11. CCP-QP-006, *CCP Corrective Action Reporting and Control* 12. CCP-QP-008, *CCP Records Management* 13. CCP-QP-036, *CCP Qualification of Acceptable Knowledge for Remote-Handled Transuranic Waste Through a Quality Assurance Equivalency Demonstration*

Acceptable Knowledge Expert (AKE) Qualification Card

Name: Chris Chancellor	**Badge Number:** [redacted]
Email Address: [redacted]	

	14. CCP-TP-001, *CCP Project Level Data Validation and Verification* 15. CCP-TP-002, *CCP Reconciliation of DQOs and Reporting Characterization Data* 16. CCP-TP-005, *CCP Acceptable Knowledge Documentation* 17. CCP-TP-506, *CCP Preparation of the Remote-Handled Transuranic Waste Acceptable Knowledge Characterization Reconciliation Report*
I have read the listed initial/indoctrination reading and understand my responsibilities as applicable to the procedures above.	06/13/2011 Trainee Signature — Date

Formal Training Requirements	
RCRA Training Documentation	Michele Billett 6/13/11 CCP Training — Date

Approvals	
I have completed formal training and received on-the-job training for this position. I fully understand my responsibilities as an AKE.	Christopher J. Chancellor 06/13/2011 Trainee *(printed name and signature)* — Date
This individual has shown proficiency in the implementation of the requirements for the preparation of Acceptable Knowledge Summary Reports as required by CCP-TP-005.	Trey Greenwood 6/16/11 AK Cognizant Manager *(printed name and signature)* — Date
I have monitored the training of this individual and believe they are ready to perform the duties of an AKE. I approve this employee to perform the duties of an AKE.	LAURA NELSON Laura Nelson 6-16-11 CCP Site Project Manager *(printed name and signature)* — Date

Approved for Content & Format: **Trey Greenwood (Approval on File)** — **06/08/2011**
Cognizant Engineer — Date

Approved for Content: **Richard Kantrowitz (Approval on File)** — **06/08/2011**
CCP Lead or Alternate SPM — Date

Approved for Use: **A.J. Fisher (Approval on File)** — **06/08/2011**
CCP Manager Responsible for Training — Date

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Acceptable Knowledge Expert (AKE) Qualification Card

Name: Kevin Peters	**Badge Number:** [redacted]
Email Address: [redacted]	

Education / Experience	
Resume documenting education and experience on file with Central Characterization Project (CCP) Training.	Michele Billett 6/8/11 CCP Training Date

Job Specific Training	
Qualification Limit	There is no qualification time limit for this position. It is a one-time only requirement. Upon completion of this qualification card, the Trainee is qualified to perform all Acceptable Knowledge Expert duties, including the development of acceptable knowledge reports. If necessary, additional training may be required by the CCP Lead Site Project Manager (SPM) or the CCP Manager Responsible for Training. Unsatisfactory performance will result in disqualification by the CCP Manager Responsible for Training. The candidate must successfully complete the entire CCP qualification card to re-establish qualification.
Requalification Requirements	Not required. See above statement.

Indoctrination	
WAP/QAPjP Briefing and Test. 8/6/03	Michele Billett 6/8/11 CCP Training Date

Initial/Indoctrination Reading:

1. NM4890139088, *Waste Isolation Pilot Plant Hazardous Waste Facility Permit*
2. DOE/WIPP-02-3122, *Transuranic Waste Acceptance Criteria for the Waste Isolation Pilot Plant*
3. DOE/WIPP 02-3214, *Remote-Handled TRU Waste Characterization Program Implementation Plan*
4. DOE/CBFO-94-1012, *U.S. Department of Energy Carlsbad Field Office Quality Assurance Program Document*
5. CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*
6. CCP-PO-002, *CCP Transuranic Waste Certification Plan*
7. CCP-PO-003, *CCP Transuranic Authorized Methods for Payload Control (CCP CH-TRAMPAC)*
8. CCP-PO-505, *CCP Remote-Handled Transuranic Waste Authorized Methods for Payload Control (CCP RH-TRAMPAC)*
9. CCP-QP-004, *CCP Corrective Action Management*
10. CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control*
11. CCP-QP-006, *CCP Corrective Action Reporting and Control*
12. CCP-QP-008, *CCP Records Management*
13. CCP-QP-036, *CCP Qualification of Acceptable Knowledge for Remote-Handled Transuranic Waste Through a Quality Assurance Equivalency Demonstration*

Acceptable Knowledge Expert (AKE) Qualification Card

Name: Kevin Peters	**Badge Number:** [redacted]
Email Address: [redacted]	

	14. CCP-TP-001, *CCP Project Level Data Validation and Verification* 15. CCP-TP-002, *CCP Reconciliation of DQOs and Reporting Characterization Data* 16. CCP-TP-005, *CCP Acceptable Knowledge Documentation* 17. CCP-TP-506, *CCP Preparation of the Remote-Handled Transuranic Waste Acceptable Knowledge Characterization Reconciliation Report*
I have read the listed initial/indoctrination reading and understand my responsibilities as applicable to the procedures above.	Trainee Signature — Date: 6/8/2011

Formal Training Requirements	
RCRA Training Documentation	CCP Training — Date: 6/8/11

Approvals	
I have completed formal training and received on-the-job training for this position. I fully understand my responsibilities as an AKE.	Kevin J. Peters Trainee *(printed name and signature)* — Date: 6/8/2011
This individual has shown proficiency in the implementation of the requirements for the preparation of Acceptable Knowledge Summary Reports as required by CCP-TP-005.	Trey Greenwood AK Cognizant Manager *(printed name and signature)* — Date: 6/16/11
I have monitored the training of this individual and believe they are ready to perform the duties of an AKE. I approve this employee to perform the duties of an AKE.	LAURA NELSON Laura Nelson CCP Site Project Manager *(printed name and signature)* — Date: 6-16-11

Approved for Content & Format:	**Trey Greenwood (Approval on File)** Cognizant Engineer	**06/08/2011** Date
Approved for Content:	**Richard Kantrowitz (Approval on File)** CCP Lead or Alternate SPM	**06/08/2011** Date
Approved for Use:	**A.J. Fisher (Approval on File)** CCP Manager Responsible for Training	**06/08/2011** Date

DIVIDER

PAGE

Remote Handled (RH) Site Project Manager (SPM) Qualification Card

Name:	Irene Quintana	**Badge Number:**	[redacted]
Email Address:	[redacted]		

Job Specific Training

Qualification Limit	There is no qualification limit for this position. This qualification is a one-time-only requirement. Upon completion of this core qualification card, the Trainee is qualified to perform SPM duties for Remote Handled Waste. Site specific qualification (i.e., BDR review) is valid for the site(s) with completed addenda. Unsatisfactory performance will result in disqualification. If unsatisfactory performance is determined, the qualification card and OJT process must be completed to re-establish qualification.
Requalification Requirements	Not required. See above statement.

Indoctrination

Completed SPM-01 Qualification Card 3/21/06	Michele Billett CCP Training	9/17/09 Date

Required Reading:

1. DOE / WIPP 02-3214, *Remote-Handled TRU Waste Characterization Program Implementation Plan (WCPIP)*
2. CCP-PO-505, *CCP Remote-Handled Transuranic Waste Authorized Methods for Payload Control (CCP RH-TRAMPAC)*
3. CCP-QP-036, *CCP Qualification of Acceptable Knowledge for Remote-Handled Transuranic Waste Through a Quality Assurance Equivalency Demonstration*
4. CCP-TP-163, *CCP Standard Waste Visual Examination*
5. CCP-TP-500, *CCP Remote-Handled Waste Visual Examination*
6. CCP-TP-504, *CCP Dose-to-Curie Survey Procedure for Remote-Handled Transuranic Waste*
7. CCP-TP-506, *CCP Preparation of the Remote-Handled Transuranic Waste Acceptable Knowledge Characterization Reconciliation Report*
8. CCP-TP-508, *CCP Standard Real-Time Radiography Inspection Procedure*
9. CCP-TP-509, *CCP Remote-Handled Transuranic Container Tracking*
10. CCP-TP-510, *CCP Remote-Handled Radiography Test and Training Drum Requirements*
11. CCP-TP-511, *CCP Peer Review*
12. CCP-TP-512, *CCP Remote-Handled Waste Sampling*
13. CCP-TP-530, *CCP RH TRU Waste Certification and WWIS Data Entry*

I have read the listed required reading and understand my responsibilities as applicable to the procedures above	Irene Quintana Trainee Signature	9/16/09 Date
CCP-PO-005 - Conduct of Operations Comprehensive Exam 9/17/09	Michele Billett CCP Training	9-17-09 Date

Remote Handled (RH) Site Project Manager (SPM) Qualification Card

Name: Irene Quintana	**Badge Number:** [redacted]
Email Address: [redacted]	

Formal Training	On-the-job Training Knowledge Requirements	SME Signature / Date
DOE/WIPP 02-3214	1. Define Environmental Protection Agency's (EPA) definition of visual examination (VE) of record. Provide an example.	N/A not required by initial SME 9/16/09
	2. Explain how CCP-TP-500 satisfies the EPA and NMED criteria.	
	3. State the Data Quality Objectives (DQO) and Quality Assurance Objectives (QAO) for each method (e.g., Dose-to-Curie, VE).	
	4. State the purpose of CCP-TP-506.	
CCP-PO-505	5. Discuss the differences in the transportation requirement for RH-TRU 72-B and CNS 10-160B versus the TRUPACT-II.	
CCP-TP-511	6. State the peer review requirements and which CCP procedure to use.	
CCP-TP-512	7. Discuss the QAOs for radiochemistry and ICP-MS batch data report (BDR).	

N/A Initial SME/OJT mrg 9-17-09

Remote Handled (RH) Site Project Manager (SPM) Qualification Card

Name: Irene Quintana	**Badge Number:** [redacted]
Email Address: [redacted]	

Formal Training	On-the-job Training Practical Requirements	SME Signature / Date
CCP-TP-500	1. Demonstrate proficiency in review of the RH visual examination BDRs.	
CCP-TP-504	2. Demonstrate proficiency in the review of "Dose-to-Curie" BDR.	
CCP-TP-506	3. Complete a Characterization Reconciliation Report (CRR).	
CCP-TP-508	4. Demonstrate proficiency in review of the RH Real-time Radiography (RTR) BDRs.	
	5. Demonstrate the verification of a container meeting the applicable content code limit.	
CCP-TP-512	6. Demonstrate proficiency in the review of "Radiochemistry" BDR.	
	7. Demonstrate proficiency in the review of "ICP-MS" BDR.	
	8. Demonstrate proficiency in the review of "Remote-Handled Waste Sample" BDR.	

N/A not required for qualified SME
N/A initial SME/DST - MB 9-17-09
9/14/09

Remote Handled (RH) Site Project Manager (SPM) Qualification Card

Name: Irene Quintana	**Badge Number:** [redacted]
Email Address: [redacted]	

Approvals	
I have completed formal training and received on-the-job training for this position. I fully understand my responsibilities as a RH Site Project Manager (SPM).	Irene Quintana Irene Quintana 9/16/09 Trainee *(printed name and signature)* Date
Validation by the SME/OJT instructor(s) involved in the training of this individual.	N/A for initial SME/OJT MB 9-17-09 NA Not required for initial SME 9/16/09 SME/OJT Instructor *(printed name and signature)* Date
	NA SME/OJT Instructor *(printed name and signature)* Date
I approve this employee to perform the duties of a RH Site Project Manager (SPM).	Hillari J. Neely 9-17-09 CCP Site Project Manager *(printed name and signature)* Date
	Mark Pearcy Mark Pearcy 9-17-09 CCP Program Manager *(printed name and signature)* Date
This qualification card has been reviewed for completeness and signature verification by CCP Training.	Michele Billett Michele Billett 9/17/09 CCP Training *(printed name and signature)* Date

Approved for Format: **Michele Billett (original signature on file)** **8-31-09**
CCP Training Date

Approved for Content: **Craig Simmons (original signature on file)** **8-31-09**
CCP Site Project Manager Date

Approved for Use: **Michael L. Sensibaugh (original signature on file)** **8-31-09**
CCP Program Manager Date

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Remote Handled (RH) Site Project Manager (SPM) Qualification Card

Name: Laura Nelson	**Badge Number:** [redacted]
Email Address: [redacted]	

Education/Experience	
Resume documenting education and experience on file with Central Characterization Project (CCP) Training.	Michele Bittlett 6/22/10 CCP Training Date

Job Specific Training	
Qualification Limit	There is no qualification limit for this position. This qualification is a one-time-only requirement. Upon completion of this core qualification card, the Trainee is qualified to perform Site Project Manager (SPM) duties for Remote Handled Waste. Unsatisfactory performance will result in disqualification. If unsatisfactory performance is determined, the qualification card and on-the-job training (OJT) process must be completed to re-establish qualification.
Requalification Requirements	Not required. See above statement.

Indoctrination

Initial/Indoctrination Reading:

1. DOE / WIPP 02-3214, *Remote-Handled TRU Waste Characterization Program Implementation Plan (WCPIP)*
2. CCP-CM-001, *CCP Equipment Change Authorization and Documentation*
3. CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*
4. CCP-PO-002, *CCP Transuranic Waste Certification Plan*
5. CCP-PO-008, *CCP Quality Assurance Interface with the WTS Quality Assurance Program*
6. CCP-PO-505, *CCP Remote-Handled Transuranic Waste Authorized Methods for Payload Control (CCP RH-TRAMPAC)*
7. CCP-QP-002, *CCP Training and Qualification Plan*
8. CCP-QP-004, *CCP Corrective Action Management*
9. CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control*
10. CCP-QP-006, *CCP Corrective Action Reporting and Control*
11. CCP-QP-008, *CCP Records Management*
12. CCP-QP-010, *CCP Document Preparation, Approval and Control*
13. CCP-QP-011, *CCP Laboratory Logbooks*
14. CCP-QP-015, *CCP Procurement*
15. CCP-QP-016, *CCP Control of Measuring and Testing Equipment*
16. CCP-QP-018, *CCP Management Assessment*
17. CCP-QP-022, *CCP Software Quality Assurance Plan*
18. CCP-QP-023, *CCP Handling, Storage, and Shipping*
19. CCP-QP-027, *CCP Test Control*
20. CCP-QP-028, *CCP Records Filing, Inventorying, Scheduling, and Dispositioning*

Remote Handled (RH) Site Project Manager (SPM) Qualification Card

Name: Laura Nelson	**Badge Number:** [redacted]
Email Address: [redacted]	

21. CCP-QP-030, *CCP Written Practice for the Qualification of CCP Helium Leak Detection Personnel*
22. CCP-QP-036, *CCP Qualification of Acceptable Knowledge for Remote-Handled Transuranic Waste Through a Quality Assurance Equivalency Demonstration*
23. CCP-TP-001, *CCP Project Level Data Validation and Verification*
24. CCP-TP-002, *CCP Reconciliation of DQOs and Reporting Characterization Data*
25. CCP-TP-003, *CCP Data Analysis for S3000, S4000, and S5000 Characterization*
26. CCP-TP-005, *CCP Acceptable Knowledge Documentation*
27. CCP-TP-028, *CCP Radiographic Test and Training Drum Construction*
28. CCP-TP-056, *CCP HSG Performance Demonstration Plan*
29. CCP-TP-058, *CCP NDA Performance Demonstration Program*
30. CCP-TP-162, *CCP Random Selection of Containers for Solids and Headspace Gas Sampling and Analysis*
31. CCP-TP-163, *CCP Standard Waste Visual Examination*
32. CCP-TP-500, *CCP Remote-Handled Waste Visual Examination*
33. CCP-TP-504, *CCP Dose-to-Curie Survey Procedure for Remote-Handled Transuranic Waste*
34. CCP-TP-506, *CCP Preparation of the Remote-Handled Transuranic Waste Acceptable Knowledge Characterization Reconciliation Report*
35. CCP-TP-508, *CCP Standard Real-Time Radiography Inspection Procedure*
36. CCP-TP-509, *CCP Remote-Handled Transuranic Container Tracking*
37. CCP-TP-510, *CCP Remote-Handled Radiography Test and Training Drum Requirements*
38. CCP-TP-511, *CCP Peer Review*
39. CCP-TP-512, *CCP Remote-Handled Waste Sampling*
40. CCP-TP-530, *CCP RH TRU Waste Certification and WWIS Data Entry*

I have read the listed initial/indoctrination reading and understand my responsibilities as applicable to the procedures above.	Laura Nelson Trainee Signature	6/21/10 Date

Document	Additional Training Requirements		
CCP-PO-001	1. WAP/QAPjP Briefing and Test 4/1/10	Michele Billett CCP Training	6/21/10 Date
	2. Hazardous Waste Number Assignments Briefing and Test 4/1/10	Michele Billett CCP Training	6/21/10 Date
	3. Solid and Soils Sampling and Analysis for Site Project Managers (SPM) Briefing	Hinani J. Nooy CCP SPM	6-22-10 Date

Remote Handled (RH) Site Project Manager (SPM) Qualification Card

Name: Laura Nelson	**Badge Number:** [redacted]
Email Address: [redacted]	

	4. Statistical Sampling Briefing	CCP SPM	6/22/10 Date
	5. NCR/CAR Briefing (Provided by CCP/QA Organization)	CCP/QA Organization	6/22/10 Date
CCP-VE-101	6. Visual Examination (VE) TRU Waste Characterization Briefing	Larry Porter CCP SPM	Larry Porter 6/22/10 Date
CCP-RTR-101	7. Real-Time Radiography TRU Waste Characterization Briefing.	Larry Porter CCP SPM	Larry Porter 6/22/10 Date
	8. Incompatibles Determination Training Module	Larry Porter CCP SPM	Larry Porter 6/22/10 Date

Formal Training	OJT Knowledge Requirements	Subject Matter Expert (SME) Signature/Date
DOE/WIPP 02-3214	1. Define Environmental Protection Agency's (EPA) definition of Visual Examination (VE) of record. Provide an example.	Irene Quintana 6/17/10
	2. Explain how CCP-TP-500 satisfies the EPA and New Mexico Environmental Department (NMED) criteria.	Irene Quintana 6/17/10
	3. State the Data Quality Objectives (DQO) and Quality Assurance Objectives (QAO) for each characterization method (e.g.. Dose-to-Curie, VE).	Irene Quintana 6/17/10
	4. State the purpose of CCP-TP-506.	Irene Quintana 6/17/10
CCP-PO-001	5. Define the term "prohibited item" and give two examples of prohibited items.	Irene Quintana 6/17/10
	6. Identify the document allowing WIPP to receive and store TRU-mixed waste.	Irene Quintana 6/17/10

Remote Handled (RH) Site Project Manager (SPM) Qualification Card

Name: Laura Nelson

Badge Number: [redacted]

Email Address: [redacted]

	7. Identify and describe the four major methods used by CCP to characterize TRU waste.	[illegible] 6/17/10
	8. State three (3) instances when a nonconformance report (NCR) is required for Real-Time Radiography (RTR).	[illegible] 6/17/10
	9. State when an NCR is written for VE.	[illegible] 6/17/10
	10. State when an NCR is written for Headspace Gas (HSG) Sampling and Analysis.	[illegible] 6/17/10
	11. State the difference between a "Z" qualifier and a "J" qualifier.	[illegible] 6/17/10
	12. State when a "B" qualifier is used.	[illegible] 6/17/10
	13. State when a replicate waste drum is run in RTR.	[illegible] 6/17/10
CCP-PO-002	14. State which sites are authorized to ship PCB waste.	[illegible] 6/17/10
	15. State the maximum allowed curies per liter activity level (averaged over the volume of the canister).	[illegible] 6/17/10
	16. State if machine-compacted waste is allowed to ship to the Waste Isolation Pilot Plant (WIPP).	[illegible] 6/17/10
CCP-QP-005	17. State one major purpose for the nonconformance control program.	[illegible] 6/17/10
	18. Identify who can initiate an NCR.	[illegible] 6/17/10
CCP-QP-008	19. List the responsibilities of record generators.	[illegible] 6/17/10

Remote Handled (RH) Site Project Manager (SPM) Qualification Card

Name: Laura Nelson		Badge Number: [redacted]
Email Address: [redacted]		
CCP-QP-010	20. State the storage and control requirements for CCP records.	[signature] 6/17/10
	21. Explain the process and proper method to make corrections or revisions to CCP records.	[signature] 6/17/10
	22. State the importance of using approved documents.	[signature] 6/17/10
	23. State when to verify a document revision.	[signature] 6/17/10
CCP-PO-505	24. Discuss the differences in the transportation requirement for RH-TRU 72-B and CNS 10-160B versus the TRUPACT-II.	[signature] 6/17/10
CCP-TP-511	25. State the peer review requirements.	[signature] 6/17/10
CCP-TP-512	26. Discuss the QAOs for radiochemistry and ICP-MS batch data report (BDR).	[signature] 6/17/10
Formal Training	**OJT Practical Requirements**	**SME Signature/Date**
CCP-TP-002	1. Demonstrate proficiency of characterization information summary reports.	[signature] 6/17/10
CCP-TP-500	2. Demonstrate proficiency in review of the RH visual examination BDRs.	[signature] 6/17/10
CCP-TP-504	3. Demonstrate proficiency in the review of "Dose-to-Curie" BDR.	[signature] 6/17/10
CCP-TP-506	4. Complete a Characterization Reconciliation Report (CRR).	[signature] 6/17/10

Remote Handled (RH)
Site Project Manager (SPM)
Qualification Card

Name: Laura Nelson		**Badge Number:** [redacted]
Email Address: [redacted]		
CCP-TP-508	5. Demonstrate proficiency in review of the RH Real-time Radiography (RTR) BDRs.	[signature] 6/17/10
	6. Demonstrate the verification of a container meeting the applicable content code limit.	[signature] 6/17/10
CCP-TP-512	7. Demonstrate proficiency in the review of "Remote-Handled Waste Sample" BDR.	[signature] 6/17/10

Remote Handled (RH) Site Project Manager (SPM) Qualification Card

Name: Laura Nelson	**Badge Number:** [redacted]
Email Address: [redacted]	

Approvals	
I have completed formal training and received on-the-job training for this position. I fully understand my responsibilities as a RH SPM.	LAURA NELSON Laura Nelson 6/22/10 Trainee *(printed name and signature)* Date
I have monitored the training of this individual and believe they are ready to perform the duties of a RH SPM. *(Signature validation by the SME/OJT instructor(s) involved in the training of this individual)*	Irene Quintana Irene Quintana 6/21/10 SME/OJT Instructor *(printed name and signature)* Date
	N/A SME/OJT Instructor *(printed name and signature)* Date
I approve this employee to perform the duties of a RH SPM.	LQ 4/20/11 * Irene Quintana Irene Quintana 6/21/10 CCP Lead or Alternate SPM *(printed name and signature)* Date

Approved for Content & Format: **Approval on file** **6/17/2010**
RH SPM SME *(printed name and signature)* Date

Approved for Content: **Approval on file** **6/17/2010**
CCP Lead or Alternate SPM *(printed name and signature)* Date

Approved for Use: **Approval on file** **6/17/2010**
CCP Manager Responsible for Training *(printed name and signature)* Date

* Briefings under the Additional Training Requirement was performed 6/22/10. The CCP Lead or alternate SPM date of 6/21/10 was recorded inadvertently. LQ 4/22/11

GEN11

GEN11

Form Approved. OMB No. 2050-0039

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: IL3890008946
2. Page 1 of 1
3. Emergency Response Phone: 575-885-6883
4. Manifest Tracking Number: 010995097 JJK

~~Generator's Site Address (if different than mailing address)~~ P.C. 8-27-13

5. Generator's Name and Mailing Address
Argonne National Laboratory in care of US DOE
9700 South Cass Avenue Bldg 306
Argonne, IL 60439
ERI Provider is CMR for William Naumann

Generator's Phone: 630-252-5046

6. Transporter 1 Company Name: Visionary Solutions LLC.
U.S. EPA ID Number: NMR000013086

7. Transporter 2 Company Name:
U.S. EPA ID Number:

8. Designated Facility Name and Site Address
NWP LLC in care of U.S. DOE
30 Miles East of Carlsbad, NM on JAL Highway
Eddy County, NM 88221
U.S. EPA ID Number: NM4890139088

Facility's Phone: 575-234-8457

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. RQ, UN2917, Waste Radioactive material, Type B(M) package, 7, fissile-excepted, solid/oxide, Pu238, Am241, Pu239, Pu241, Pu240, 0.3231 TBq, RADIOACTIVE YELLOW-II, TI: 0.2, USA/9212/B(M)F-96	1	CM	692	K	D004 D006 D007 D008 D009 D011
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information
Return signed original to Argonne National Laboratory c/o U.S. DOE, 9700 S. Cass Ave. Bldg. 306, Argonne, IL 60439, Attn: William Naumann. Prepared under contract# DE-AC02-06CH11357. Shipment AER13023. ERG# 163. TK# 425 TR# RH-009. Cask# 00-08, Wt. 17,643 kg. TID# 572501. Exclusive Use Shipment.

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Paula Cunningham on behalf of U.S. DOE
Signature: Paula U. Cunningham
Month 08 Day 28 Year 13

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: DAVID FARRELL
Signature: D Farrell
Month 08 Day 28 Year 13

Transporter 2 Printed/Typed Name:
Signature:
Month Day Year

DESIGNATED FACILITY

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:

18b. Alternate Facility (or Generator)
U.S. EPA ID Number:
Facility's Phone:

18c. Signature of Alternate Facility (or Generator)
Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name:
Signature:
Month Day Year

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

AK1

AK1

Controlled
Copy

CCP-AK-ANLE-500

Central Characterization Program
Acceptable Knowledge Summary Report
For

ARGONNE
REMOTE-HANDLED DEBRIS WASTE

WASTE STREAM: AERHDM

Revision 11

July 2, 2013

Irene Joo
Printed Name
APPROVED FOR USE

RECORD OF REVISION

Revision Number	Date Approved	Description of Revision
0	06/15/2006	Initial issue.
1	07/18/2006	Revised to make consistent with CCP-AK-INL-500, *Central Characterization Project Acceptable Knowledge Summary Report For Remote-Handled Transuranic Debris Waste From Argonne National Laboratory-East Stored at the Idaho National Laboratory Waste Stream: ID-ANLE-S5000*, and to address relevant findings identified during the U.S. Environmental Protection Agency (EPA) Inspection EPA-INL-RH-CCP-06.06-8.
2	12/18/2006	Revised to implement the Waste Isolation Pilot Plant Hazardous Waste Facility Permit requirements and associated Section 311/Remote-Handled (RH) Permit Modification Request (PMR). Also revised to address comments from the EPA Baseline Inspection EPA-ANL-CCP-RH-9.06-8 and the Carlsbad Field Office (CBFO) Certification Audit A-06-27.
3	05/08/2008	Revised document to incorporate approved Remote-Handled Transuranic Waste Content Codes (RH-TRUCON) AE321 and AE325. Incorporated discussions related to prohibited items (prohibited liquids) identified during Idaho National Engineering and Environmental Laboratory (INEEL) and Argonne National Laboratory-East (ANL-E) certification of the Alpha Gamma Hot Cell Facility (AGHCF) debris waste (Acceptable Knowledge [AK] Sources DR016 and DR017). Corrected editorial errors included in the Freeze File, including correcting several chemical AK references in Table 3, Waste Stream AERHDM Material and Chemical Inputs.
4	10/08/2009	Revised to include additional containers generated in the K-Wing hot cells of the Chemical Technology Building. Also revised to incorporate new packaging configuration for AERHDM waste drums (direct loaded 30-gallon drums). Revised to address freeze file changes and recommendations identified during ANL/CCP Recertification Audit A-09021 (August 4-6, 2009).

RECORD OF REVISION (Continued)

Revision Number	Date Approved	Description of Revision
5	01/14/2010	Revised to include additional containers of AGHCF fuel examination waste previously not included in waste stream AERHDM. Waste consists primarily of test specimen residues (fragments, samples, and swarf) and associated debris.
6	09/21/2010	Revised to add TRUCON Code AE 322.
7	08/12/2011	Revised to adjust waste stream volume projections (DR023), add met mount reactivity study (P2035), address United States Environmental Protection Agency (EPA) Tier 1 review issues (U911) associated with the addition of Alpha Gamma Hot Cell Facility (AGHCF) fuel examination waste (FEW) and the K-Wing materials to waste stream AERHDM (C2027), address comments raised during the Carlsbad Field Office (CBFO) Recertification Audit A-10-23 (August 3-5, 2010), and updated to reflect current waste characterization, management, and packaging activities.
8	10/27/2011	Revised to address U.S. Environmental Protection Agency (EPA) Tier 1 review issues associated with the addition of K-Wing fuel examination waste (FEW) materials to waste stream AERHDM.
9	12/21/2011	Revised to address U.S. Environmental Protection Agency (EPA) Tier 1 review issue. Discussion in Section 5.4.3.1.3 was rewritten to better describe methodology for measurement of K-Wing fuel materials.
10	05/22/2012	Revised to address U.S. Environmental Protection Agency (EPA) Tier 1 review issues. Discussion added to Section 4.2.2.2 to clarify that corrosion study liquids were not present in the waste stream (C2033) and Inorganic Matrix waste material parameter added to Table 3, Waste Stream AERHDM Waste Material Parameter Estimates, to account for immobilized extraction liquids.
11	07/02/2013	Revised to format the report consistently with CCP-TP-005, *CCP Acceptable Knowledge Documentation*; to incorporate Nuclear Waste Partnership (NWP) transition changes; add RH-TRUCONs AE 125A and AE 225A; and incorporate current procedures and waste processing acceptable knowledge (AK).

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LIST OF ACRONYMS AND ABBREVIATIONS

AEC	U.S. Atomic Energy Commission
AGHCF	Alpha Gamma Hot Cell Facility
AK	acceptable knowledge
ANL	Argonne National Laboratory
ANL-E	Argonne National Laboratory – East
ANL-W	Argonne National Laboratory – West
ATM	Acceptable Test Material
ATR	Advanced Test Reactor
ATWIR	Annual Transuranic Waste Inventory Report
BR3	Belgonair Reactor-3
BWR	boiling water reactor
CBFO	Carlsbad Field Office
CCP	Central Characterization Program
CFR	Code of Federal Regulations
Ci%	curies percent
CMT	Chemical Technology Division
CP-5	Chicago Pile-5 Reactor
CTA	Clean Transfer Area
CWPC	Chemical Waste Processing Container(s)
DOE	U.S. Department of Energy
DOT	U.S. Department of Transportation
DQO	Data Quality Objective
DRA	Decontamination and Repair Area
DTC	dose-to-curie
DTPA	diethylenetramine pentaacetic acid
EBL	Electron Beam Laboratory
EBR-II	Experimental Breeder Reactor-II
EMP	electron microprobe
EPA	U. S. Environmental Protection Agency
EPRI	U. S. Electric Power Research Institute
ERDA	U.S. Energy Research and Development Administration
ETR	Engineering Test Reactor
FEW	fuel examination waste
FIMS	Fissile Inventory Management System
FFTF	Fast Flux Test Facility
FR	fast reactor
HBR	H.B. Robinson Reactor
HEPA	High-Efficiency Particulate Air
HEU	highly-enriched uranium
HWN	hazardous waste number
IFR	Integral Fast Reactor
INEEL	Idaho National Engineering and Environmental Laboratory
INL	Idaho National Laboratory
IPS	Irradiation Performance Section

LIST OF ACRONYMS AND ABBREVIATIONS (Continued)

LANL	Los Alamos National Laboratory
lbs	pounds
LBC	liquid bulking container
LEU	low-enrichment uranium
LLNL	Lawrence Livermore National Laboratory
LMFBR	Liquid Metal Fast Breeder Reactor Program
LWA	WIPP Land Withdrawal Act
LWR	light water reactor(s)
m^3	cubic meters
MeV	Mega electron Volt
MFP	mixed fission products
MOX	mixed oxide
mR/hr	millirem per hour
MSDS	Material Safety Data Sheet
MTR	Materials Test Reactor
NaK	sodium-potassium
NASA	National Aeronautics and Space Administration
nCi/g	nanocuries per gram
NFT	Nuclear Filter Technology, Inc.
NNSA	U.S. National Nuclear Security Administration
NRC	U.S. Nuclear Regulatory Commission
NWPA	Nuclear Waste Policy Act of 1982
ORIGEN	Oak Ridge Isotopic Generation Computer Program
ORNL	Oakridge National Laboratory
ORR	Oak Ridge Research Reactor
PCB	polychlorinated biphenyl
PIE	post-irradiation examination
PVC	polyvinyl chloride
PNL	Pacific Northwest Laboratories
PWR	pressurized water reactor
QA	quality assurance
QAO	Quality Assurance Objective
RCRA	Resource Conservation and Recovery Act
RERTR	Reduced Enrichment Research and Test Reactor Program
RH	remote-handled
RH-TRUCON	Remote-Handled Transuranic Waste Content Code
R/hr	rem per hour
SAM	scanning auger microscope
SAR	Safety Analysis Report
SDIO	Strategic Defense Initiative Organization
SEM	scanning electron microscope
SGF	Shielded Glovebox Facility
SR	Savannah River Reactor

LIST OF ACRONYMS AND ABBREVIATIONS (Continued)

SRS	Savannah River Site
TBP	tributyl phosphate
TMI	Three Mile Island
TREAT	Transient Reactor Test Facility
TRU	transuranic
TRUEX	Transuranium Extraction
TSCA	Toxic Substances Control Act
UREX	Uranium Extraction
VE	visual examination
WCPIP	*Remote-Handled TRU Waste Characterization Program Implementation Plan*
WIPP	Waste Isolation Pilot Plant
WIPP-WAC	*Transuranic Waste Acceptance Criteria for the Waste Isolation Pilot Plant*
WIPP-WAP	*Waste Isolation Pilot Plant Hazardous Waste Facility Permit, Waste Analysis Plan*
WMO	Waste Management Operations Department
WMP	Waste Material Parameter
WS	work station
Wt%	weight percent
ZPPR	Zero Power Plutonium (or Physics) Reactor

1.0 EXECUTIVE SUMMARY

This acceptable knowledge (AK) summary report has been prepared for the Central Characterization Program (CCP) for remote-handled (RH) transuranic (TRU) waste generated at Argonne, historically known as the Argonne National Laboratory – East (ANL-E). This report was prepared in accordance with CCP-TP-005, *CCP Acceptable Knowledge Documentation* (Reference 13), to implement the AK requirements of DOE/WIPP-02-3214, *Remote-Handled TRU Waste Characterization Program Implementation Plan* (WCPIP) (Reference 1); *Waste Isolation Pilot Plant Hazardous Waste Facility Permit, Waste Analysis Plan* (WIPP-WAP) (Reference 14); and DOE/WIPP-02-3122, *Transuranic Waste Acceptance Criteria for the Waste Isolation Pilot Plant* (WIPP-WAC) (Reference 23).

The WIPP-WAP AK requirements are addressed in CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan* (Reference 8). The WIPP-WAC AK requirements are addressed in CCP-PO-002, *CCP Transuranic Waste Certification Plan* (Reference 10). Additionally, this report provides the AK information required by CCP-PO-505, *CCP Remote-Handled Transuranic Waste Authorized Methods for Payload Control (CCP RH-TRAMPAC)* (Reference 24).

The CCP is tasked with certification of TRU waste for transportation to and disposal at the Waste Isolation Pilot Plant (WIPP). The CCP is responsible for collection, review and management of AK documentation in accordance with CCP-TP-005 (Reference 13), and reviews and approves this AK Summary Report. CCP maintains responsibility for this AK Summary Report and all CCP-TP-005 generated forms and records as quality assurance (QA) records. In addition, CCP maintains a copy of the "historical source documents" as non-QA records.

Argonne National Laboratory (ANL) has consisted of numerous sites, including Argonne (historically known as ANL-E) in Illinois and Argonne National Laboratory-West (ANL-W) in Idaho on the Idaho National Laboratory (INL) site. Metallurgical research was conducted at Argonne, while large-scale testing and development, including reactor programs, occurred at ANL-W. The sites have worked together to support the Laboratory's nuclear program for more than 50 years. In general, the program involved the irradiation of fuel elements and materials in ANL-W reactors that were transferred to ANL-W and Argonne hot cell facilities for examination.

Waste stream AERHDM originally consisted of 44 30-gallon drums of RH TRU debris packaged (inner waste cans) in the Alpha Gamma Hot Cell Facility (AGHCF) between February 1993 and February 2002. It is estimated that an additional 340 drums will be generated during packaging of the existing waste materials and ongoing operations in the Argonne AGHCF of the Material Sciences Division Building, including approximately 120 drums of similar debris including irradiated fuel test materials and residues (debris, fuel pin fragments, samples, capsules, and swarf) previously stored as accountable materials in the AGHCF. This waste has been generated at the AGHCF during the examination of irradiated and un-irradiated fuel pins and other reactor materials from various reactor programs at ANL-W and other U.S. Department of Energy (DOE)

reactors. The AGHCF is a hot cell complex that includes shielded and unshielded gloveboxes, a hot cell under nitrogen atmosphere with work stations (WS) for remote manipulation of materials, and a decontamination and repair area.

Waste stream AERHDM also includes an estimated 75 55-gallon drums of RH TRU organic and inorganic debris to be packaged from the K-Wing hot cells of the Chemical Technology Building. The waste is generated during packaging of solid material stored within the three K-Wing hot cells, solid material stored outside the hot cells in shielded rooms K-108 and K-116, and neutralized and solidified solutions stored within the hot cells. In addition, solid and liquid waste materials generated during the same K-Wing operations transferred from the building (stored in Building 306) will be transferred back to be managed with the waste within the facility. Most of the materials tested in the K-Wing hot cells originated from AGHCF experiments or consisted of reactor test specimens from the same commercial reactors.

This AK Summary Report, along with the referenced supporting documentation, provides a defensible and auditable record of AK for waste stream AERHDM. The references and AK sources used to prepare this report are listed in Sections 8.0 and 9.0. The AK sources are referenced within this report by an alphanumeric designator (i.e., C001, P001, and U001), corresponding to a unique CCP Source Document Tracking Number.

This AK report includes information relating to AGHCF and K-Wing history, configuration, equipment, process operations, waste identification, characterization, and waste management practices. Information contained in this report was obtained from numerous sources, including facility safety basis documentation, historical document archives, generator and storage facility waste records and documents, procedures for waste packaging and generation operations, container specific waste packaging and characterization documentation, and interviews with cognizant AGHCF and K-Wing personnel.

This report and supporting source documentation provide the mandatory waste program and waste stream-specific information required by the WIPP-WAP (Reference 14). This report also compiles data relevant to applicable U.S. Environmental Protection Agency (EPA) requirements and presents the documentation necessary to satisfy each WCPIP Data Quality Objective (DQO) and Quality Assurance Objective (QAO) for RH TRU waste streams (Reference 1). Argonne RH debris waste shipped to the INL packaged prior to November 1995 is addressed in CCP-AK-INL-500, *Central Characterization Program Acceptable Knowledge Summary Report For Remote-Handled Transuranic Debris Waste from Argonne National Laboratory-East Stored at the Idaho National Laboratory – Waste Stream: ID-ANLE-S5000* (Reference 2).

2.0 WASTE STREAM IDENTIFICATION SUMMARY

Site Where TRU Waste Was Generated:

Argonne
9700 South Cass Avenue
Argonne, Illinois 60439
EPA ID No. IL3890008946

Facility Where TRU Waste Was Generated:

F-Wing AGHCF of the Material Sciences Division Building

K-Wing Hot Cells in the Chemical Technology Building (K-Wing)

Facility Mission:

Argonne is a multi-disciplinary research laboratory that performs work in basic and applied science in the areas of engineering, energy technology, chemistry, physics, materials, biomedicine, and environmental studies. The Argonne mission expanded from the initial experiments performed at the University of Chicago in 1941 to produce plutonium for the Manhattan Project. Officially founded in 1946 as the first national laboratory by the U.S. Atomic Energy Commission (AEC), Argonne has been instrumental in the development of nuclear reactors and associated systems, materials, fuel elements, and components for use in both civilian and defense programs. This work included key participation in the development of essentially all the nuclear reactor systems in use today for isotope production, power generation, and naval submarine propulsion, as well as experimental or proposed applications for weapons destruction, defense waste management, defense security and safeguards, and space propulsion.

The 200 Area Material Sciences Division Building containing the AGHCF was built in the late 1950s and started operations in the early 1960s as the "Fuels Technology Center" under the direction of the Metallurgy Division. The overriding design criterion for the building was to allow Argonne to conduct research programs for the advancement of reactor technology, with a particular emphasis on the use of plutonium as fuel. This mission required that the facilities were designed to accommodate radiation fields and the unique handling requirements associated with plutonium materials.

The F-Wing of the AGHCF is a kilocurie hot cell complex designed to conduct metallurgical research on radioactive fuel materials. The facility was designed to handle irradiated and un-irradiated fuels used in the Liquid Metal Fast Breeder Reactor (LMFBR) Program and numerous other reactor testing programs. The AGHCF was used for examination of fuel elements and other structural components of commercial and research reactors. Waste from the AGHCF has been generated primarily from analysis of post-irradiated nuclear fuel assemblies from fast breeder and light water reactors (LWRs).

As described in Section 4.2, the 200 Area Chemical Technology Building containing the K-Wing was built during the 1949 to 1950 time period and is operated by Argonne's Chemical Technology Division. Since its inception, the Chemical Technology laboratories were intended and have been mainly used for experimental work with radioactive materials. Current uses emphasize characterization, treatment, process development, and engineering demonstration experiments involving primarily non-irradiated nuclear reactor fuel samples and waste materials.

K-Wing was an addition following the initial construction of the Chemical Technology Building (circa 1956) and it occupies only a small portion of the overall structure. The K-Wing kilocurie hot cell complex was designed to conduct metallurgical research on radioactive fuel materials. The facility consists of three heavily shielded cells, an operating area, and a laboratory/service area. The shielded cells are designed to handle up to 10,000 curies of one Mega electron Volt (MeV) gamma activity in Cells A and B and ten curies in Cell C. Specific experiments conducted in the facility involved aqueous biphasic extraction studies, and long-term testing of radioactive waste forms to: (1) determine the mode of degradation of the spent fuel that will occur under the unsaturated conditions that are anticipated for the Yucca Mountain repository, and (2) validate current models of spent fuel corrosion.

More recent research conducted at the K-Wing involved experimentation with the Uranium Extraction (UREX) solvent extraction process and chemistry related to fuel reprocessing in the cells. Programmatic operations in the K-Wing were suspended temporarily in July 2007. Subsequently, Argonne decided to make that suspension permanent and to de-inventory the facility.

While more recent research conducted at the AGHCF and K-Wing contributed to the DOE mission of advancing nuclear science and technology, a majority of the research conducted after the late 1990s supported programs initiated to ensure safe and economical high-burnup operation of commercial LWRs and research to ensure the safe storage of commercial spent nuclear fuel in dry casks and permanent repositories.

Waste Stream AERHDM

Summary Category Group:	S5000 – Debris Waste
Waste Matrix Code Group:	Heterogeneous Debris Waste
Waste Matrix Code:	S5400
RH TRU Waste Content Code (RH-TRUCON):	AE 125A, AE 225A, AE 321, AE 322, and AE 325

Annual Transuranic Waste Inventory Report (ATWIR) Identification Numbers: AE-T009

EPA Hazardous Waste Numbers (HWNs): D004, D005, D006, D007, D008, D009, D010, D011, D019, D028, D029, F002, and F005

Waste Stream Description:

Waste stream AERHDM originally consisted of 44 30-gallon drums (4.8 cubic meters [m^3]) of RH TRU debris generated by destructive and nondestructive examination of radiological materials such as fuel pins, reactor structural materials, and targets in the AGHCF in waste cans packaged between February 1993 and February 2002. It is estimated that an additional 340 30-gallon drums (37.4 m^3) will be generated during packaging of the waste contained in the cells and ongoing operations in the AGHCF, including approximately 120 drums of similar debris including irradiated fuel test materials and residues (debris, fuel pin fragments, samples, capsules, and swarf) previously stored as accountable materials in the AGHCF. It is estimated that waste stream AERHDM will also include 75 55-gallon drums (10.4 m^3) of similar RH TRU organic and inorganic debris generated in hot cells in the Chemical Technology Building. The K-Wing waste is generated during packaging of the solid material stored within the three K-Wing hot cells, solid material stored outside the hot cells in two shielded rooms, and neutralized and solidified solutions stored within the hot cells. The waste material within K-Wing was generated as the result of various experiments described in Section 4.7.2 from 1996 until 2007. The waste also includes waste materials from these experiments that were stored at other locations and returned to the K-Wing to be packaged in waste stream AERHDM. Waste from this stream was contaminated primarily with fissile materials, mixed fission products (MFP), and activation products. A discussion relating to the radiological characterization of this stream is provided in Section 5.4.3.

This waste stream consists predominantly of organic and inorganic debris generated during the destructive and nondestructive examinations conducted in the AGHCF and K-Wing, and contains the following materials (See Section 5.4.2):

- **Cellulosic** items including: paper, cellophane tape, cardboard, cotton, leather rags, cloth, towels, grinding paper, boxes, liners, High-Efficiency Particulate Air (HEPA) filter media, filter paper, tissues, string, boxes, rope, swabs, mop heads, and gloves. Wooden items including brooms, mop head and handles, HEPA filter frames, rulers, brushes, blocks, and Masonite, plywood, cork, fiber board, and chipboard items.

- **Plastic** materials including: polyethylene, polypropylene, polyvinyl chloride, phthalate, Koroseal, Tygon, styrene butadiene, polyurethane, Lucite, Nylon, Teflon, Nalgene, and epoxy (hardened), metallurgical (Bakelite) sample mounts, bottles, cups, dishes, pipettes, tubing, funnels, pipe, bags, filter cartridges, sheeting, vials, tape, syringes, markers, and other miscellaneous items.

- **Rubber** items including: Neoprene, Viton, butyl, latex, and silicone O-rings, gaskets, stoppers, hose, tubing, gloves, wire/cord insulation, and other miscellaneous items.

- **Glass** items including: glass, ceramic, alumina, porcelain, quartz, Pyrex, Vycor, and boron nitrite bottles, jars, tubing, caps, condensers, beakers, flasks, graduated cylinders, Petri dishes, plates, syringes, insulation (fiber glass), firebrick, insulators, light bulbs, thermometers, lenses, and other items.

- **Metal** items (ferrous materials) including: carbon steel, stainless steel, and cast iron cans, buckets, dies, slings, equipment, tools, tubing, fittings, rods, rings, rounds, chain, saw blades, dustpans, motors, fixtures, heating mantles, hot plates, mortar and pestles, steel wool, manipulator parts and tape, trays, variacs, vessels, capsules, and other miscellaneous scrap items.

- **Non-ferrous metals** items including: aluminum, brass, bronze, copper, lead, gold, tungsten, tantalum, tin, vanadium, zinc, zirconium, cans (including punctured aerosol cans), cladding, vials, mesh sample holders, sheeting, foils, tools, wire, shot, rods, cable, tubing, capsules, fittings, gaskets, gauges, plates, motors, pumps, samples, solenoid valves, thermocouples, variacs, light fixtures, and other miscellaneous scrap items.

In addition to the debris materials described above, waste stream AERHDM will also contain lesser amounts (less than 50 percent in any container) of homogeneous organic and inorganic materials. Clay and vermiculite based absorbents are used during the neutralization and evaporation of acids, etchants, and solutions generated during the passivation of reactive metals. Solidifications agents such as Portland cement, Acid Bond, Aquaset, Petroset, or Petrobond may also be used to immobilize some liquids.

Prior to February 2008, the packaging configuration for AGHCF containers in waste stream AERHDM consisted of (from inside to out) two 7-gallon waste cans, a fiber drum pouch spreader, an inner heat-sealed Polyvinyl chloride (PVC) pouch (with HEPA filter vent), a polyethylene drum liner, an outer heat-sealed PVC pouch (with HEPA filter vent), and a U.S. Department of Transportation (DOT) 17H 30-gallon drum (with filter vent). The filter vents used on the bags were specified as Nuclear Filter Technology, Inc. (NFT) NUCFIL-030 and NUCFIL-034. The 30-gallon drums are vented with NFT NUCFIL filter vents. Beginning in February 2008, the fiber drum pouch spreader and inner PVC pouch were not included in the packaging configuration resulting in the waste cans being loaded directly into the polyethylene drum liner. Higher activity irradiated test materials and residues (fuel pin fragments and, samples), referrered to as fuel examination waste (FEW), are packaged in the 7-gallon waste cans in a 1-gallon lead-shielded container (pot) braced with a centering rig in the 7-gallon waste can (see Section 5.5).

Argonne is planning to package AGHCF waste directly into the 30-gallon drum without the inner 7-gallon waste cans. This packaging configuration will consist of the waste packaged directly placed into an inner heat-sealed PVC pouch (with a NFT

NUCFIL 034 filter) placed into a DOT 17H 30-gallon drum (with a NFT NUCFIL filter vent) lined with a 140-mil polyethylene drum liner (See Section 5.5).

The packaging configuration for K-Wing containers in waste stream AERHDM consists of (from inside to out) an inner drop chute PVC pouch (with HEPA filter vent), a polyethylene or fiberboard 30- or 55-gallon drum liner, one PVC drum pouch with inner plastic, fiberboard, or wood discs for protecting top and bottom of pouch (with filter vent), and a DOT 17H 30- or 55-gallon drum (with filter vent). The filter vents used on the bags were specified as NFT NUCFIL-034. The 30- and 55-gallon drums are vented with WIPP-approved NUCFIL filter vents, respectively. Higher activity FEW specimens (fuel pin fragments and samples), are packaged in lead-lined high-integrity stainless steel tubes. Liquids are batched and immobilized in 5-gallon polycarbonate bottles (see Section 5.5).

Items prohibited from AGHCF RH TRU waste containers during the entire generation period for waste stream AERHDM included free liquids, residual liquids greater than one percent, compressed gases including aerosol cans, pyrophorics, explosives, and incompatible or potentially reactive chemicals. Liquids are not expected to be routinely present in any waste container in waste stream AERHDM, due to the AGHCF and K-Wing standard practice of evaporating and/or absorbing all liquids as described in Section 5.4.2.3. As described in Section 5.4.1 fuel examination residues (e.g., specimen fragments, swarf, cladding) have been added to waste stream AERHDM. Prior to packaging these residues are inspected, deactivated, and/or stabilized as necessary to ensure that the final waste form does not contain potentially reactive or phyrophoric materials.

Based on a March 2003 report certifying a non-hazardous waste determination submitted by the DOE Chicago Operations Office to the Idaho Operations Office, the containers in this waste stream have been and will continue to be managed as Resource Conservation and Recovery Act (RCRA) non-hazardous waste while at Argonne (Reference C147). Even though this waste stream will continue to be managed as non-hazardous by Argonne, EPA HWNs have been assigned to the waste stream due to the lack of analytical evidence demonstrating that these constituents would have not exceeded the regulatory thresholds. For this reason, the containers in this waste stream will be assigned the following EPA HWNs D004, D005, D006, D007, D008, D009, D010, D011, D019, D028, D029, F002, and F005 prior to shipment to WIPP. Refer to Section 5.4.2 for the waste stream chemical content evaluation.

Waste stream AERHDM meets the WIPP-WAP and the WCPIP waste stream definitions. The waste has a common physical form (debris), and contains similar hazardous and radiological constituents as a result of the waste being generated from a single activity (research and development experiments associated with the destructive examination of post-irradiated materials and associated maintenance and deactivation operations) (Refer to Section 4.6.1).

3.0 ACCEPTABLE KNOWLEDGE DATA AND INFORMATION

TRU waste destined for disposal at the WIPP must be characterized prior to shipment. Development of knowledge of the waste materials and processes that generate and control the waste is required to provide a clear and convincing argument about the characteristics of each waste stream. The AK characterization documented herein complies with the requirements of the WIPP-WAP (Reference 14) and the WCPIP (Reference 1) and was developed in accordance with CCP-PO-001 (Reference 8). The WCPIP identifies waste characterization requirements and methods to satisfy requirements in:

- 40 Code of Federal Regulations (CFR) Part 191, *Environmental Radiation Protection Standards for Management and Disposal of Spent Nuclear Fuel, High-Level and Transuranic Radioactive Wastes* (Reference 3)
- 40 CFR Part 194, *Criteria for the Certification and Re-Certification of the Waste Isolation Pilot Plant's Compliance with the 40 CFR 191 Disposal Regulations* (Reference 4)
- *Criteria for the Certification and Re-Certification of the Waste Isolation Pilot Plant's Compliance with the 40 CFR Part 191 Disposal Regulations: Certification Decision* (Reference 5)
- Public Law 102-579, *The Waste Isolation Pilot Plant Land Withdrawal Act* (LWA) (Reference 6)

This report presents relevant information from the review of AK source documents relating to historical Argonne operations, waste generating processes, and waste management practices. In addition, the available information has been reviewed to determine the physical, chemical, and radiological composition of waste stream AERHDM. More than 300 source documents were originally collected by IT Corporation for Bechtel BWXT during an AK program initiated in 2000 for the Argonne waste shipped to INL between 1976 and 1995. Examples of these source documents include, safety analysis reports, procedures and radiological calculations describing isotopic content of the waste, release permits, material inputs to the waste generating process, diagrams, results of waste characterization programs, and site mission descriptions identifying defense and non-defense operations.

In addition to the RH waste generated by the AGHCF originally included in waste stream AERHDM, Argonne will generate containers of similar RH debris hot cell waste during the cleanout of K-Wing and additional containers of AGHCF debris previously stored as accountable materials. In an effort to collect sufficient AK to demonstrate that these containers should be included in waste stream AERHDM, the following sources were collected and reviewed:

- Existing CCP AK records collected for the characterization of RH TRU waste generated at AGHCF containing relevant information associated with K-Wing operations supporting these AGHCF operations;
- K-Wing documents associated with historic operations, current waste management activities, and proposed deactivation plans;
- Interviews with generators of the waste stored in K-Wing and
- AGHCF radioactive inventory records and reports containing relevant research and calculations associated with high-burnup operation of commercial LWR fuel and storage of commercial spent nuclear fuel.
- Review of current waste characterization documentation and waste management and packaging activities (Revision 7).

In addition, an evaluation was performed (Reference C2027) comparing the accountable materials identified in the K-Wing inventory (Reference U2004) and AK source documents collected during the characterization of the waste materials originating from the AGHCF. This comparison was performed to verify the traceability of the same and similar irradiated fuel materials examined in both the K-Wing and AGHCF and verify that the resulting flow of these materials between these areas would have resulted in the commingling of the same radiological and chemical contaminants as these materials were transferred between the different examination areas.

The references and AK sources used to prepare this report are listed in Sections 8.0 and 9.0, respectively. The AK sources referenced within this report by alphanumeric designations (i.e., C001, P001, U001, and DR001) correspond to the Source Document Tracking Number using the following convention:

- C – Correspondence (i.e., memoranda, letters, e-mail, interviews)
- DR – AK Discrepancy Reports
- P – Published Sources (i.e., reports, controlled procedures)
- U – Unpublished Data (i.e., data bases, analytical data, draft reports)

4.0 REQUIRED PROGRAM INFORMATION

This section presents the mandatory TRU waste program information required by the WCPIP and the WIPP-WAP for waste stream AERHDM (References 1 and 14). This section provides a description of the Argonne operations associated with the generation and management of RH TRU waste generated at the Argonne AGHCF, K-Wing and Waste Facilities. In addition, a description of the facilities, summary of the mission, defense determination, and descriptions of operations associated with the generation of waste stream AERHDM are provided.

4.1 Facility Location

Argonne is located on a 1,275 acre site in the Des Plaines River Valley of DuPage County, Illinois, approximately 22 miles southwest of downtown Chicago and 25 miles west of Lake Michigan. Laboratory facilities occupy about 200 acres of the total Argonne site area. Surrounding Argonne is the 2,040 acre Waterfall Glen Forest Preserve, a greenbelt forest preserve of the DuPage County Forest Preserve District. The AGHCF is located in the 200 or Core Area of Argonne within the Waterfall Glen Forest Preserve. The AGHCF is approximately 2,200 feet from the nearest site boundary to the north, and significantly further in all other directions. Figure 1, Location of the Argonne Site, and Figure 2, Argonne Site Map, provide maps of the Argonne site and facilities (References P004 and P380).

4.2 Facility Description

The 200 Area building containing the AGHCF was built in the late 1950s and started operations in the early 1960s as the "Fuels Technology Center" under the direction of the Metallurgy Division. The overriding design criterion for the 275,000 square foot building was to allow Argonne to conduct research programs pertinent to the advancement of reactor technology, with a particular emphasis on the use of plutonium as fuel. With this in mind, facilities were designed to accommodate radiation fields and the unique handling requirements associated with plutonium (References 2, 7, P002, P027, and P380).

The building is laid out in eight wings (A through H), primarily to limit the extent of contamination due to accidental release or fire. The AGHCF occupies 12,500 square feet of the F-Wing. The main section of the AGHCF consists of an 11-foot by 32-foot area under a high purity nitrogen atmosphere, with additional work stations and service space. Equipment from the AGHCF includes a kilocurie hot cell, a shielded electron microprobe, two shielded gloveboxes, a scanning electron microscope, an Auger electron microprobe, and a Decontamination and Repair Area (DRA). The hot cell was capable of in-depth post-irradiation examinations of fuel elements, fuel, cladding, and structural materials, and small test components. A shielded microscope was connected to the cell by a nitrogen pneumatic transfer system. The shielded gloveboxes were used for preparing small specimens of fuel for electron microscopy, or other tests, and for density measurements on claddings (References 2, 7, C138, C335, P002, P004, P378, P380, and U2014).

The 200 Area Chemical Technology Building containing the K-Wing was built in the 1949 to 1950 time period; the K-Wing was added in 1956. The facility was operated as part of Argonne's Chemical Technology (CMT) Division. The overriding design criterion for the 260,000 square foot building was to allow Argonne to conduct various experiments, including programs supporting process development for the treatment of radioactive materials and waste forms from the nuclear fuel cycle. With this in mind, facilities were designed to accommodate radiation fields and the unique handling requirements associated with both pre- and post-irradiated nuclear fuel (References C2002, C2003, C2004, C2005, C2006, C2007, P2000, P2016, and P2018).

The building is a multilevel structure built on a sloping site. It is irregularly shaped with a number of wings and high bay areas in large part to the later additions installed in 1956. K-Wing is situated on the ground floor of the CMT building and consists of three hot cells (referred to as the Senior Cave), a manipulator room for the hot cells (operating area), a support area including isolation rooms behind the hot cells, and a combination workshop manipulator preparation area (service area).

The heavily shielded cells of the Senior Cave were designed to handle up to 10,000 curies of one MeV gamma activity in Cells A and B and 10 curies in Cell C. The Senior Cave was capable of in-depth post-irradiation examinations of fuel materials involving the development of pyroprocessing techniques, aqueous biphasic extraction studies, and long-term testing of radioactive waste forms (References C2002, C2005, P379, P1001, P2011, P2016, and P2018).

The Waste Management Operations Department (WMO) is responsible for radioactive waste management at Argonne. The WMO operates four nuclear facilities and several radiological facilities providing waste collection, treatment, storage, certification, and shipping of radioactive waste. RH TRU waste containers are managed in approved storage areas in the Waste Management Operations Building 306, concrete bunkers in the WMO Facility, and the Radioactive Waste Storage Facility Yard (References 7, C335, P002, P611, and U332).

4.3 Facility Mission

Argonne is a multi-disciplinary research laboratory that performs work in basic and applied science in the areas of engineering, energy technology, chemistry, physics, materials, biomedicine, and environmental studies. The current mission expanded from the initial experiments performed at the University of Chicago in 1941 to produce plutonium for the Manhattan Project. Officially founded by the AEC in 1946 as the first national laboratory, Argonne has been instrumental in the development of nuclear reactors and associated systems, materials, fuel elements, and components for use in both civilian and defense programs. This work included key participation in the development of essentially all the nuclear reactor systems in use today for isotope production, power generation, and naval submarine propulsion, as well as experimental or proposed weapons applications, defense waste management, defense security and safeguards, and space propulsion (References 2, 7, P002, P013, P014, and U003).

The AGHCF, in operation since 1964, was originally designed to perform post-irradiation examination (PIE) for advanced fast reactor fuel materials containing plutonium for the LMFBR Program. The primary role of the DOE PIE facilities was to support fuel surveillance, fuel improvement and development, failure analysis, and postmortem analysis of safety-related tests. This mission required that the facilities were designed to accommodate radiation fields and the unique handling requirements associated with plutonium materials. During early operations, the AGHCF was used primarily for the PIE metallographic studies of fuel and structural materials. As the emphasis in reactor development programs changed, additional equipment and techniques were developed to supply the information required in these new areas of interest. Specifically, this included information relating to the behavior of advanced ceramic fuel materials, such as the mixed carbides and mixed oxides (MOXs) of uranium and plutonium. Fuel materials received and examined by the AGCHF originated from ANL-W reactors including the Experimental Breeder Reactor-II (EBR-II), Transient Reactor Test Facility (TREAT), Fast Flux Test Facility (FFTF), Materials Test Reactor (MTR), and Advanced Test Reactor (ATR) test and research reactor facilities. Other test materials were also received from Savannah River Site (SRS), Hanford, Oak Ridge National Laboratory (ORNL), and Los Alamos National Laboratory (LANL) operations (References 2, 7, C016, C046, C074, C082, C108, C138, C155, C157, C812, C2005, C2007, C2011, C2022, C2023, C2024, P002, P013, P061, P329, P520, P532, P606, P607, P815, P816, P817, P822, P826, P827, P829, P2032, P2033, P2034, U045, U076, U1003, U2002, and U5003).

The Irradiation Performance Section (IPS) is responsible for conducting experiments and analysis in support of the development of national science and technology goals. As the only hot cell facility of its kind in the U.S., the AGHCF maintained the capabilities to perform certain types of testing in conjunction with other examination and testing methods in the same remotely controlled environment. It was constructed of a single hot cell divided into three main areas subdivided into ten work stations. Operations at work stations included sectioning, grinding, polishing, metallography, storing irradiated samples, gamma spectroscopy and scanning, high-temperature testing, fission gas collection and analysis, macrophotography, and profilometry. The hot cell also houses a single work station for waste sorting and packaging. In 1983, the DRA was built to allow for the repair of in-cell equipment (i.e., manipulators) (References C066, C108, C138, C335, P320, P397, and U001).

While recent research conducted by the IPS continues to contribute to the DOE mission of advancing nuclear science and technology, the research is also funded by many other sources, including the U.S. Nuclear Regulatory Commission (NRC), Electric Power Research Institute (EPRI), U.S. National Nuclear Security Administration (NNSA), and international sponsors. A majority of the research conducted since the late 1990s has supported NRC and EPRI sponsored programs initiated to ensure safe and economical high-burnup operation of commercial LWRs and NRC/EPRI/DOE co-sponsored research to ensure the safe storage of commercial spent nuclear fuel in dry casks and permanent repositories. Fuels from Quad Cities, H.B. Robinson, Surry, Limerick, Three Mile Island, and other LWRs were analyzed to support these programs

(References C2012, C2013, C2014, C2015, C2016, C2017, C2018, C2019, C2020, C2021, P2032, P2033, P2034, and U076).

Founded in 1947 as the Chemical Engineering Division, the Division's name was changed to the Chemical Technology Division in 1982 to better reflect its more diversified activities. Originally, the Division's only mission was to develop processes for recovery of spent nuclear fuels. Over the years, the mission expanded to include research and development in a wide variety of chemistry and related applications, including fuel cells, radioactive waste management, environmental chemistry, and geochemistry. The Chemical Technology Division's primary mission is the safe application of chemical and engineering disciplines and techniques to process design and development in areas that are energy related, or are related to other parts of the DOE charter such as nuclear energy, waste management, environmental restoration and remediation, production and transformation of nuclear and other materials, and energy utilization (Reference 7).

The Chemical Technology Division has been involved in numerous reactor and waste management programs during the 1980s and 1990s. Reactor program involvement included work on the Integral Fast Reactor (IFR) fuel cycle, fuel treatment studies using Hanford N-reactor fuel, and Proof-of-Breeding studies for naval nuclear reactors. Waste management program support included studies for the Defense Waste Processing Facility at Savannah River in support of the Yucca Mountain Project; radiolytic gas generation studies for ceramicrete waste forms; fabricating, characterizing, and testing ceramic waste forms for weapons plutonium disposal; testing of vitrified waste forms for application to the Hanford tank wastes; developing final flowsheets for the Transuranium Extraction (TRUEX) process using New Brunswick Laboratory waste and for application to Hanford wastes; and plutonium recovery from defense waste (scrap and residues) in cooperation with Lawrence Livermore National Laboratory (LLNL) and the Savannah River Laboratory. CMT has also provided direct support to the WIPP program for actinide solubility in brine studies (Reference 7).

In conjunction with AGHCF operations, K-Wing has been used for handling and experimentation with both pre- and post-irradiated fuel materials. Experiments conducted in the K-Wing involved the development of pyroprocessing techniques, aqueous biphasic extraction studies, and long-term testing of radioactive waste forms to: (1) determine the mode of degradation of the spent fuel that will occur under the unsaturated conditions that are anticipated for the Yucca Mountain repository, and (2) validate current models of spent fuel corrosion. Most recently, experimentation with the UREX solvent extraction process and chemistry related to fuel reprocessing dominated activity in the cells (References C2002, C2004, C2005, C2006, C2007, C2027, C2029, C2030, C2031, P344, P2000, P2011, U2002, and U2004).
In July 2007, programmatic activities in the Chemical Technologies Building K-Wing Laboratories were temporarily suspended. Subsequently, Argonne decided to make the suspension permanent and to de-inventory the facilities. The new mission for K-Wing is to reduce its current inventory of radioactive material to below that of a hazard category-3 facility via a Nuclear Operations Deactivation, Decommissioning, and Demolition Project. This deactivation project is guided by a basis for interim operations

which will direct fuel encapsulation/packaging of fuel inside of and exterior to the hot cells; liquids processing, packaging, and removal from the hot cells; and residual solid material removal, including material in the hot cells (References P012, P2011, and P2016).

4.4 Defense Waste Assessment

WIPP requires generator sites to use AK to determine that TRU waste streams to be disposed of at WIPP meet the definition of TRU defense waste. TRU waste is eligible for disposal at WIPP if it has been generated in whole or part by one of the atomic energy defense activities listed in Section 10101(3) of 42 U.S.C 10101, *Nuclear Waste Policy Act of 1982* (NWPA) (Reference 9). Based on the review of AK there is sufficient evidence to demonstrate that TRU wastes generated by AGHCF and K-Wing operations are contaminated with materials from atomic energy defense activities associated with naval reactor development, materials security and safeguards, and defense research and development activities. Additionally, Argonne has played an integral role supporting the underlying historical and ongoing defense missions associated with the DOE test and research reactor programs described below.

The U.S. has historically operated and continues to operate reactors used for the development of nuclear energy technology. Additionally, these reactors have been utilized to produce radioisotopes for medical, industrial, and military purposes; to generate neutron environments for scientific research; and to conduct irradiation experiments in support of the government's defense, space, fusion, and advanced reactor programs. Collectively referred to as test and research reactors, these facilities have been typically operated by private contractors for the DOE. Mixed oxide, carbide, and alloy fuels for, or tests in, the DOE breeder reactor research and testing program (formerly the AEC and U.S. Energy Research and Development Administration [ERDA] Fast Breeder Reactor Program) were manufactured with plutonium obtained primarily from DOE production reactors at the Hanford and SRS sites. DOE test and research reactor facilities include the ANL-E Chicago Pile-5 (CP-5), ANL-W EBR-II, Zero Power Plutonium (Physics) Reactor (ZPPR), ATR, TREAT, and Hanford FFTF. The ANL-W, Argonne, and LANL hot cell facilities have played a major role in the examination of fuel specimens generated by this program and the AK documentation verifies the ongoing receipt, examination, and management of mixed oxides, carbide, and alloy fuels at the AGHCF and K-Wing (References C046, C074, C124, C301, C302, C304, C330, C812, P002, P394, P520, P585, P586, P815, P5001, U009, U040, U076, U307, and U5001).

In 1967 the AEC initiated the LMFBR Program for developing and demonstrating fast breeder reactor technology for safe, reliable, and economical energy production. Critical to this demonstration program was the design, development, and construction or modification of facilities capable of manufacturing, testing, and examining these reactor materials. The first challenge was the procurement and development of domestic commercial capabilities to manufacture mixed oxide fuel to support the plans for future commercial reactors. To this end, the AEC awarded contracts to Kerr-McGee and NUMEC (a division of Babcock and Wilcox), to manufacture mixed oxide fuel pins for this program. Between 1968 and 1979, Kerr-McGee and NUMEC produced mixed

plutonium-uranium fuels for the LMFBR Program (References C331, P016, P394, and P587).

The ANL-W EBR-II and Hanford FFTF reactors were the most important facilities in the LMFBR Program. The FFTF was constructed to produce higher neutron flux and testing capabilities than produced by EBR-II. The FFTF's unique capability allowed for closed-loop testing of a variety of fuels, control materials, and structural materials in a controlled fast neutron flux environment approximating that required for the development of fast breeder commercial power generation. Ongoing examination with LMFBR mixed fuel specimens originating from NUMEC, FFTF and EBR-II have been conducted at the AGHCF and K-Wing hot cells. These hot cell facilities continue to manage mixed fuel specimens received at Argonne between 1965 and 1995 (References C124, C138, C305, C330, C812, C2007, C2027, P394, P586, U007, U011, U012, U040, U076, U307, U1003, and U5003).

During its ten years of operation (1982-1992) the FFTF supported a variety of experiments associated with industrial, nuclear energy (domestic and international), nuclear defense, and medical research and development. Several projects were identified having defense applications, including a series of tests to evaluate tritium production by the irradiation of lithium oxide targets. This joint venture with Canada and Japan assessed tritium production from these proposed breeder materials in a fusion facility. The Multiple Isotope Production project generated physics data on plutonium-238 isotope production and also demonstrated the capability of the FFTF to produce more than 20 other isotopes for defense, medical, and industrial programs. In 1992, defense missions proposed for the FFTF included large-scale tritium production projects, continued defense isotope production, waste burn experiments, and defense nuclear waste transmutation (References C331 and P587).

EBR-II supported ongoing defense experiments conducted throughout the 30-year operating life of the reactor (1964-1994). In 1968-1969, the reactor was converted to a fast-reactor irradiation test facility. Test fuels and materials were placed in the core assemblies identical to those holding the driver fuel assemblies. In addition to supporting the LMFBR Program, numerous experiments were conducted for defense applications, including support of the Bettis Atomic Power Laboratory dedicated to supporting the Naval Nuclear Propulsion Program. Other defense program experiments conducted at EBR-II included radiation of thermionic elements and tritium production test materials. During its final year, experiments included a cooperative effort between LANL and LLNL to demonstrate disposition of weapons plutonium in a fast reactor (Reference P599).

The EBR-II, TREAT, ZPPR, and FFTF reactors also supported the irradiation of experimental fuel pins manufactured at LANL as part of the SP-100 Fuel Pin Irradiation Testing program during the late 1980s and early 1990s. This program, initiated in 1983, was jointly funded by National Aeronautics and Space Administration (NASA), DOE, and the Strategic Defense Initiative Organization (SDIO). The SDIO (better known as the "Star Wars" program) was established to pursue technology in the development of a viable and comprehensive ballistic missile defense program. The SP-100 program's

objective was to verify and validate the design of a compact, fast-spectrum nuclear reactor fuel for a broad range of national defense-related space applications. There is no evidence that the AGHCF was involved directly in the examination of SP-100 fuel specimens, however, the hot cells examined EBR-II driver fuels and other test materials in the reactor during these SDIO experiments. Even though the primary mission of the DOE test and research reactors was focused on the development of commercial energy technology, the reactors had an underlying defense mission and ongoing defense research and development experiments were conducted in these facilities (References C068, C074, C329, C330, C331, C812, C2005, C2007, C2011, C2022, C2023, C2024, P584, P588, P2032, P2033, P2034, U067, U068, and U330).

In 1978, the Reduced Enrichment Research and Test Reactor (RERTR) Program was established by the DOE at ANL to minimize the use of highly-enriched uranium (HEU) in civil nuclear programs. RERTR is a nuclear nonproliferation program currently administered by the NNSA in coordination with the Department of State, the Arms Control and Disarmament Agency, and the NRC. The primary mission of this international program is to develop the technology required for use of low-enrichment uranium (LEU) for use in test and research reactors to reduce the amount of HEU available for weapons production. Numerous fuel samples fabricated at ANL-W and irradiated in reactors including the ATR have been received and examined at the AGHCF (References C073, C124, C157, P010, P029, P373, P374, P375, P520, P551, P575, P583, P599, P606, P607, P815, P816, P817, P822, P826, P827, P829, P2032, P2033, P2034, U003, U007, U076, and U830).

The AGHCF also received IFR plutonium-uranium-zirconium metallic alloy fuel specimens from the EBR-II, TREAT, and FFTF facilities. The IFR mission included goals to improve nuclear power with respect to safety, waste management, fuel efficiency, and proliferation resistance fuels. Like RERTR, the IFR Program supported the DOE nonproliferation mission by creating a closed loop reactor system making it unnecessary to move fuel on or off the reactor site during the 30 to 40 year life cycle of the plant. The IFR Program began in 1983 and ran through September 30, 1994 (References P008, P010, P017, P603, P2032, P2033, P2034, and U003).

In addition to the defense support described above, the following defense related experiments were supported by the AGHCF and K-Wing (References 17, C006, C011, C068, C092, C103, C124, C152, C305, C335, C2027, P028, P320, P325, P329, P389, P520, P585, P599, P815, P819, P821, P2029, P2030, P5001, U001, U003, U007, U023, U040, U045, U076, U307, U1003, U2002, U2004, and U5003):

- Hanford research involving the examination of N-Reactor fuel to obtain data relating to corrosion characteristics and corrosion rates of the fuel and cladding. This research was needed to support the design, transportation, and interim storage of fuels, in addition to addressing questions related to behavior of fuels during staging and stabilization.

- Naval Research Laboratory research involving the examination of specimens from the Knolls Atomic Power Laboratory and Bettis Atomic Laboratory irradiated in the ATR. Experiments included the examination of blanket fuel plates and auger analysis of irradiated corrosion samples. The ATR is the principal irradiation facility for the development of naval reactor fuels and materials.

- Support of the Liquid Water Breeder Reactor Program to develop technology to significantly improve the utilization of the Nation's fuel resources by combining the established commercial Pressurized Water Reactor technology with a thorium/uranium-233 oxide binary fuel system. This program was conducted under the technical direction of the Naval Reactors Program.

- Gulf General Atomic has been listed as a sponsor for defense-related programs at ANL-W that have sent fuel specimens to the AGHCF. Specifically, oxide fuel designated G1-7 received at the AGHCF was listed as defense-related by an ANL-W defense determination.

- Lithium containing specimens (IRIS, LILAC, and LILY) irradiated at the ATR to generate tritium as part of classified defense research and development activities (naval reactor development and defense nuclear materials security).

- Fuel specimens from the IRIS and a defense-related vibratory compacted fuel rod program are currently managed in the AGHCF inventory in the hot cell.

- Examination of CP-5 irradiated specimens and management of CP-5 converter tubes.

Civilian programs identified in the AK record that submitted specimens to the AGHCF include Belgonucleair, Big Rock Point, Braidwood, Browns Ferry, Calvert Cliffs, CANDU, Carolina Power, Dresden, Exxon Nuclear Fuel, H.B. Robinson, Limerick, Quad Cities, Saxton, Shippingport, Surry, Three Mile Island, Turkey Point, and Zion, commercial reactors (References C036, C318, C2004, C2005, C2012, C2013, C2014, C2015, C2016, C2017, C2018, C2019, C2020, C2021, P344, P515, P518, P519, P523, P602, P2000, P2001, P2002, P2003, P2004, P2005, P2006, P2007, P2008, P2009,

P2019, P2020, P2032, P2033, P2034, U007, U076, U307, U309, U1003, U2002, U2004, and U5003).

In addition to combining waste materials during the ongoing destructive examination of materials from different programs, AGHCF personnel estimate that 7.5 percent of the fuel dust generated during cutting, grinding, and polishing would remain in the examination area contaminating hot cell surfaces and equipment. This contamination would remain in the area to commingle with wastes generated during subsequent examinations. The AGHCF and K-Wing continue to store, manage, and utilize research materials, in addition to HEPA filters and swarf (cutting and grinding dust and fines) accumulated throughout the 40-year operational history (References C004, C007, C036, C125, C301, C302, C303, C304, C305, C2027, P394, P396, P414, P469, P532, P557, and U307).

Separation of contamination from destructively examined specimens was not and is not a possibility in the facility due to various factors such as the open atmospheric conditions within the cell, contamination of handling equipment including manipulator arms, the nature of ongoing work being in the hot cell, and continuing management of historical fuel specimens. As a result of the waste management practices and destructive analytical nature of the operations conducted in the AGHCF and K-Wing hot cells, segregation of cross-contaminated non-defense waste from defense-related waste is not feasible. Therefore, waste stream AERHDM is eligible for disposal at WIPP as a commingled defense waste stream generated "in part" by the atomic energy defense activities described in this section (References C001, C2027, P001, P002, P025, U001, and U013).

4.5 High-Level Waste and Spent Nuclear Fuel Assessment

The WIPP LWA (Reference 6) prohibits the disposal of spent nuclear fuel and high-level waste as defined by the NWPA (Reference 9) at WIPP. According to the NWPA, spent nuclear fuel is "fuel that has been withdrawn from a nuclear reactor following irradiation, the constituent elements of which have not been separated by reprocessing." *The DOE Radioactive Waste Management Manual* (Reference 18) expands on this definition to clarify that "Test specimens of fissionable material irradiated for research and development only, and not production of power or plutonium, may be classified as waste, and managed in accordance with the requirements of this Order when it is technically infeasible, cost prohibitive, or would increase worker exposure to separate the remaining test specimens from other contaminated material." This RH waste stream contains test residues, test materials, and the resultant test fragments from the fuel pin test specimens, including irradiated pin fragments and dispersed particulate (fines and dust). Intact irradiated fuel pin test specimens were managed separately from the hot cell waste and are not included in the waste stream. The K-Wing and AGHCF accountable materials inventories were reviewed to verify the materials to be packaged did not contain intact irradiated fuel pins (References U076, U2004, and U5001).

High-level waste is defined by the NWPA as "the highly radioactive material resulting from the reprocessing of spent nuclear fuel, including liquid waste produced directly in

reprocessing and any solid material derived from such liquid waste that contains fission products in sufficient concentrations, and other highly radioactive material that the Commission, consistent with existing law, determines by rule requires permanent isolation." The waste produced from the K-Wing and AGHCF hot cell facilities originated from laboratory operations associated primarily with research associated with the examination of irradiated materials and R&D laboratory-scale technology development. Even though reprocessing research associated with UREX separations was performed in the K-Wing, these R&D laboratory operations were not production operations involving the separation or reprocessing of constituent elements from reactor fuel. Therefore, the waste associated with these operations is not high-level waste and is eligible for disposal at WIPP as RH TRU waste. It should be noted that vitrified samples of high level waste surrogates, and related debris previously stored in the K-Wing associated with West Valley and SRS studies prepared during Yucca Mountain corrosion studies will not be included in waste stream AERHDM, pending further evaluation documenting that these materials are not high-level waste and are eligible for disposal at WIPP (References C2033, P004, P380, P2010, P2011, P2018, P2023, P2024, and U2004).

4.6 RH TRU Waste Management

The elements of RH TRU waste management discussed in this section include waste identification, segregation, and characterization, as well as organizational and administrative controls that are in place to ensure proper management of RH TRU waste in the AGHCF and K-Wing.

The technicians performing the work at the AGHCF workstations were responsible for handling waste, maintaining records, moving packaged waste off-site for disposal, and procuring appropriate waste containers. Information such as waste volume, gross weight, physical description of container, serial number, combustible and noncombustible designation, radiation smear survey results of the payload container exterior, and weights and type of fissile content, are documented prior to the transfer of waste containers from the AGHCF to WMO (References C335, P006, U002, and U332).

Even though the specific AGHCF waste management practices and associated documentation varied over the time frame of RH TRU waste generation, general waste generator responsibilities included the following (References C136 and P055):

- Keeping the amount of radioactive wastes to a minimum by early planning.
- Maintaining knowledge of waste handling procedures.
- Planning for proper waste production, discussing any unique or large quantities of this waste with the WMO Manager, and informing Health Physics, Special Materials Group, and WMO of waste that was "non-routine" in nature.
- Segregating wastes by separating TRU waste from non-TRU waste and combustibles from noncombustibles.

- Placing radioactive wastes into acceptable receptacles to ensure segregation requirements were met.
- Providing information about the waste as requested on the appropriate waste packaging forms.
- Arranging with WMO to load shipping containers.
- Requesting radiation surveys of filled receptacles by contacting Health Physics.
- Managing filled waste receptacles as required by Health Physics to confirm that no materials were added once the Waste Disposal Requisition documentation had been completed.
- Labeling of waste containers with the Waste Disposal Requisition serial number.
- Obtaining Special Materials Group approval when waste was found to contain accountable nuclear material.

TRU waste packaging campaigns have been conducted periodically in the AGHCF, beginning in 1975. The waste shipped to INL through 1995 are addressed in CCP-AK-INL-500 (Reference 2).

Waste generated prior to and during the clean-out campaign of the K-Wing hot cells in late 1995 was characterized as CH radioactive waste, and was managed and disposed of in accordance with Argonne Site waste handling procedures as described in the Site Waste Handling Procedures Manual; that waste is not included in waste stream AERHDM. Waste removed from the hot cells at the time of clean-out consisted of glass and plastic bottles, metal cans, wipes, and other similar debris waste. Waste was removed from hot cells A and B via remote handling through hot cell C and placed into 55-gallon drums. This CH waste sent to WMO for disposal at WIPP is described in CCP-AK-ANLE-001, *Central Characterization Project Acceptable Knowledge Summary Report For Argonne National Laboratory – East Contact-Handled TRU Waste Facility Maintenance and Laboratory Operations* (References 7, C009, and P2015).

The management and packaging of waste existing in the K-Wing area is documented in several K-Wing Deactivation plans and procedures, as illustrated in Figure 6, K-Wing Waste Management. There are three types of radioactive material to be removed: fuel sections and fragments left over from previous experiments (as described in Section 4.7.2), solid debris stored within the three K-Wing hot cells and in adjacent shielded rooms K-108 and K-116; and solutions stored within hot cells A and B. In addition, solid and liquid waste materials generated during the same K-Wing operations transferred from the building (stored in Building 306) will be transferred back to be managed with the waste within the facility. The fuel sections and fragments and solid debris are removed from A- and B-Cells by transferring the items through the drum port in the Alpha Barrier and placing them in a waste drum or transfer container located in C-Cell. Prior to transfer to C-Cell, some of the waste items are size-reduced either by disassembling or using appropriate equipment (saw, shear, or nibbler)

(References C2029, C2030, C2031, P2010, P2011, P2012, P2013, P2014, P2016, P2038, P2039, U2011, and U2012).

The solid debris stored in Isolation Room A (Room K-108) and the K-Wing Service Area (Room K-116) (see Figure 4, K-Wing Process Area) are transferred into the hot cells for repackaging or repackaged in place (depending on the rem per hour [R/hr] dose rate) to meet the RH TRU waste packaging requirements and transferred to WMO for storage and disposal (References P2011, P2012, P2015, P2016, P2038, P2039, U2011, and U2012).

Various solutions (nitric acid aqueous solutions, aqueous/organic multi-phasic solutions, and organic solutions) with dissolved fuel particles are stored within A- and B-Cells. The aqueous portion is removed from the multi-phasic solutions, and all aqueous liquids are neutralized and solidified prior to removal from these two cells into C-Cell. The organic solutions are transferred out of A- and B-Cells to the B-Iso glovebox for treatment and disposal outside of the AERHDM waste stream (References P2010, P2011, P2013, P2016, P2038, P2039, U2011, and U2012).

4.6.1 Types and Quantity of TRU Waste Generated

Waste stream AERHDM originally consisted of 44 30-gallon drums (4.8 m^3) of RH TRU organic and inorganic debris packaged (inner waste cans) in the AGHCF between February 1993 and February 2002. It is estimated that an additional 340 30-gallon drums (37.4 m^3) will be generated during packaging of the waste contained in the cells and ongoing operations in the AGHCF which includes approximately 120 drums of similar debris including irradiated fuel test materials and residues (debris, fuel pin fragments, samples, capsules, and swarf) previously stored as accountable materials in the AGHCF. The container specific records have been reviewed for each container to verify the composition and origin of the waste stream inventory. It has been determined that every container presently included in waste stream AERHDM was generated from AGHCF operations and meets the WIPP-WAP and WCPIP waste stream definition of waste material which is similar in material, physical form, hazardous constituents, and radiological properties generated from a single process or activity (References C333, C335, C2025, DR013, DR023, P2032, P2033, U076, U332, and U2003).

Waste stream AERHDM also includes an estimated 75 55-gallon drums (15.6 m^3) of RH TRU organic and inorganic debris to be packaged from the K-Wing hot cells originating from experiments conducted between 1996 and 2007. The waste is generated during packaging of solid material stored within the three K-Wing hot cells, solid material stored outside the hot cells in shielded rooms K-108 and K-116, and neutralized and solidified solutions stored within the hot cells. In addition, solid and liquid waste materials generated during the same K-Wing operations transferred from the building (stored in Building 306) will be transferred back to be managed with the waste within the facility. The K-Wing hot cells inventory and visual observations have been used to verify the composition and origin of the waste stream inventory. Most of the materials tested in the K-Wing hot cells originated from AGHCF experiments or consisted of reactor test specimens from the same commercial reactors (H.B. Robinson, Quad Cities, Big Rock

Point, Limerick) also being examined in the AGHCF. To further justify the inclusion of K-Wing waste materials in waste stream AERHDM, an evaluation was performed to provide a comparison between the accountable materials identified in the K-Wing inventory (Reference U2004) and AK source documents collected during the characterization of the waste materials originating from the AGHCF. This comparison was performed to verify the traceability of specific materials examined in both the K-Wing and AGHCF and verify that the resulting flow of these materials between these areas would have resulted in the commingling of the same radiological and chemical contaminants as these materials were transferred between the different examination areas. For these reasons, the examination wastes generated in the K-Wing and AGHCF meet the WIPP-WAP and WCPIP waste stream definitions of waste material which is similar in material, physical form, hazardous constituents, and radiological properties generated from a single process or activity (References C2006, C2007, C2009, C2027, C2029, C2030, C2031, DR023, P2011, P2013, P2014, U2001, U2003, U2004, and U2006).

As described in Section 5.4.1.2, all of the containers in the stream will have originated from AGHCF and K-Wing remote hot cell examination operations unchanged containing the same type of materials in approximately the same relative percentages. As described in Section 5.5, periodic campaigns have been conducted in the AGHCF to prepare shipments of TRU waste containers to be sent to the WIPP. Wastes have been generally collected at individual work stations and then moved to the waste packaging area in WS 5 to be stockpiled until the next packaging campaign. Technicians in WS 5 visually examined, sorted, and loaded the waste. Technicians in the K-Wing will visually examine, sort, and size-reduce (as necessary) the solid debris, neutralize and solidify the aqueous liquids, and load the waste into containers to be bagged out of the B-Cell into drums in the C-Cell. Due to these waste management practices, in conjunction with the destructive nature of the examinations performed in the AGHCF and K-Wing, further delineation of this waste stream based on radiological contamination is not feasible. In addition, the waste stream contains waste materials generated during material transfer, storage, hot cell maintenance, and waste management operations that could contain any radiological materials contaminating the cell surfaces and equipment (References C332, C333, C2008, C2009, C2027, P023, U332, and U2010).

4.6.2 Correlation of Waste Streams Generated from the Same Building and Process

Waste stream AERHDM consists of RH debris from the AGHCF and K-Wing operations described in Section 4.7. This RH waste stream is identified in DOE/TRU-12-3425, *Annual Transuranic Waste Inventory Report – 2012* (Reference 25) as waste stream identification number AE-T009. This RH waste stream correlates to the following certified RH and CH waste streams containing TRU waste generated in these facilities:

- **ID-ANLE-S5000** – RH debris waste stream shipped to INL between 1976 and 1995 (ATWIR Number IN-AE-AGHC-02 and IN-AE-AGHC-02T).
- **AECHDM** – CH debris waste generated by WMO operations at Argonne shipped to WIPP during the 2000 to 2003 time frame (ATWIR Number AE-T001).
- **AECHHM** – CH homogeneous waste generated by WMO operations during the immobilization of organic and aqueous solutions at Argonne shipped to WIPP during the 2000 to 2003 time frame (ATWIR Number AE-T003).
- **ID-AECHDM** – CH debris waste generated by WMO operations at Argonne shipped to AMWTP for certification beginning in 2011 (ATWIR Number AE-T001).
- **ID-AECHHM** – CH homogeneous waste generated by WMO operations during the immobilization of organic and aqueous solutions at Argonne shipped to AMWTP for certification beginning in 2011(ATWIR Number AE-T003).

4.6.3 Waste Stream Identification, Categorization, and Delineation

The Argonne Waste Acceptance Criteria is described in the *Waste Handling Procedures Manual* (Reference P2015). The manual states that waste generators have the primary responsibility for compliance with the Argonne Waste Acceptance Criteria, including characterizing their waste by completing the WMO-195 and WMO-195A forms. Each WMO-195 form has a unique identification number/barcode that is used for waste tracking. The barcode label must be affixed to the container of TRU waste represented on the WMO-195 form. The manual requires training for all TRU waste generators in waste generation planning, segregation, container management, and characterization (Reference P2015).

The WMO-195 form requires the following information be provided for TRU waste:

- Generator location (division, building, room, program)
- Approved container type
- Radionuclide content and the method of determination
- For liquid waste: the amount, pH, and flashpoint
- Waste contents (physical contents and chemical makeup, as applicable)
- Dose rate
- Special materials accountability information
- Generator certification of accuracy and completeness

The WMO relies primarily on waste generators to characterize their waste based on process knowledge, as documented on the WMO-195 and WMO-195A forms. During review and approval of the forms, a waste specialist verifies whether or not waste is TRU and hazardous (i.e., mixed), based on the information provided by the generator for radionuclides, radionuclide determination method, liquid waste, and waste contents. If the waste is indicated as TRU on the forms, a review of the radionuclide listing and quantity is performed to verify the TRU concentration in the waste. If the waste is not indicated as TRU, a review of the radionuclide listing is performed to determine if TRU isotopes are present. TRU calculations performed by WMO are documented on the WMO-195 form. WMO makes the TRU determination from the information provided by generators on the WMO-195 forms.

Information provided by the generator concerning the nature of liquid waste and waste contents is also reviewed. Based on this information, they determine whether or not the waste is hazardous (i.e., mixed) and indicate the appropriate hazardous waste numbers on the WMO-195 form. In the event that an "uncharacterized material" is discovered, WMO staff assists in determining the nature of the material. An attempt is made to characterize the material using process knowledge. However, if adequate process knowledge does not exist to complete the required WMO-195 and WMO-195A forms, the material is characterized using radiation measurements, nondestructive analysis, nondestructive examination, and sampling and analysis, as needed. The results are documented on the WMO-195 and WMO-195A forms and the information is entered into the WMO's Waste Management System controlled database.

4.7 Description of Waste Generating Processes

4.7.1 AGHCF

As described above, the AGHCF was a kilocurie hot cell facility used for the characterization and testing of irradiated reactor materials. During the operational history of the hot cell facility, the AGHCF has developed numerous nondestructive and destructive capabilities. The primary AGHCF capabilities consisted of the following (References C016, C314, C315, P006, P059, P060, P525, P545, P571, P577, and P578):

<u>Nondestructive Capabilities</u>

- Visual inspection and examination
- Capsule disassembly
- Macrophotography
- Weight, length, bow measurement
- Diametral profilometry
- Diameter measurements with micrometers
- Eddy current inspection
- Fuel element length measurement
- Irradiated fuel element balance point
- Weight determination

- Irradiated fuel element helium leak test
- Autoradiography
- X-ray analysis and gamma scanning
- Irradiated material transfer, management, and storage

Destructive Examination and Other Capabilities

- Fuel element fission gas sampling and tritium gas collection
- Plenum volume determination and gas analysis
- Fuel element sectioning
- Metallographic specimen mounting
- Microphotography
- Microhardness
- Immersion density testing
- Optical microscopy and photography
- Scanning electron microscopy
- Scanning auger microscopy
- Electron microprobe
- Mechanical testing specimen preparation (e.g., creep, charpy, bend, and tensile)
- Mock fuel pin fabrication (e.g., defueling, annealing, hydriding, welding, and pressurization)

The purpose of the AGHCF was to allow for analysis of highly irradiated, alpha-emitting samples. It was specifically designed and built to examine plutonium-bearing fuel elements from the ANL-W Experimental Breeder Reactor, although over the years, the sources of specimens examined expanded to include other national laboratories, commercial nuclear power plants, international clients, and universities. Although numerous fuel and specimen types have been examined over the years of operation, the waste generating operations remained relatively unchanged and the RH TRU waste generated essentially consists of the same materials in the same approximate percentages (References P023, P380, and P604).

The figure in Figure 3, AGHCF Process Areas, provides the locations of the AGHCF operations areas, rooms, and associated remote WS. Areas 1 and 3 contain a total of ten WS areas with shielded viewing windows equipped with master-slave manipulators.

Each station supported one to three job functions, most semi-permanently set up at the station. Specimens being prepared and examined were moved from one station to another depending upon the desired examination operation. Area 1 was used for disassembly of irradiation vehicles and destructive examination of fuel elements. Area 3 contained nondestructive examination facilities, special experimental setups, waste handling operations, maintenance facilities, the glove repair area and the main transfer access into and out of the cell (References P004, P038, P380, P604, P2032, and U002).

Movement of materials within the hot cell was achieved by using the fixed manipulator arms at the WS windows, overhead bridge-mounted electro-mechanic manipulators, remote-controlled "mules," a remote controlled robot, chain hoists, a cable transport, and monorail hoists. These pieces of equipment allowed for remote handling at a specific work station and between work stations (References P380, P404, P604, and P2032).

Area 4 included the majority of the space surrounding the hot-cell. The Electron Beam Laboratory (EBL) consisted of an unshielded glovebox in room F-117, two gloveboxes and a scanning electron microscope (SEM) in room F-117A, an electron microprobe (EMP) in room F-118, and a scanning auger microscope (SAM) and its associated glovebox in room F-118A. The Shielded Glovebox Facility (SGF) in room F-117 consisted of two shielded gloveboxes. The EMP, SEM, and the SAM were used for electron beam analysis of samples. The shielded gloveboxes in the SGF were used to prepare small specimens for electron microscopy or other tests. Area 4 is outside of the AGHCF hot cell boundary and did not generate RH TRU waste materials during operation (References C335, P380, P456, P604, P2032, and U002).

Each element or specimen received at the AGHCF was assigned an alphanumeric identification number. Fuel elements or other specimens were received at the AGHCF in a shielded shipping cask. The cask was moved into room F-113 and lined up with the door to the Clean Transfer Area (CTA) to allow for unloading of the fuel elements. WS 10 is located in the door to the CTA and is outside of the nitrogen boundary. The elements were moved past the alpha wall and through the large lock into Area 1 for interim storage at WS 1 or long-term storage in storage holes in Area 2. Small casks may have been moved into the CTA for specimen removal (References C335, P380, P399, P401, P402, P604, and P2032).

The fuel elements or specimens were examined according to a work plan detailing the analysis (both destructive and nondestructive) to be completed. In general, the initial nondestructive examination and capsule disassembly was performed at WS 1. Nondestructive testing included bow measurement, diametral profilometry, weight and length measurements, determination of balance point, and diameter measurements. If required, the element was moved to Area 3 for nondestructive examinations. Visual examination (VE), macrophotography, and other miscellaneous experimental work were conducted at WS 8. The gamma scanning equipment was located at WS 9; the holding fixture is inside the cell, and the germanium gamma detector, multichannel analyzers, and computer controlled data collection apparatus were external to the cell. This

equipment allows for gamma spectrometry and gamma profiling of the fuel elements (References P380, P604, P2032, and U002).

The puncturing rig and fission-gas collection apparatus was also located at WS 9. If an element was received unpunctured, so that the fission gas has not been released, the element was punctured in Area 3. The gas was collected and analyzed to quantify the amounts of fission and other gases present. The puncturing rig was located in-cell, while the gas collection and sampling apparatus was located in a cabinet external to the cell. Excess fission-gas was vented back into the cell where it is exhausted by the cell ventilation system (References P380, P604, and P2032).

Gas testing and density measurements were performed at WS 8 and WS 9. Fuel element fission gas sampling, tritium gas collection, and plenum volume determinations and gas analysis, in addition to helium leak testing, x-ray examination, and gamma scanning were conducted at these stations. Profilometry equipment on a wheeled cart was used at WS 8. The profilometry equipment was used for measurement of elements specifically to determine the amount of radial strain due to irradiation growth. The profilometer shared data collection equipment with the gamma scanner (References P380, P604, P2032, and U002).

After the nondestructive examinations had been completed, the element, or sample, was returned to Area 1 for destructive examinations. Based on a cutting diagram, that was part of the work plan for the examination, the element was sectioned using a dry abrasive cutoff wheel at WS 2. Each individual piece was identified with a break-off number and was normally placed in an aluminum pipe with a screw top; the aluminum pipe had the break-off number stamped on the side and was the primary container for the sample (References P380, P604, and P2032).

Samples requiring metallographic examination were cold-mounted using epoxy resin. Grinding wheels were located at WS 3 and polishing wheels were located at WS 4. The metallographs were accessed from WS 4. The sample was moved into a shielded glovebox that enclosed the metallograph stage and was attached to the cell (References P380, P604, and P2032).

Specimens were also to be prepared for examination on the EMP. Because the EMP was heavily shielded, the operator could analyze highly irradiated specimens. The EMP has an associated wave-length dispersive x-ray detector that allowed for quantitative chemical analysis of the specimens. A pneumatic transfer tube connected the instrument to WS 7 essentially making the EMP and its associated glovebox an appendage to Area 3 (References P380, P604, and P2032).

The SEM and SAM electron beam instruments were not heavily shielded, and the analysis was limited to samples with a radiation level that could be handled outside of the hot cell. Samples were bagged out of the hot cell either in the glove niche or in the CTA. The samples were then placed in a transfer pot and carried to the SEM glovebox in room F-117 or the SAM glovebox in room F-118A. The SEM and the associated energy dispersive x-ray system were used for microstructural and microchemical

examination of small segments. The SAM was used for surface or grain boundary analysis of irradiated (low-level) or contaminated specimens (References P380 and P604).

There were other experimental systems in the hot-cell that were semi-permanently set up in WS 7 and WS 6. Furnaces in these areas were used for elevated temperature testing of fuel segments. The controllers, data collection equipment, and gas collection apparatus were located external to the cell. Post-test examinations included mounting of the test sample and optical or electron beam examination. Post-test examinations included both nondestructive and destructive examinations, similar to the typical examinations described above for a fuel element (References P380 and P604).

After the examinations were completed, the samples were placed in storage to await either future work or eventual outbound shipment. Fuel elements, segments, and swarf that were to be shipped out were placed in a container that fits into the shipping cask. In a reverse manner to the receiving of the fuel elements, the container was placed in the shipping cask in room F-113 then shipped out of AGHCF (References P380, P604, and P2032).

If the samples were to be stored for future use or long-term storage, they were placed in a storage can and "sealed" with a tamper-indicating device. These cans were either stored in Areas 1 or 3, or placed into the Area 2 storage holes for the longer-term storage (References P380, P604, and P2032).

Equipment maintenance and repair also generated RH TRU waste. Maintenance ranged from routine tasks such as replacement of saw blades, broken glassware, and light bulbs, to less routine tasks such as replacement or repair of experimental apparatus, broken electrical motors, furnaces, glove rings, HEPA filters, manipulator arms, and cell windows. Entries in to alpha-contaminated areas in the AGHCF were performed in polyurethane tunnel suits. In 1983, a manipulator DRA was constructed in Area 6 to better handle a higher level contamination associated with the manipulators. Prior to this time, manipulator repair was conducted in the glove repair area. The DRA utilized a shower stall, originally used for personnel decontamination after a hot-cell entry, to decontaminate the manipulators so that they may be repaired in a glovebox with much lower levels of exposure to technicians (References P009, P040, P380, P395, P403, P410, P469, P470, P471, P472, P473, P475, P478, P480, P484, P485, P493, P516, P604, and U065).

Because the work areas were designed to accommodate multiple examination capabilities, the specific locations of the experiments described above represent the area where the operations were typically conducted, but may have varied slightly. Waste has been either placed in cans at work stations or moved directly to the waste packaging area for temporary storage. Miscellaneous items that could have been generated from anywhere in the hot cell include sample containers, plastic pouches, plastic bottles, and sphincter cans. Waste cans are generally used to collect waste materials at individual work stations and then moved to WS 5 for temporary storage. Sorting and packaging activities performed at WS 5 have been videotaped since

February 1993 and the video tapes are available for the containers already packaged. CCP has implemented a formal VE process to verify the contents of every waste can by reviewing the existing video tapes for the packaged waste drums and verifying container contents during packaging for drums not already packaged by Argonne (see Section 6.0). After the waste cans are surveyed, they are packaged into 30-gallon drums. The specific packaging configuration and contents of RH TRU waste containers is discussed in more detail in Sections 5.4 and 5.5 (References C089, P380, P412, P604, P2038, U041, and U2011).

4.7.2 K-Wing

Since the most recent cleanout campaign in late 1995, two primary K-Wing experiments were: 1) demonstration of UREX chemical separation processes in support of advanced nuclear fuel cycles and 2) sampling of irradiated target material by dissolution in acid solutions (corrosion studies, high-burnup fuel characterization). Fuel cycle studies used solutions that in some cases were made from segments of several spent reactor fuel test specimens (Acceptable Test Materials [ATMs]) as well as recycled radionuclides recovered from earlier separation campaigns. Fuel cycle research required frequent sampling of process streams and generated a large number of hot samples as did dissolution, dilution, and sampling of dissolved fuels for analytical purposes, such as high burnup fuel characterization (References C2027 and P2000).

This section describes both the fuels used in K-Wing and the processes that used these fuels. Table 1, Fuels and Processes Associated with K-Wing, provides a list of the fuels and associates them with the processes in which they were used.

Table 1. Fuels and Processes Associated with K-Wing

Fuel Name	Source Of Fuel	Type Of Fuel	Process In Which Fuel Was Used
ATM-101	H.B. Robinson pressurized water reactor (PWR)	Commercial spent fuel	• Yucca Mountain corrosion studies • UREX+3a
ATM-103	Calvert Cliffs reactor	Commercial oxide spent fuel	• Yucca Mountain corrosion studies
ATM-105/ATM-108	Cooper Nuclear Power Plant	Commercial spent fuel	• UREX+1a
ATM-106	Calvert Cliffs reactor	Commercial oxide spent fuel	• YM corrosion studies
ATM-109	Quad Cities boiling water reactor (BWR)	Commercial spent fuel	• Yucca Mountain corrosion studies
Big Rock Point	Big Rock Point BWR	Commercial spent fuel	• UREX+ (UREX+4) • UREX+2
H.B. Robinson	H.B. Robinson PWR	Commercial spent fuel	• UREX+1a • High-burnup fuel characterization
Limerick	Limerick reactor	Commercial spent fuel	• High-burnup fuel characterization
TMI-1	Three Mile Island Nuclear Power Plant	Commercial spent fuel	• High-burnup fuel characterization
MOX	EBR-II	Defense-related spent fuel	• Yucca Mountain corrosion studies • High-burnup fuel characterization
N Reactor zircaloy-clad uranium	Hanford N reactor	Defense-related spent fuel	• Yucca Mountain corrosion studies
U and U-Th oxides	Shippingport Light Water Breeder Reactor	Defense-related unirradiated & spent fuel	• Yucca Mountain corrosion studies
U-Mo	RERTR	Defense-related spent fuel	• High-burnup fuel characterization

Corrosion Studies

K-Wing began conducting corrosion studies in the early 1990s to assess potential for corrosion of commercial and defense-related spent nuclear fuels exposed to groundwater in the Yucca Mountain high-level nuclear waste repository in Nevada. Following cleanout of the hot cells in late 1995, corrosion studies continued, addressing both short-term (days or weeks) and long-term (multi-year) corrosion potential. The corrosion studies used fuel segments prepared (sectioned) in the AGHCF. The water from well J-13 near Yucca Mountain has a chemistry representative of the saturated zone below Yucca Mountain; therefore the fuel segments were exposed to varying amounts of the well-water. Prior to use in the corrosion tests, the well-water was conditioned in Topopah Spring tuff to adjust its pH to resemble the Yucca Mountain groundwater (References C812, C2004, C2005, C2027, C2029, C2030, C2031, P602,

P2001, P2002, P2003, P2004, P2005, P2006, P2007, P2008, P2019, P2020, P2029, P2030, U2002, and U2004).

The fuel exposure to water occurred at varying rates and over varying time periods. The fuels on which corrosion tests were conducted are:

- ATM-101
- ATM-103
- ATM-106
- ATM-109
- MOX (mixed oxide)
- Uranium and Uranium/Thorium oxides

Fuel fragments were placed in holders with holes at the base, immersed in the conditioned well-water, and placed inside a closed vessel. Some tests included increased temperatures and pressures, which caused evaporation of the water (vapor [static] tests). Periodically, additional water was added in a controlled methodology. At specified times, the holder was removed from the vessel, the fuel was visually examined, and depending on the length of the test, it was replaced inside a clean vessel and the test was continued. Removal and testing of the leachate (either gas or liquid) was performed whenever the vessel was opened. Testing of the leachate took place within the K-Wing hot cells. Fuel rod segments and fragments, and residues/sludge from the corrosion studies remain inside the hot cells and are part of the AERHDM waste stream. Though small amounts of test leachates remained in the cell following the corrosion studies, no collectable amounts of these liquids remained during batching of the liquids to be immobilized for shipment to WIPP in waste stream AERHDM. These liquids had evaporated or were allowed to evaporate if, vessels were found to be damp when they were opened (References C812, C2004, C2005, C2033, P602, P2001, P2002, P2003, P2004, P2005, P2006, P2007, P2008, P2019, P2020, P2029, P2030, U2002, and U2004).

K-Wing also performed corrosion studies beginning in 1984 and continuing into 1998 to study the behavior of high-level glasses when exposed to water or water vapor to predict the long-term behavior of high-level waste glasses under conditions typical of what is expected in the Yucca Mountain Repository. As part of these studies, crushed fragments from a vitrified glass monolith from SRS containing plutonium-238 and strontium-90 and West Valley vitrified glass containing sludge were subjected to the same type of corrosion experiments as described in the corrosion tests above. Both static and drip dissolution tests were performed on the SRS glass; only drip tests were performed on the West Valley glass. It should be noted that the corrosion studies on these samples was performed in vessels outside of the K-Wing. For this reason, waste stream AERHCM does not contain leachates from these experiments. The test materials and related debris from the preparation of these corrosion study samples have been removed from the area and placed in storage separate from the balance of the remaining RH and CH TRU inventories. These materials are being evaluated to determine if they meet the definition of high-level waste and are not included in waste stream AERHDM (References C2033, P1001, U2002, and U2004).

UREX

Between 2003 and 2007, several UREX process demonstrations were performed to determine the feasibility of using solvent extraction for recovering uranium, technetium, neptunium, and plutonium from spent fuel pins. The different experiments were designated UREX+ (also designated UREX+4), UREX+2, UREX+1a, and UREX+3a. The fuels used to demonstrate the various UREX processes are listed in Table 2, UREX Project History.

Table 2. UREX Project History

UREX Demonstration	Fuel Type	Year of Demonstration
UREX+ (UREX+4)	Big Rock Point	2003
UREX+2	Big Rock Point	2004
UREX+1a	ATM-105/ATM-108 H.B. Robinson	2005, 2006
UREX+3a	ATM-101	2007

UREX+ took place in 2003 and consisted of five solvent extraction processes that separated dissolved spent fuel into seven fractions. A segmented spent fuel pin of irradiated Big Rock Point BWR uranium oxide fuel was dissolved in nitric acid at an elevated temperature and pressure. The dissolved fuel was fed into the UREX process which separated uranium and technetium from the remaining components of the fuel and into two separate product streams. Additional processes were used to recover cesium and strontium in a single stream, neptunium and plutonium in a single stream, with the remaining actinides, predominantly americium and curium separated from the rare earth and other fission products. After analysis, the two raffinates, as well as residual sludges from the UREX+ demonstration were kept in the hot cells and will be neutralized and solidified. The solvent used in the UREX+ process was 30 percent tributyl phosphate (TBP) in n-dodecane (References P2021 and P2022).

The same source of dissolved spent fuel that was used for UREX+ was also used for the UREX+2 demonstration in 2004. The UREX+2 process consisted of three solvent extraction processes and one ion exchange process that separated the dissolved spent fuel into seven fractions. Two segments of the UREX+2 process were run in the K-Wing hot cells. Plutonium, neptunium, uranium, and technetium were extracted from the dissolved fuel in the shielded cell; stripping of neptunium and plutonium from the loaded solvent was conducted in a glovebox, and stripping of the uranium and technetium was done in a hood. The process segment for cesium and strontium was run in the shielded cell contactor. After analysis, the raffinates, as well as residual sludges from the UREX+2 demonstration were kept in the hot cells and will be neutralized and solidified during waste packaging. The solvents used in the UREX+2 process were 30 percent TBP in n-dodecane and chlorinated cobalt dicarbollide and polyethylene glycol in phenyltrifluoromethyl sulfone. Other chemicals used were guanidinium carbonate and diethylenetramine pentaacetic acid (DTPA) (Reference P2023).

The UREX+1a demonstration occurred in the summer of 2006 and used a mixture of two dissolved fuels: two irradiated fuel pins, designated ATM-105/ATM-108 from the Cooper Reactor in Nebraska, and part of a partially irradiated experimental assembly from the H.B. Robinson PWR in South Carolina. An earlier less complex demonstration took place in 2005; this discussion includes only the 2006 demonstration, but is also pertinent to the 2005 demonstration. The UREX+1a process consisted of four solvent-extraction processes and one anion exchange process that separated the dissolved spent fuel into seven fractions. Three segments of the UREX+1a process were run in the K-Wing hot cells. Plutonium, neptunium, cesium, strontium, americium, and cerium were extracted and stripped from the dissolved fuel in the shielded cell; extraction and stripping of uranium and technetium were performed in a hood. After analysis, the raffinates, as well as residual sludges from the UREX+1a demonstration were kept in the hot cells and will be neutralized and solidified during waste packaging. The solvents used in the UREX+1a process were 30 percent TBP in n-dodecane, chlorinated cobalt dicarbollide, polyethylene glycol in phenyltrifluoromethyl sulfone, and other complexing agents. Other chemicals used were hydrofluoric acid, acetohydroxamic acid, guanidinium carbonate, ammonium lactate/lactic acid, and DTPA (References P2000, P2024, P2025, P2026, and P2027).

The UREX+3a demonstration occurred in the summer of 2007 and used a feed derived from dissolved irradiated fuel from the H.B. Robinson PWR. The UREX+3a process consisted of five solvent-extraction processes and one anion exchange process; however, only four segments were demonstrated in 2007. The full UREX+3a demonstration planned for 2008 did not occur, due to the cessation of K-Wing operations in 2008. Three segments of the UREX+3a process were run in the K-Wing hot cells. Plutonium, neptunium, cesium, strontium, americium, and cerium were extracted and stripped from the dissolved fuel in the shielded cell; extraction and stripping of uranium and technetium were performed in a hood. After analysis, the raffinates, as well as residual sludges from the UREX+1a demonstration were kept in the hot cells and may still need neutralization and solidification. The solvent used in the UREX process was 30 percent TBP in n-dodecane; other complex solvents were used for the remaining three processes. Other chemicals used were acetohydroxamic acid, uranyl nitrate, sulfamic acid, ammonium lactate/lactic acid, and DTPA (Reference P2028).

High-Burnup Fuel Characterization

Several high-burnup fuels were examined in K-Wing after higher than normal burnups in both commercial and test reactors to characterize the spent fuel. Two MOX pins from Hanford were irradiated in EBR-II to peak burnups of 13.9 and 12.7 atom percent, respectively. The pins were destructively examined in AGHCF and segments were transferred to K-Wing in 1998 to determine radial profiles of uranium and plutonium, radial distributions of cesium and molybdenum, and the composition of the material at the fuel/cladding interface (References C812, C2007, and U1002).

Two different high-burnup fuel characterizations were performed for H.B. Robinson fuel: one in 2001 and one in 2003. The 2001 characterization was conducted using segments from 12 PWR test specimens irradiated at H.B. Robinson, and consisted of mechanical property and high-temperature oxidation tests needed to support the reactivity initiated accident and loss of coolant accident criteria, as well as in creep tests needed for licensing of dry storage systems and in isotopic inventory measurements that supported the extension of the burnup credit concept. The 2003 characterization used two pulverized fuel segments from a fuel rod that had been irradiated for seven cycles in the H.B. Robinson PWR, and consisted of dissolution in a solution composed of nitric acid, hydrochloric acid, and hydrofluoric acid, separations, and analyses to obtain experimental isotopic-assay data. The data were used to benchmark the performance of computer codes that predict time-dependent inventory of nuclides in the fuel for safety and licensing evaluations (References P1002 and P2017).

During the 2001 H.B. Robinson high-burnup fuel characterization, seven BWR fuel specimens irradiated at the Limerick plant were also characterized during this time frame for the same purpose. In addition, one spent fuel specimen from one fuel rod irradiated in the Limerick reactor was characterized in 2003 using the same methodology described for the H.B. Robinson fuels. (References P344, P519, and P1002).

In the late 1990s, five dry-powdered samples from a uranium oxide fuel rod with very high burnups in the Three Mile Island (TMI)-1 reactor were analyzed in the hot cells for the purpose of investigating nuclide measurement methods for highly irradiated spent fuels from the TMI PWRs. The samples were dissolved in a solution composed of nitric acid, hydrochloric acid, and hydrofluoric acid, separated, and analyzed (References P515, P518, P523, and P2009).

Beginning in the 1999 time frame the AGHCF supported the RERTR program by performing postirradiation examination of the U-Mo fuel plates irradiated in the ATR to assess the extent of reaction between the fuel and matrix phases and the swelling characteristics of these fuel alloys. In 2004, RERTR uranium-molybdenum fuel samples from test specimens were pulverized, dissolved in nitric acid, and analyzed in the K-Wing. After analysis, the samples were dried (References P551, P575, P606, U2002, and U2004).

Nuclear Operations Deactivation

During the deactivation process for the K-Wing hot cells and supporting areas, solid debris waste will be generated as a part of the solid material sorting and size reduction, the neutralization and solidification of liquids, and the waste packaging. The additional waste will primarily consist of personal protective equipment, wipes, plastic and glass bottles, metal cans, and other similar types of materials (References P2010, P2011, and P2012).

4.8 Waste Certification Procedures

The WMO at Argonne operates under an established waste management program that addresses the identification, characterization (using process knowledge), treatment, packaging, and storage of TRU waste. This program is described in the *Waste Handling Procedures Manual* established in 1982 (Reference P2015). It has undergone numerous revisions since its inception to address new and changing waste characterization requirements. This program, in its current and previous forms, was used to manage all of the TRU waste at Argonne.

In the CCP under which the subject waste streams will be certified for shipment to WIPP, CCP-TP-005 (Reference 13) directs compilation of AK. CCP certifies TRU waste under the program described in CCP-PO-002 (Reference 10).

5.0 REQUIRED WASTE STREAM INFORMATION

This section presents the waste stream information required by the WIPP-WAP and the WCPIP for waste stream AERHDM (References 1 and 14). The area of generation, waste stream volume, period of generation, waste packaging, and the physical, chemical, and radiological characterization of the waste stream are described.

5.1 Area and Building of Generation

Waste stream AERHDM was and will be generated at the AGHCF and K-Wing hot cells. Container specific documentation has been reviewed for each container previously packaged by Argonne to verify the composition and origin of the waste stream inventory. VE will be performed during packaging to assess the waste remaining in AGHCF and K-Wing. VE verifies that the physical form of the waste is consistent with operations described in Section 4.0 and meets the WIPP-WAP and the WCPIP waste stream definitions of waste material that is similar in material, physical form, hazardous constituents, and radiological properties generated from a single process or activity (References C333, C2025, C2027, C2029, C2030, C2031, and U332).

5.2 Waste Stream Volume and Period of Generation

Waste stream AERHDM originally consisted of 44 30-gallon drums (4.8 m^3) of RH TRU organic and inorganic debris packaged between February 1993 and February 2002. It is estimated that an additional 340 30-gallon drums (37.4 m^3) will be generated during packaging of the waste contained in the cells and ongoing operations in the AGHCF. It is also estimated that an additional 75 55-gallon drums (15.6 m^3) will be generated during the packaging and cleanout of waste in the K-Wing hot cells originating from experiments conducted between 1996 and 2007. Note that some of the waste from the K-Wing may need to be packaged in 30-gallon drums due to limitations on weight capacity (800 pounds [lbs]) or dose limit (<70 R/hr) (References C2009, C2025, DR013, DR023, P2012, U338, and U2003).

5.3 Waste Generating Activity

Waste stream AERHDM was generated from the destructive and nondestructive examination of irradiated and unirradiated reactor fuel materials and associated hot cell support operations described in Section 4.7.

5.4 Type of Wastes Generated

This section describes the process inputs, Waste Matrix Code assignment, Waste Material Parameter (WMP) weight estimates, radionuclide contaminants, and RCRA hazardous waste determinations for debris waste stream AERHDM. The waste stream is characterized based on knowledge of the materials, knowledge of the processes generating the waste, and physical descriptions of the waste.

5.4.1 Material Input Related to Physical Form

Waste stream AERHDM was generated from the destructive and nondestructive examination of irradiated and unirradiated reactor fuel materials and associated hot cell support operations described in Section 4.7. Most of the AGHCF waste contaminants were introduced during specimen preparation associated with sectioning, grinding, and polishing of the fuel materials for analysis by methods including gamma spectroscopy and scanning, high-temperature testing, fission gas collection and analysis, macrophotography, and profilometry. Debris waste was also generated during the repair of in-cell equipment (i.e., manipulators), cell maintenance, and waste management activities (References C066, C108, P2032, and U001).

Most of the K-Wing waste contaminants were introduced during research experiments, including aqueous biphasic extraction studies, and long-term testing of radioactive waste forms to (1) determine the mode of degradation of the spent fuel and (2) validate current models of spent fuel corrosion, UREX solvent extraction, and chemistry related to fuel reprocessing. Debris waste will also be generated during the hot cell deactivation of K-Wing (References C2002, C2004, C2005, C2006, C2007, P344, P2000, P2011, U2002, and U2004).

Waste stream AERHDM consists predominantly of organic and inorganic debris generated during the examinations conducted in the AGHCF and experiments conducted in the K-Wing. Based on the review of the AK documentation, the waste stream may contain the following materials:

- **Cellulosic** items including: paper, cardboard, cotton, and leather rags, cloth, towels, filter paper, grinding paper, boxes, liners, HEPA filter media, tissues, string, boxes, rope, swabs, wipes, mop heads, and gloves. Wooden items including brooms, mop head and handles, HEPA filter frames, rulers, brushes, blocks, and Masonite, plywood, cork, fiber board, and chipboard items.

- **Plastic** materials including: polyethylene, polypropylene, polyvinyl chloride, phthalate, Koroseal, Tygon, styrene butadiene, polyurethane, Lucite, Nylon, Teflon, Nalgene, and epoxy (hardened), metallurgical (Bakelite) sample mounts, bottles, cups, dishes, pipettes, tubing, funnels, pipe, bags, filter cartridges, sheeting, vials, tape, syringes, markers, and other miscellaneous items.

- **Rubber** items including: Neoprene, Viton, butyl, latex, and silicone O-rings, gaskets, stoppers, hose, tubing, gloves, wire/cord insulation, and other miscellaneous items.

- **Glass** items including: glass, ceramic, alumina, porcelain, quartz, Vycor, Pyrex, and boron nitrite bottles, jars, tubing, caps, beakers, bottles, funnels, graduated cylinders, plates, insulation (fiber glass), firebrick, insulators, light bulbs, syringes, Petri dishes, reaction vessels, thermometers, lenses, tuning, and other items.

- **Metal** items: ferrous materials, including carbon steel, stainless steel, and cast iron cans, buckets, slings, equipment, tools, tubing, fittings, rods, rings, rounds, chain, saw blades, dustpans, motors, fixtures, hot plates, variacs, vessels, steel wool, manipulator parts and tape, trays, capsules, and other miscellaneous scrap items.

- **Metal** items: Non-ferrous metals including aluminum, brass, bronze, copper, gold, lead, tungsten, tantalum, tin, vanadium, zinc, cans (including punctured aerosol cans), gaskets, mesh sample holders, solenoid valves, thermocouples, vials, sheeting, foil, tools, wire, shot, rods, cable, tubing, capsules, fittings, gauges, plates, motors, samples, light fixtures, and other miscellaneous scrap items.

In addition to the debris materials described above, waste stream AERHDM contains lesser amounts (less than 50 percent in any container) of homogeneous organic and inorganic materials. Clay and vermiculite based absorbents are used during the neutralization and evaporation of acids, etchants, and alcohol solutions generated during the passivation of reactive metals. Solidification agents such as Portland cement, Acid-Bond, Aquaset, and Petroset may also be used to immobilize some liquids (References 2, C333, C335, P2010, P2013, and U332).

Dust and fines (referred to as swarf) generated during cutting and grinding were collected in the work areas. The majority of the swarf was collected from pans under the cutting station, the grinding bowls at the grinding work station, or from dry sweeping the material with a shop brush and dustpan or vacuum. In addition, recoverable residue was shaken off the grinding papers and saw blades. In the AGHCF, this material was typically designated as "sweeps," "high-level scrap," or "recoverable material," and segregated from the RH TRU waste stream. Some of the swarf (i.e., from the grinding bowl) generated during specific element sectioning is collected in small screw-closed metal containers and identified with the parent element identification number and stored in the sealed can with the originating element. These materials are now included in the AERHDM waste stream, based on review of additional AK information. Pyrophoric and reactive materials may be present in test specimen residues; therefore, treatment procedures are implemented to address the inspection, deactivation, and/or stabilization of residues potentially containing sodium, metal fines (swarf), and/or other pyrophoric material prior to packaging (References C066, C2025, C5001, P032, P366, P380, P381, P2032, P2035, P5002, P5004, P5005, P5006, P5007, P5008, and U076).

There are over 3,000 samples containing fuel-bearing material within the AGHCF. This material is in the form of nuclear irradiated fuel specimens, metallography mounts, and other fuel-bearing materials. The fuel-bearing material came from both U.S. NRC and DOE facilities. The NRC facilities included the Dresden, Limerick, H.B. Robinson, Saxton, Quad Cities, Big Rock Point, Surry, and TMI nuclear power plants. The DOE sites that provided fuel-bearing material were the ATR, Chicago Pile, EBR-II, Engineering Test Reactor (ETR), FFTF, MTR, N-Reactor, Oak Ridge Research Reactor (ORR), Savannah River Reactor (SR), and TREAT, along with some fuel examination material from a CANDU reactor and the Belgonair Reactor-3 (BR3), and some

fuel-bearing material in the form of IPNS Targets and other target disks (References C2032, P2032, and U076).

Sodium-bonded fuel examination materials stored in the AGHCF will be packaged and transferred to INL and are not included in the AERHDM waste stream (References C2025, P2032, and U076).

5.4.1.1 Waste Matrix Code

Based on the evaluation of the materials contained in this waste stream and Argonne waste management practices, the waste stream is comprised of greater than 50 percent of heterogeneous inorganic and organic debris. Therefore, Waste Matrix Code S5400, Heterogeneous Debris is assigned to waste stream AERHDM. Although the waste stream, as a whole, is comprised of more than 50 percent heterogeneous debris, any drum may include nearly any percentage of the WMP listed in Section 5.4.1.2, except that no individual drum will contain greater than 50 percent homogenous solids (Reference C333).

5.4.1.2 Waste Material Parameters

Waste stream AERHDM is composed of waste from two separate, but related facilities: the AGHCF and the K-Wing. Based on a review of the AK record to assess the physical composition of the waste items to be included in waste stream AERHDM it has been determined that both of these facilities will contribute waste items from the WMP categories described below (References C2027, C2029, C2030, and C2031).

The contribution from AGHCF to the WMPs for waste stream AERHDM were originally estimated by reviewing the waste can inventory records for 30-gallon drums of AGHCF waste packaged by Argonne between 1993 and 2002. The waste can inventory records provide a waste item description and corresponding volume percentage for waste packaged in the 7-gallon waste cans. Waste items were categorized into one or more of the following WMPs: iron metals, aluminum metals, other metals, other inorganic materials, cellulosics, rubber, plastics, and organic matrix. An average volume percentage was then calculated for each WMP for each 30-gallon drum. It was determined that the waste materials and corresponding volume percentages reported on the available waste can inventory records will be representative of the waste remaining in the hot cell area and waste that will be generated by future AGHCF operations. This determination is supported by the AK record indicating that the AGHCF processes have remained relatively unchanged and the wastes generated consist of the same type of materials in approximately the same relative percentages. This estimate is further supported by the assessment performed for 123 drums sent to INL during the 1990 to 1995 time frame in waste stream ID-ANLE-S5000 (References 2 and C332). The relative WMP percentages were comparable with the inorganic materials accounting for a majority of the waste stream (78 percent). No organic matrix WMP materials (i.e., homogenous organic solids) were identified in the current inventory; however, small volumes may be generated (0.6 percent estimated for INL waste stream ID-ANLE-S5000). It should be noted that the amount of metal debris may increase in individual containers (up to 100%) as waste stream AERHDM is

generated, due to the size reduction of larger metal equipment that has not been processed during past waste disposal campaigns and the inclusion of FEW debris consisting primarily of metal items. In addition, numerous drums of waste generated by the repackaging operation have been added to the waste stream since this evaluation was performed. Based on a review of the VE records prepared for these drums, the waste materials included were physically consistent with the waste stream description in this report (References C332, C333, DR013, and U332).

Estimated densities for each WMP were used to calculate the weight percentage of each WMP for each 30-gallon drum generated from the AGHCF. The weight of each WMP for each debris drum was then calculated based on the recorded gross drum weight and a default tare weight of 69 lbs for each drum (assuming two 7-gallon waste cans, liners, and bags).

With the addition of AGHCF containing fuel examination debris and fuel specimen residues, the fuel specimen residues will be packaged in lead-lined FEW containers not to exceed 100 lbs each. A number of assumptions were used to calculate any changes to the WMPs assuming that an additional 100 drums would be added to the waste stream (References C2026, U076, U2013, and U2020).

- Original distribution of waste weight is 50 percent in each of the top and bottom halves of the drum; upper average waste weight is one-half of 42.2 lbs., that is, 21.1 lbs;
- For the additional AGHCF FEW waste drums containing lead-lined fuel-bearing material containers in the lower half of the drums, the containers weigh a maximum of 100 lbs. The majority of the weight should come from the lead lining;
- Fissile Inventory Management System (FIMS) database provides grams of U-235, U-233, and Plutonium in all of the AGHCF fuel inventory. The sum of all three radionuclide values is approximately 3,500 grams, which, when distributed between the estimated 100 drums is equal to 35 grams per drum. Accounting for additional mass in fuel, use a maximum of 100 grams total mass per drum, or 0.2 lbs;
- The fuel-bearing container without lead is 6.25 lbs.; the fuel segments/drum are estimated to weigh no more than 100 grams or 0.2 lbs.; therefore the lead is estimated to weigh 93.5 lbs.

Based upon the above assumptions, the average drum weight information was calculated and is presented below. The lead lining is considered part of the packaging, separate from the waste; therefore, the average weight of the waste in the additional AGHCF FEW drums is 21.3 lbs., slightly more than half of the average waste weight in the original waste stream. It should be noted that this evaluation assumes that the drums contain one internal container of debris and one FEW container; however drums containing two FEW containers are currently being generated. This packaging

configuration will not affect the overall contribution of these materials to the waste stream as a whole, and is bounded by the evaluations described.

Finally, an overall WMP weight percentage was calculated for the population. Due to the additional fuel weight in the additional AGHCF FEW drums contributing less than one percent to the total waste weight per drum, the WMP estimates presented in Table 3, Waste Stream AERHDM Waste Material Parameter Estimates, is also applicable to these drums. The results of the assessment are presented in Table 3 (References C333 and C335).

Table 3. Waste Stream AERHDM Waste Material Parameter Estimates

WMP	Average Weight Percent	Weight Percent Range
Iron-based Metals/Alloys	25.3 %	0.0 – 81.5 %
Aluminum-based Metals/Alloys	12.1 %	0.0 – 71.5 %
Other Metals	11.2 %	0.0 – 66.0 %
Other Inorganic Materials	15.9 %	0.0 – 45.4 %
Cellulosics	20.3 %	0.0 – 100.0 %
Rubber	5.5 %	0.0 – 57.9 %
Plastic (waste materials)	9.8 %	0.0 – 58.2 %
Inorganic Matrix**	<1.0 %	0.0 – 20.0 %
Total Inorganic Waste Ave.	**64.4 %**	
Total Organic Waste Ave.	**35.6 %**	

* - This range reflects the expected range for drums containing routine debris waste, drums containing only containers of FEW (100% metal) will be generated.
**- This waste material parameter included to account for the K-Wing immobilized liquids waste originating from the extraction experiments described in Section 4.7.

Average Gross Drum Weight (without FEW container)	111.2 lbs./drum (85 – 165 lbs.)
Estimated Tare Weight	69 lbs.
Steel Packaging (30-gallon drum)	37 lbs.
Steel Packaging (2 7-gallon cans)	12.5 lbs. (6.25 lbs. each)
Plastic Packaging (rigid liner and bags)	16.4 lbs.
Cellulosic Packaging (cardboard liner)	3.1 lbs.
Average Waste Weight	42.2 lbs./drum (16 – 96 lbs.)
Average Gross Drum Weight (with FEW container)	184.4 lbs./drum (127 – 219 lbs.)
Estimated Tare Weight	163 lbs.
Steel Packaging (30-gallon drum)	37 lbs.
Steel Packaging (2 7-gallon cans)	12.5 lbs. (6.25 lbs. each)
Lead Lining (for 7-gallon can)	93.5 lbs.
Plastic Packaging (rigid liner and bags)	16.4 lbs.
Cellulosic Packaging (cardboard liner)	3.1 lbs.
Average Waste Weight	21.3 lbs./drum (16 – 75 lbs.)

The contribution from K-Wing to the WMPs for waste stream AERHDM were estimated by observation of the debris material that could be seen through the hot cell viewing windows and WMP estimates for related debris waste at the Alpha Gamma Hot Cell

Facility. There is no physical waste inventory information to use to establish an estimate. However, based on visual inspection of the waste materials in the hot cell that could be observed through the viewing windows, it has been determined that most of the waste to be packaged is comprised of inorganic and organic debris items consistent with the debris waste stream generated at the AGHCF. WMPs identified in the K-Wing waste materials included the following: iron-based metals/alloys, aluminum-based metals/alloys, other metals, other inorganic materials, cellulosics, rubber, and plastic (waste materials). Like the AGHCF waste, solidified liquids will comprise a very small fraction of the total waste volume. Unlike the FEW from the AGHCF, the FEW from the K-Wing is packaged in small (~2-liter) capsules and placed in 55-gallon drums containing debris and account for a small fraction of the material in any container and the waste stream as a whole. Based on these observations, the WMPs expected for waste originating from the K-Wing are expected to be comparable to the initial WMP estimates for debris materials originating from the AGHCF. A wide range of any of the WMPs is expected for drums generated in the K-Wing; however, no individual container in this waste stream will contain more than 50 percent homogeneous waste materials. The evaluation of data for the WMP weights for the waste stream is documented in a memorandum as required by CCP-TP-005 (References 13, C2010, C2026, and U2001).

5.4.2 Chemical Content Identification – Hazardous Constituents

The following sections describe the characterization rationale for assignment of EPA HWNs to waste stream AERHDM. Table 4, Waste Stream AERHDM Hazardous Waste Characterization Summary, summarizes the EPA HWNs assigned to this waste stream.

Table 4. Waste Stream AERHDM Hazardous Waste Characterization Summary

Waste Stream	EPA HWNs
AERHDM	D004, D005, D006, D007, D008, D009, D010, D011, D019, D028, D029, F002, F005

Based on Argonne historic waste characterization, certification, and management operations, containers in waste stream AERHDM have been and will continue to be managed as non-hazardous waste. Argonne has historically characterized this waste as non-hazardous culminating in a March 2003 report certifying a non-hazardous waste determination submitted by the DOE Chicago Operations Office to the Idaho Operations Office. This report concluded that there was no substantive basis for assigning RCRA HWNs to the RH TRU wastes generated by ANL-E stored at INL (References C098, C147, and C351).

Even though containers in this waste stream will continue to be managed as non-hazardous by Argonne, EPA HWNs have been assigned to the waste stream due to the lack of analytical evidence demonstrating that these constituents would have not exceeded the regulatory thresholds. Therefore, the HWNs listed in Table 4 will be assigned to the containers in this waste stream prior to shipment to WIPP, in accordance with CCP-PO-001 (Reference 8). The assignment of these EPA HWNs

was based on a review of the available AK documentation to assess chemical usage in the AGHCF, the K-Wing, and surrounding areas to identify hazardous materials potentially contaminating waste stream AERHDM. In addition, Material Safety Data Sheets (MSDSs) and other manufacturer information was obtained for commercial products to determine the presence of RCRA-regulated compounds. Table 5, Waste Stream AERHDM Material and Chemical Inputs, lists the specific chemicals identified and associated HWNs assigned to the waste stream (References C2027 and DR014).

Table 5. Waste Stream AERHDM Material and Chemical Inputs

Chemical/Material	Use/Description	AK Source	EPA HWNs
1,1,1-trichloroethane	Manipulator arm maintenance and cleaning. Cell cleaning solvent. Ingredient of Hyprez lubricant (10-30%)	C012, C066, C137, C147, P327, P389, P416, U065, U072, U321	F002
1,1-dichloroethylene	Metallurgical reagent – no use specified.	C147	D029
1,2-dichloroethane	Metallurgical reagent – no use specified.	C147	D028
1-(2,2,3,3-tetrafluoropropoxy)-3-(4-sec-butylphenoxy)-2-propanol	Cs-7SB modifier.	C2008, P2028	NA
1,4-dioxane	Ingredient of Hyprez lubricant (0-1%).	C012, C029, C066, P389, U072, U321	NA
2-Ethylhexanol	Organic solvent / contactor cleaning.	C2008, C2009, P2010, P2011, P2013, U2004, U2008, U2009, U2010	NA
Acetic acid	Metallography etchant acid. Electropolishing and etchant acid. Scrub solution. Degradation product of AHA.	C066, C118, C2008, P062, P326, P521, P2022	NA
Acetohydroxamic acid (AHA)	Pu and Np complexing agent / Np oxidation agent.	C2008, P2022, P2023, P2024, P2026, P2028, U2004	NA
Acetone	Metallographic specimen and cell cleaning. Electron microscopy sample preparation. Ingredient in Krylon Spray.	C029, C066, C137, C147, P061, P304, P327, P333, P416, P505, P507, P552, U066, U072, U321	NA
Acetyl cellulose	Electron microscopy sample preparation.	P061	NA
Acid Bond A660 Acid Bond N940	Chemical Sorbent.	C2008, P2010, P2013	NA
Alumina (aluminum oxide)	Metallurgical sample polishing compound. Mock fuel material in LOCA experiments. Product of UAlx fuel exposed to water.	C025, C137, P509, P2007, U072	NA
Aluminum	PNNL fuel pieces shipped in aluminum screw-top pipe nipples.	C2007	NA
Aluminum silicate	Present in leachate solution.	P2003	NA
Ammonia	Lithium passivation reagent.	C066	NA
Ammonium acetate	Stripping agent.	P2022	NA
Ammonium carbonate	Reagent used to produce ammonium salt of Cyanex 301.	P2022, P2028	NA
Ammonium hydroxide	pH control.	P2022, P2024, P2027	NA
Ammonium molybdophosphate (AMP)	Column used to remove Cs.	P2024	NA
Ammonium nitrate	Feed solution.	P2022	NA
Ammonium oxalate	Complexing agent for Pu and Np. NPEX strip solution.	C2008, P2010, P2011, P2013, P2028, U2004	NA
Arsenic	Contaminant of HEPA filters and clay absorbent.	C014, P412, U083	D004
Asbestos	Insulating materials and Transite waste.	U015, U017, U018, U019, U021	NA
Barium	Contaminant of HEPA filters, clay absorbent, and fluorescent bulbs. Present in dissolved fuel.	C035, C116, C160, P412, P416, P2017, P2021, P2022, P2023, P2028, U083, U084	D005
Benzene	Laboratory reagent – no use specified. Refluxing solvent for ammonium carbonate and Cyanex 301.	P2022, U066	F005
Beryllium	Beryllium containing samples. Moderator limit of 10kg. in Areas 1 and 3.	C066, C335, P407	NA
Beta-uranophane	Corrosion product of spent UO2 fuel reacted with groundwater.	P2001, P2002, P2004	NA
Bicarbonate salts	Present in leachate solution.	P2003, P2020, P2030	NA
Bio-Rad AG-1	Anion-exchange resin.	P2017	NA
Bis(2-ethylhexoxy) phosphinic acid (HDEHP)	Extraction agent.	C2008, P2024, P2026, P2027	NA

Table 5. Waste Stream AERHDM Material and Chemical Inputs (Continued)

Chemical/Material	Use/Description	AK Source	EPA HWNs
Boehmite (Al2O3*H2O)	Aluminum oxide scaling that forms on U-Al fuel reacted with water.	P2007	NA
Boric acid	Zinc-Zircaloy interactions specimen preparation.	P548	NA
Boron	Present in leachate solution.	P2020	NA
Butyl cellusolve	Microstructural exam etchant reagent. Ingredient of Krylon Spray.	P505, U072	NA
Cadmium	Contaminant of HEPA filters and pelletized clay. Component of neutron shielding, batteries, photography solutions, and other metal alloys. Element found in dissolved spent fuels.	C020, C066, C094, C116, C160, P412, P416, P2017, P2021, P2022, P2027, P2028, U015, U017, U072, U083	D006
Calcite	Present in leachate solution.	P2003	NA
Calcium salts	Present in leachate solution.	P2003, P2004, P2020, P2029, P2030	NA
Calcium silicate	Present in leachate solution.	P2003, P2020	NA
Calcium hydroxide	Soda lime used to neutralize acidic solutions.	P578	NA
Calixarene (BOBCalixC6)	Extraction agent.	C2008, P2028	NA
Carbon tetrachloride	Immersion density measurements. Metallographic specimen and cell cleaning solvent.	C066, C081, C137, C147, P416	D019
Cellulosic Materials	Items include paper, cardboard, cotton, and leather rags, cloth, filter paper, towels, grinding paper, boxes, liners, HEPA filter media, tissues, string, boxes, rope, swabs, mop heads, wipes, and gloves. Wooden items include brooms, mop head and handles, HEPA filter frames, rulers, brushes, blocks, and Masonite, plywood, cork, fiber board, and chipboard items.	C013, C026,C029, C066, C333, C2005, P001, P006, P031, P327, P329, P331, P399, P410, P416, P469, P546, P548, P552, P557, P560, P577, P604, P2004, P2010, P2012, P2013, P2021, P2029, P2030, P2031, U002, U004, U041, U332, U2001	NA[1]
Charcoal	DRA water treatment unit filter media. AGHCP exhaust filtration media.	C137, C158, U015, U017, U018, U019, U021, U041, U073	NA
Chloride salts	Present in leachate solution.	P2020, P2029, P2030	NA
Chlorinated cobalt dicarbollide (CCD)	Extraction agent.	C2008, P2022, P2023, P2024, P2026	NA
Chromic acid	Metallography etchant acid.	C066, C137, C147, U006	D007
Chromium	Component of chromic acid etchant, fuel, stainless and zircaloy steel cladding, chromium plated measuring tapes, chromic oxide polishing abrasive, pelletized clay and HEPA filters. Present in leachate solution and used to oxidize Np.	C066, C116, C137, C160, P412, P490, P2003, P2021, P2023, P2027, U006, U068, U069, U070, U072, U074, U083, U084	D007
Citric acid	Metallography etchant acid.	C066, C137, P062	NA
Clay and vermiculite absorbents (Oil Dri)	Absorption of neutralized etchants and alcohol solutions from passivation of reactive materials (i.e., Na and NaK).	C013, C026, C029, C066, C106, C115, C116, C130, C147, C333, P001, P006, P009, P551, P578, P604, U002, U004, U015, U017, U018, U019, U021, U041, U332	NA[1]
Copper	Gasket material.	C2005, P2003	NA
Crown ether (D+Bu18Crown6)	Extraction agent.	P2028	NA
Cyanex 301 (bis (2,4,4-Trimethylpentyl) dithiophosphinic acid)	Organic solvent.	C2008, P2022	NA
Di(2-ethylhexyl) phosphoric acid (D2EHPA)	Extraction agent.	C2008	NA
Diammonium Diethylene triamine pentaacetate	Stripping agent.	P2022	NA
Diamond paste/powder	Metallurgical sample polishing compound.	C137, C2006, P062, P604	NA
Diethylenetriamine pentaacetic acid (DTPA)	Complexing agent.	C2008, P2010, P2011, P2012, P2013, P2022, P2023, P2024, P2026, P2027, P2028, U2004	NA

Table 5. Waste Stream AERHDM Material and Chemical Inputs (Continued)

Chemical/Material	Use/Description	AK Source	EPA HWNs
Dodecane (n-dodecane)	Organic solvent.	C2008, P2010, P2011, P2012, P2013, P2018, P2022, P2023, P2024, P2026, P2027, P2028, U2004	NA
Eichrom TRU SPEC	Column resin used for rare-earth element separation.	P2017	NA
Epoxy resin	Used to mount fuel samples.	P2004, P2005, P2012, P2019	NA
Ethanol (ethyl alcohol)	Metallurgical sample cleaning and etching. Cell decontamination cleaning solvent. Ingredient of Permatex gasket adhesive. Na, NaK, and lithium passivation reagent.	C008, C011, C029, C039, C066, C137, C147, C316, C2008, C5001, P001, P062, P329, P416, P480, P540, P552, P566, P568, P604, P2018, P2035, P5006, P5008, U004, U066, U072, U321	NA
Ethyl Benzene	Component of Krylon Spray.	P410, U072	NA
Ethylenediamine tetraacetate (EDTA)	Complexing agent.	P2017	NA
Ethyl ether	Metallurgical sample preparation. Cell cleaning solvent.	C066, C147	NA
Ethylene glycol	Metallurgical sample etching. Furnace coolant. Ingredient of Krylon Spray and mounting wax.	P062, P516, U072	NA
Ethyl violet	Indicator in soda-lime/soda carbonate neutralization filter media.	P578	NA
Fluoride salts	Present in leachate solution.	P2020, P2029, P2030	NA
Fluorinert – FC-43	Clear non-toxic fluorinated electric liquid used in immersion density measurement of cladding samples.	C128, U072	NA
Formate salts	Present in leachate solution.	P2003, P2020	NA
Gadolinium oxide (gadolinium burnable poison)	UO2 fuel pellet Dopant.	P2000, P2021, P2022, P2023	NA
Graphite	Graphite felt, paint, crucibles, containers, and hardware covers.	C025, P546, P556, P557, P578, P604, U015, U017, U018, U019, U021	NA
Glass	Items include glass, ceramic, alumina, porcelain, quartz, Vycor, Pyrex, and boron nitrite bottles, jars, tubing, caps, beakers, bottles, funnels, graduated cylinders, plates, insulation (fiber glass), firebrick, insulators, light bulbs, syringes, Petri dishes, reaction vessels, thermometers, lenses, tubing, and other items.	C025, C026, C029, C2005, P006, P031, P304, P327, P392, P412, P550, P578, P580, P2004, P2010, P2011, P2012, P2013, P2017, P2022, P2023, P2024, P2025, P2026, P2029, P2030, P2031, U041, U332, U2001	NA[1]
Guanidine carbonate (Guanidinium carbonate)	Oxygen scavenger.	C2008, P2010, P2011, P2013, P2022, P2023, P2026, U2004	NA
Heptane	Metallurgical sample cleaning. Ingredient of Krylon Spray.	C066, C128, C147, P031, P410, P416, P604, U321	NA
Hexane	Metallurgical reagent and component of Krylon Spray.	P410, P416, U072	NA
Hydrobromic acid	Dissolution agent.	P2017, P2024	NA
Hydrochloric acid	Metallography etchant acid. Clean shielding windows. Purification agent.	C066, C137, C344, P034, P344, P475, P521, P602, P2009, P2017, P2021, P2022, P2030, U304, U321	NA
Hydrofluoric acid	Metallography etchant acid. Reagent for cleaning cladding for mechanical testing. Fuel dissolution acid.	C066, C137, C2008, P062, P344, P503, P507, P521, P554, P572, P578, P602, P2009, P2017, P2021, P2024, P2025, P2026, P2028, P2030, U030, U304, U321, U2004	NA
Hydrogen peroxide	Reagent for cleaning cladding for mechanical testing. Radiolysis product. Reagent.	P503, P507, P551, P554, P572, P574, P578, P2001, P2002, P2026, U321	NA

Table 5. Waste Stream AERHDM Material and Chemical Inputs (Continued)

Chemical/Material	Use/Description	AK Source	EPA HWNs
Hydroxylamine	Reagent.	P2022	NA
Hydroxylamine hydrochloride	Additive to zinc bromide shielding window solution.	P380, P486	NA
Hydroxylamine nitrate (HAN)	Degradation product of AHA.	P2028	NA
Hyprez	Petroleum distillate based lubricant containing 1,4-dioxane (0-1%) and 1,1,1-trichloroethane (10-30%) used for specimen cleaning.	C012, C029, C066, P062, P069, P389, U072, U321	F002
Iron oxides	Contaminant found when fuel assembly is breached.	C2005	NA
Iron sulfamate	Used for feed adjustment.	C2008, P2024, P2026	NA
Iron sulfate	Degradation product.	C2008	NA
Isobutanol	Metallurgical reagent – cleaning solvent.	C147, P416	F005
Isopar-L	Kerosene solvent.	C2008, P2010, P2028, U2004	NA
Isopropyl alcohol	Ingredient of Permatex gasket adhesive and Krylon Spray. Metallurgical reagent -- degreaser.	U072, P416	NA
Kerosene	Microprobe sample preparation.	C029, U066	NA
Krylon Spray	Used to fix contamination on face of HEPA filters.	P410, U072	NA
Lactate buffer (Ammonium Lactate/Lactic Acid)	pH control and strip solution.	C2008, P2010, P2011, P2013, P2022, P2024, P2026, P2027, P2028, U2004	NA
Lead	Component of manipulator weights, metal scrap, leaded glass, shielding, leaded gloves and aprons, blocks, shot, lead wool, lead-bismuth epoxy, paint, lead solder, flashlight batteries, lead-acid batteries, sodium vapor lamps, and HEPA filter contaminant. Reference material. Present in leachate solution.	C013, C029, C066, C088, C091, C137, C143, C147, C148, C333, C341, P023, P038, P039, P380, P412, P416, P484, P485, P487, P489, P490, P521, P536, P537, P557, P2003, P2017, U004, U006, U015, U017, U018, U019, U021, U041, U072, U083, U332	D008
Light bulbs	Broken fluorescent, mercury, and furnace lamps.	P392, P416, U015, U017, U018, U019, U021	D009
Lithium metal	Coolant removed from fuel pins and cladding. Low-oxygen vanadium alloy testing reagent.	C066, P412, P540	NA
Lithium salts	Present in leachate solution. Cut up discharged lithium battery pieces identified during VE.	C2029, P2020	NA
Magnesium salts	Present in water leachant.	P2004, P2029, P2030	NA
Magnesium hydroxide	Neutralization agent.	P2010, P2013	NA
Mercury	Component of mercury vapor lights, fluorescent lights, batteries thermometers, prinometers (density testing), and switches.	C013, C035, C066, C137, C143, C147, P070, P412, P416, P2011, U015, U017, U018, U019, U021, U022, U041, U083, U085	D009
Metal (ferrous)	Items include carbon steel, stainless steel, and cast iron cans, buckets, dies, slings, equipment, tools, tubing, fittings, rods, rings, rounds, chain, saw blades, dustpans, motors, fixtures, hot plates, variacs, vessels, steel wool, manipulator parts and tape, trays, capsules, and other miscellaneous scrap items.	C013, C026, C029, C066, C333, C2004, C2005, P001, P006, P031, P032, P040, P327, P329, P331, P344, P394, P396, P398, P489, P560, P577, P2003, P2004, P2005, P2006, P2009, P2011, P2012, P2013, P2014, P2017, P2020, P2021, P2023, P2024, P2025, P2026, P2028, P2029, P2030, U002, U004, U015, U017, U018, U019, U021, U041, U332	NA[1]

Table 5. Waste Stream AERHDM Material and Chemical Inputs (Continued)

Chemical/Material	Use/Description	AK Source	EPA HWNs
Metal (nonferrous)	Items include aluminum, brass, bronze, copper, gold, lead, tungsten, tantalum, tin, vanadium, zinc, zirconium, cans (including punctured aerosol cans), gaskets, mesh sample holders, solenoid valves, thermocouples, tools, vials, sheeting, foil, tools, wire, shot, rods, cable, tubing, capsules, fittings, gauges, plates, motors, samples, light fixtures, and other miscellaneous scrap items.	C013, C026, C029, C333, C2004, C2005, P006, P327, P329, P386, P395, P399, P415, P489, P520, P540, P548, P551, P562, P604, P2003, P2006, P2012, P2017, P2020, P2021, P2023, P2024, P2025, P2026, P2028, P2029, P2030, U002, U004, U015, U017, U018, U019, U021, U041, U332, U2001	NA[1]
Met-L-X	Fire suppression agent. Swarf conditioning.	P492, P540, P5002, P5004, P5006, P5008	NA
Metaschoepite (UO3*2H2O)	Corrosion product of spent UO2 fuel reacted with groundwater.	P2004	NA
Methanol	Metallurgical sample preparation. Cell cleaning solvent.	C066, C106, C137, C147, C316, P416, P505, P2017, P2018, U322	NA
Methyl ethyl ketone	Building 205 inventory stored outside of the hot cell.	P2018	NA
n-butyl alcohol	Metallurgical sample preparation and cleaning solvent. Na and NaK passivation reagent.	C013, C066, C137, C147, P061, P412, P416	NA
Neodymium oxide	Standard.	P2017	NA
Neptunium dioxide	Material of interest.	P2030	NA
Nickel	Present in leachate solution.	P2003	NA
Nitrate salts	Present in leachate solution.	P2003, P2020, P2029, P2030	NA
Nitrite salts	Present in leachate solution.	P2003, P2020	NA
Nitric acid	Metallography etchant and defueling acid. Reagent for cleaning cladding for mechanical testing. Dissolution solution.	C137, C2004, C2005, C2008, C2009, P031, P062, P329, P331, P344, P387, P503, P507, P551, P554, P556, P566, P572, P574, P578, P602, P2008, P2009, P2010, P2011, P2012, P2013, P2016, P2017, P2018, P2020, P2021, P2022, P2023, P2024, P2025, P2026, P2027, P2028, P2029, P2030, U304, U321, U2002, U2004, U2010	NA
octyl(phenyl)-N,N-diisobutylcarbamoyl methyl phosphine oxide (CMPO)	Extraction agent.	C2008, P2022, P2024, P2026, P2028	NA
Oxalate salts	Present in leachate solution. Scrub solution.	P2003, P2024	NA
Oxalic acid	Metallography etchant acid. Complexes zirconium.	C066, C118, C137, C2008, P062, P386, P2010, P2011, P2022, P2023, P2024, P2026, P2028	NA
Perchloric acid	Electropolishing acid and isotope dilution.	P521, P2017	NA
Pertechnetic acid (HTcO4)	Complexing agent.	P2026	NA
Petro Bond A610	Chemical sorbent.	P2010	NA
Petroset II-G	Chemical sorbent.	P2010, P2013	NA
Phenolphthalein	Indicator used during sodium reactivity testing of swarf, metmounts, and loop sections.	C5001, P2035, P5006, P5008	NA
Phenyl trifluoromethyl sulfone (FS-13)	Solvent.	P2010, P2011, P2022, P2023, P2026, U2004	NA
Phosphoric acid	Metallography etchant and electopolishing acid.	C066, C137, P062, P521, P551, P574, P2018, U321	NA
Photo Flo	Hydrogenous liquid in Area III	U322, U072	NA

Table 5. Waste Stream AERHDM Material and Chemical Inputs (Continued)

Chemical/Material	Use/Description	AK Source	EPA HWNs
Plastic	items include polyethylene, polypropylene, polyvinyl chloride, phthalate, Koroseal, styrene butadiene, polyurethane, Lucite, Nylon, Teflon, Tygon, Nalgene, and epoxy (hardened), metallurgical (Bakelite) sample mounts, push thrus, bottles, cups, dishes, pipettes, tubing, funnels, pipe, bags, filter cartridges, sheeting, vials, tape, syringes, markers, and other miscellaneous items.	C013, C026, C029, C333, C2004, C2005, P006, P068, P344, P489, P548, P552, P553, P557, P560, P569, P578, P580, P604, P2004, P2009, P2010, P2012, P2013, P2017, P2021, P2025, P2030, P2031, U004, U015, U017, U018, U019, U021, U041, U072, U332, U2001	NA[1]
Polychlorobiphenyls	Component of ballasts, capacitors, and transformers located outside of the cells.	C066, C137, C143	NA
Polyethylene glycol (PEG)	Organic solvent.	C2008, P2022, P2023, P2026	NA
Potassium bisulfate (sulfate)	Hydrogen charging solution reagent for auger fracture specimens.	P521	NA
Potassium hydroxide	Neutralize acidic etchant and fuel dissolution solutions (soda lime).	P578	NA
Potassium oxalate	Used to complex zirconium.	C2008	NA
QuickStick	Mounting wax used in Bakelite metallographic mount preparation.	C2006, P552, U072	NA
REACT	Hydrochloric acid-based cleaning solution used to clean manipulators.	P472, U072	NA
Reillex HPQ resin	Anion-exchange resin.	P2023, P2026	NA
Resin	DRA water treatment unit filter media. In-cell vacuum air sweeper filters (Zeolyte).	C026, P546, U015, U017, U018, U019, U021, U041, U072, U073	NA
Rubber	Items include Neoprene, Tygon, Viton, butyl, latex, and silicone O-rings, gaskets, stoppers, hose, tubing, gloves, wire/cord insulation, and other miscellaneous items.	C013, C026, C029, C333, P006, P358, P395, P553, P2023, P2025, U015, U017, U018, U019, U021, U041, U332, U2001	NA[1]
Schoepite (hydrated/dehydrated)	Corrosion product of spent UO2 fuel reacted with groundwater.	P2001, P2002, P2003, P2004, P2007, P2020, P2030	NA
Selenium	Irradiation experiment reagent. Contaminant of HEPA filter media. Element found in dissolved spent fuel.	U006, U083, P412, P2027, P2028	D010
Sky Blue	Cell and glovebox window cleaning detergent.	P487, U321, U072	NA
Silica	Component of a ground water surrogate. Present in leachate solution.	C2004, C2005, P2003, P2020, P2029, P2030	NA
Silicic acid	Naturally-occurring fuel leachate reactant.	P2002	NA
Silicon	Present in water leachant.	P2002, P2003, P2004, P2020	NA
Silicon carbide	Abrasive on paper used to grind down fuel specimens.	C2006, P2029	NA
Silver	Component of silver nitrate etchant, mounting epoxy, containers, solder, photographic film and chemicals, and HEPA filter contaminant and screw eyes. Element found in dissolved spent fuel.	C020, C029, C066, C137, C147, U006, P061, P062, P068, P410, P412, P416, P507, P539, P2017, P2021, P2027, P2028, U072, U083	D011
Silver nitrate	Metallography etchant reagent for Zircaloy metals. Testing agent.	C066, C137, P062, P539, P2026, U006, U321	D011
Simple Green	Detergent used to clean hot cells.	C2008, U072	NA
Soddyite	Corrosion product of spent UO2 fuel reacted with groundwater.	P2004, P2020	NA
Sodium arsenite	Hydrogen charging solution reagent for auger fracture specimens.	P521	D004
Sodium bicarbonate	Component of a ground water surrogate.	C2004, C2005	NA
Sodium boltwoodite	Corrosion product of spent UO2 fuel reacted with groundwater.	P2002, P2004	NA
Sodium bisulfate (sulfate)	Hydrogen charging solution reagent for auger fracture specimens.	P521	NA
Sodium carbonate	Neutralize acidic etchant and fuel dissolution solutions.	C066, C147, P551, P578	NA

Table 5. Waste Stream AERHDM Material and Chemical Inputs (Continued)

Chemical/Material	Use/Description	AK Source	EPA HWNs
Sodium hydroxide	Neutralize acidic etchant and fuel dissolution solutions (soda lime). Autoradiography film etching. Used in titrations.	C066, C147, C2008, P061, P578	NA
Sodium metal	Component of fuel pins, generated during sectioning.	C008, C009, C011, C013, C029, C147, P001, P006, P009, P032, P060, P412, U002, U004	NA
Sodium nitrite	Used to ensure tetravalent state for Np and Pu.	P2022	NA
Sodium salts	Resulting from Na and NaK passivation absorbed on mineral (clay) absorbents. Present in water leachant.	C013, P2002, P2004, P2029, P2030	NA
Sodium-potassium alloy	Component of fuel pins, generated during sectioning.	C023, C029, C039, C066, C147, P001, P032, P060, P412, U002	NA
Solidification Agents	Liquid solidification agents may include Portland cement, Aquaset, or Petroset.	P032, P412	NA
Strippable paint	Used to decontaminate cell surfaces and equipment.	P489	NA
Sulfamic acid	Stabilizes Np(VI) oxidation state and destroys nitrite.	C2008, P2026, P2028	NA
Sulfate salts	Present in leachate solution.	P2020, P2029, P2030	NA
Sulfuric acid	Metallography etchant and electropolishing acid. Degradation product of sulfamic acid.	C066, C137, C2008, P031, P505, P521	NA
Tetrachloroethylene	Manipulator arm maintenance and cleaning. Cell cleaning solvent.	C066, C137, C147, C2009, P416, U066, U2007, U2008, U2009, U2010	F002
Titanium	Present in leachate solution.	P2003	NA
Toluene	Manipulator arm maintenance and cleaning. Metallographic specimen and cell cleaning solvent. Component of Krylon Spray.	C012, C066, C137, C147, P062, P410, P416, P2018, U066, U072, U321	F005
Tri-n-octylamine (TOA)	Organic solvent.	C2008, P2028	NA
Tributyl phosphate (TBP)	Complexing agent.	C2008, P2010, P2011, P2012, P2013, P2022, P2023, P2024, P2026, P2028, U2007	NA
Uranium carbide	Product of spent fuel oxide with water under oxidizing conditions.	C2005, P2007	NA
Uranium trihydride (uranium hydride)	Product of metallic uranium reacted with water.	C2005, P2007	NA
Uranyl nitrate	Stripping solution.	P2026, P2028	NA
Uranyl oxide hydrate	Product of spent fuel oxide with water under oxidizing conditions.	P2001	NA
Uranyl oxyhydroxides	Product of spent fuel oxide with water under oxidizing conditions.	P2002, P2004	NA
Uranyl silicates	Product of spent fuel and silica-containing water.	P2001, P2004	NA
Vanadium (salts or acids)	Reagents.	C2008, P2023, P2024	NA
Vanadyl nitrate	Oxidizing agent for Np.	P2028	NA
Xylene	Metallography mount and lens cleaner. Cell cleaning solvent. Ingredient of Krylon Spray.	C029, C066, C137, C147, P410, P416, U072	NA
Zinc	Reference material. Present in leachate solution.	P2003, P2017	NA
Zinc bromide	Salt shielding solution in hot cell windows.	P031, P034, P486	NA
Zircaloy	Fuel cladding material. Component of sectioning dust and fines (swarf).	C066, C137, C2005, P001, P032, P062, P304, P372, P396, P412, P548, P557, P568, P580, P1002, P2001, P2002, P2003, P2007, P2021, P2030, U006	NA
Zirconia	Milling media.	P2029	NA
Zirconium	Present in leachate solution.	P2021, P2022, P2023, P2024, P2025, P2026	NA

Note 1:
The hazardous compounds and associated EPA HWNs for these waste materials are addressed in the specific chemical compounds in this table (lead, mercury vapor light bulbs, etc.)

5.4.2.1 F-Listed Constituents

Based on review of AK relative to chemicals used or present in AGHCF and K-Wing operations, waste stream AERHDM may contain or be mixed with F-listed hazardous wastes from non-specific sources listed in 40 CFR Part 261.31, *Identification and Listing of Hazardous Waste* (Reference 15). As shown in Table 5, F002 and F005 listed solvents were used in the AGHCF and K-Wing hot cells. F003 constituents, including acetone, n-butyl alcohol, ethyl benzene, ethyl ether, methanol, and xylene are listed solely because these solvents are ignitable in the liquid form. The waste stream does not exhibit the characteristic of ignitability because it is not liquid; therefore, F003 is not assigned. Although several F001-listed solvents were identified in the AK record (i.e., 1,1,1-trichloroethane, carbon tetrachloride, and tetrachloroethylene), EPA has provided a regulatory clarification that the F001 listing is only appropriate when the listed solvents are used in a "large-scale" degreasing operation such as cold cleaning or vapor degreasing on an industrial scale (Reference 16). Neither the AGHCF nor the K-Wing conducted large-scale degreasing operations, and therefore, EPA HWN F001 is not assigned to this waste stream. Waste stream AERHDM is assigned F-listed EPA HWNs F002 and F005 for 1,1,1-trichloroethane, benzene, isobutanol, tetrachloroethylene, and toluene. A small amount (200 millileters) of methyl ethyl ketone was identified in a chemical inventory in a laboratory outside of the hot cell area in the K-Wing. Review of the AK record did not identify any use of this chemical during the operations conducted in the K-Wing hot cell operations. For this reason, HWN F005 is not assigned for methyl ethyl ketone (References C2027, DR014 and P2018).

5.4.2.2 Toxicity Characteristic Constituents

Based on review of AK relative to chemicals used or present in AGHCF, K-Wing, and supporting operations, waste stream AERHDM is contaminated with toxicity characteristic compounds as defined in 40 CFR 261.24 (Reference 15). Where a constituent has been identified and there is no quantitative data available to demonstrate that the concentration of a constituent is below regulatory threshold levels, the applicable EPA HWN is applied to the waste stream (Reference DR014) in accordance with CCP-TP-005 (Reference 13).

Debris waste from both the AGHCF and the K-Wing contains or is contaminated with toxicity characteristic metal compounds listed in 40 CFR 261 (Reference 15). Based on the references identified in Table 5, EPA HWNs D004, D005, D006, D007, D008, D009, D010, and D011 are assigned to waste stream AERHDM (References C2027 and DR014).

The AK sources identified the use of organic toxicity characteristic compounds including 1,1-dichloroethylene (D029), 1,2-dichloroethane (D028), benzene (D018), carbon tetrachloride (D019), and tetrachloroethylene (D039). Benzene and tetrachloroethylene are identified as F-listed solvents; assigned F005 and F002, respectively. Because the more specific F-listed EPA HWNs have been assigned for these compounds, assignment of the corresponding toxicity characteristic HWNs (D018 and D039) is not

necessary. Therefore HWNs D019, D028, and D029 are assigned to waste stream AERHDM (Reference DR014).

5.4.2.3 Ignitables, Reactives, and Corrosives

Potentially ignitable, corrosive, and reactive chemicals are prohibited from disposal in the RH TRU waste. Sodium (Na), sodium-potassium (NaK) alloy, and lithium metals contained in some fuel pins have been generated during disassembly and sectioning during preparation of metallurgical specimens, and are passivated in the AGHCF. Na and NaK have been reacted with alcohol (ethanol) and lithium was reacted with an ammonia solution or alcohol. The resulting solutions are absorbed into pelletized clay and heated to dryness on a hot plate in the same manner as the acid solutions. Solidification agents such as Portland cement, Acid-Bond, Aquaset, and Petroset may also be used to immobilize liquids. Surrogate testing must be performed prior to the solidification and disposal of any non-aqueous liquids. As described in Section 5.4.1 fuel examination residues (e.g., specimen fragments, swarf, cladding) have been added to waste stream AERHDM. Prior to packaging, these residues are inspected, tested, deactivated, and/or stabilized as necessary to ensure that the final waste form does not contain potentially reactive or phyrophoric materials (References 2, C009, C029, C066, C099, C118, C130, C133, C137, C147, C333, C2025, P372, P412, P540, P2010, P2011, P2013, P2032, P2033, P2035, P5002, P5004, P5005, P5006, P5007, P5008, and U332).

To verify that metallurgical specimens (met mounts) prepared in the AGHCF would not exhibit the characteristic of reactivity, met mounts originating from numerous types of fuel materials were tested. Met mounts typically consist of a cylindrical epoxy body in which a small section of the fuel rod is embedded and polished to expose a single cross-sectional surface. The epoxy body of a typical mount is 1.25 inches in diameter and about 1-inch tall. Among the fuel types examined at the AGHCF, some were sodium-bonded metal fuel pins. The twenty met mounts chosen for testing were selected from the portion of the AGHCF inventory that contains samples prepared from sodium-bonded metal fuels and both sodium-bonded and non sodium-bonded fuels that were irradiated in sodium-cooled Loops and/or test trains. These samples were soaked in an ethanol solution containing phenolphthalein as an indicator that would readily identify the generation of potentially reactive hydrogen gas. None of the samples tested positive for the presence of sodium in any form, there were no gas bubbles observed, and there was no color change observed in the liquids (Reference P2035).

To assure that the swarf (specimen chips, filings, fines, and dust) was not water reactive prior to packaging, samples of these materials were also tested in an ethanol solution. These materials were than blended with Met-L-X (1:5 swarf to Met-L-X). 100-gram samples were then taken from the conditioned swarf populations and exposed to atmospheric conditions (oxygen level greater than or equal to 18%) to assure no reaction in air (References C5001, P5002, and P5004).

Carbide and sulfide fuel specimens were initially segregated from waste stream AERHDM until it was verified that these materials, predominantly originating from the

examination of fuel pins from sodium-cooled reactor assemblies, were free of any unreacted sodium contamination. The reactor assembly sections from these reactors (also referred to as loops) originally containing unreacted sodium metal were sectioned and immersed in an ethanol solution to verify that no reactive sodium was present. Should unreactive sodium be detected, it will be neutralized in ethanol prior to packaging (References C5001, C2029, and P5007).

Small amounts of etchant solutions are prepared in the AGHCF with hydrofluoric, sulfuric, hydrochloric, chromic, phosphoric, nitric, citric, acetic, and oxalic acids. A silver nitrate solution has been used for etching the surface of Zircaloy specimens. Acidic waste solutions are neutralized using either sodium carbonate or sodium hydroxide (soda-lime/sodium carbonate filters), absorbed into pelletized clay (Oil Dri), then heated to dryness on a hot plate or allowed to air dry (References C066, C077, C147, P032, P062, P578, U006, and U332).

AGHCF operations have used small amounts of ignitable solvents including acetone, xylene, ethyl ether, ethanol, n-butyl alcohol, methanol, heptane, hexane, isopropyl alcohol, and kerosene. These chemicals have been used primarily during etching operations and also during cleaning operations in the hot cell. Solvents (primarily alcohols) are also used during sample preparation to clean the surfaces of the metallographic specimens. Due to the AGHCF practice of evaporating all organic liquids to dryness, no solvent liquids will be included in the waste stream (References C029, C066, C097, C106, C115, C118, C130, C137, C147, P025, P032, P472, and U332). This is supported by the low concentrations of flammable volatile organic chemicals detected in headspace gas samples taken to date in waste stream AERHDM containers (Reference U5002).

AGHCF waste management practices required aerosol cans, gas cylinders, or other vessels which could be pressurized to be permanently vented prior to disposal. The method of venting must be easily visible and may include, puncturing or flattening aerosol cans, removing valves from gas cylinders, and removing plugs, flanges, or caps from other types of vessels (References DR017, P412, and U332). Any drums containing aerosol cans that cannot be verified to be punctured will be removed or remediated prior to shipment to WIPP.

No source for Na, NaK, or lithium metal was identified in the AK sources for the K-Wing operations. It would be expected that MOX fuels originating from LMFBR specimens would be sodium bonded, however the shipping documentation from ANL-W for the EBR-II MOX fuel specimens identified in the K-Wing inventory note that no sodium was present in these specimens (References C812 and U1002-A/G 498). Lithium battery pieces have been identified during packaging operations; however, these batteries have been cut into pieces and fully discharged (Reference C2029).

Aqueous solution chemistry was performed in the K-Wing. Aqueous liquids are to be neutralized and solidified with the sorbent Acid Bond (or similar) during packaging. Corrosive liquids such as acetic acid, hydrobromic acid, hydrochloric acid, hydrofluoric acid, hydrogen peroxide, nitric acid, oxalic acid, and sulfuric acid were commonly used

in separations chemistry and metal etching. Acidic waste solutions may also be neutralized using a magnesium hydroxide slurry (or similar) and then solidified using Aquaset II-G (or similar) (References P2010, P2011, and P2013).

The K-Wing operations have used ignitable solvents including acetone, acetonitrile, n-butyl alcohol, n-dodecane, hexane, Isopar-L, and methanol. These chemicals have been used primarily during chemical extraction operations in the hot cells. The organic solutions generally have sufficiently low gamma activity that they can be removed and either stored or processed outside the cells, and not included in this waste stream (References P2011 and P2016).

Aerosol cans and gas cylinders were not observed inside the hot cells of the K-Wing during a walk-through inspection, documented as being present, nor are they apparent in the photographic record. Cylinders of flammable gas are specifically noted not to have been used in the hot cells of the K-Wing. Any aerosol cans will be removed or remediated prior to shipment to WIPP (References P2016 and U2001).

Based on these AGHCF and K-Wing waste management practices, the materials contained in waste stream AERHDM do not exhibit the characteristics of ignitability (D001), corrosivity (D002), or reactivity (D003) as defined in 40 CFR 261.21, 261.22, and 261.23, respectively (Reference 15). Internal containers with prohibited amounts of liquids have been identified. These containers are not eligible for WIPP disposal until these liquids are remediated (Reference DR017).

5.4.2.4 P- and U-Listed Constituents

The AK did not identify any source or incident where the debris was mixed with or contaminated with discarded commercial chemical product, an off-specification commercial chemical product, or a container residue or spill residue thereof. Production scale activities involving beryllium were not performed at either the AGHCF or the K-Wing. The only source of beryllium identified in the AK record was samples being analyzed for beryllium. Based on the physical form of the beryllium samples introduced into the waste generating processes, the waste stream will not meet the definition of P015 waste and beryllium will not exceed one percent in any payload container. Hydrofluoric acid was used in both the AGHCF and the K-Wing as a metallurgical etchant, however there is no indication that unused acid or materials from spills of the acid were disposed of in this waste stream. Additionally, as described above, corrosive liquids were evaporated and/or neutralized and immobilized prior to disposal; therefore, U134 for hydrofluoric acid is not assigned to the waste stream. Waste stream AERHDM is therefore not assigned a P- or U-listed HWN.

5.4.2.5 K-Listed Constituents

The material in this waste stream is not a hazardous waste from any of the sources specified in 40 CFR 261.32 (Reference 15).

5.4.3 Radiological Characterization

5.4.3.1 CCP Radiological Characterization

Waste stream AERHDM was generated at both the Argonne AGHCF and K-Wing during the processing of various types of radiological material including irradiated and un-irradiated fuel pins from numerous reactor programs. Based on AGHCF and K-Wing waste management practices categorization schemes, and container-specific documentation covering the time period of generation, containers in this waste stream have surface dose rates exceeding 200 millirem per hour (mR/hr) and contain greater than 100 nanocuries per gram (nCi/g) TRU alpha contamination. The waste is contaminated primarily with fissile materials and MFP. The radiological characterization of this waste stream is determined as described in CCP-AK-ANLE-501, *Central Characterization Project Remote-Handled Transuranic Radiological Characterization Technical Report For Remote-Handled Transuranic Debris Waste From Argonne National Laboratory-East*. Each payload container shipped to the WIPP will be characterized according to CCP-AK-ANLE-502, *Central Characterization Project RH TRU Waste Certification Plan for 40 CFR Part 194 Compliance for ANL RH Waste Stream: AERHDM*, and certified in accordance with CCP-PO-002, as containing more than 100 nCi/g of alpha emitting isotopes with half-lives greater than 20 years (References 10, 11, 12, C349, P031, P051, P380, P414, U332, and U335).

The overall approach to the radiological characterization of the Argonne RH TRU drums is what is termed, a dose-to-curie (DTC) approach. In this approach, the gamma dose (exposure) rate is measured for an individual drum, and from the measured dose rate, the concentration of gamma radionuclide such as Cs-137 is determined. The dose rate used in the calculation of the Cs-137 concentration is the average of several gamma dose rate measurements at specific locations around the drum in conformance with the geometric modeling used to derive the DTC relationship. The weight of the drum is measured and the tare weight of the container is subtracted to yield a net weight of the waste that is used in the density determination and, ultimately, in the DTC determination. Once the Cs-137 concentration has been determined, scaling factors are used to derive the concentrations of the remainder of the radionuclides that are required to be reported (Reference 13).

As described in CCP-AK-ANLE-501 and CCP-AK-ANL-502, the radiological characterization approach has been developed for each of the following contributing sources of waste materials included in waste stream AERHDM (References 11 and 12):

- AGHCF Debris (Original Population)
- AGHCF FEW
- AGHCF RERTR FEW

- AGHCF Carbide FEW, 2nd Batch, <1/2" Fuel Remnants
- AGHCF Carbide FEW, 2nd Batch, >1/2" Fuel Remnants
- K-Wing Debris
- K-Wing FEW
- K-Wing Debris with Solidified Liquids

Table 6, Summary of Radiological Characterization Technical Approaches for Waste Stream AERHDM, provides an overview of the approach developed for each population of waste containers associated with specific sources of waste materials. The sections following Table 6 briefly identify each population and the associated characteristics of each that trigger a tailored radiological characterization approach (References 11, 19, 20, 21, and 22).

Table 6. Summary of Radiological Characterization Technical Approaches for Waste Stream AERHDM

Waste Material Source	Method	Scaling Factor Development	CCP-AK-ANLE-501 Description
AGHCF Debris (Original Population)	DTC	Composition information and records for fuel materials in conjunction with ORIGEN2.2 analysis	Section 2
K-Wing Debris	DTC	Sampling campaign of debris waste	Appendix A
K-Wing FEW	Mass determination of discrete fuel specimens in individual drums in conjunction with ORIGEN2.2 analysis	N/A	Appendix B
AGHCF FEW	Mass determination of discrete fuel specimens in individual drums in conjunction with ORIGEN2.2 Analysis	N/A	Appendix C
K-Wing Debris including Solidified Liquids	DTC	Sampling campaign of liquid waste prior to solidification in conjunction with the scaling factors developed for the K-Wing Debris.	Appendix D and G
AGHCF RERTR FEW	DTC	Composition information and records for fuel materials in conjunction with ORIGEN2.2 analysis	Appendix E
AGHCF Carbide FEW, 2nd Batch, <1/2" Fuel Remnants	DTC	Composition information and records for fuel materials in conjunction with ORIGEN2.2 Analysis	Appendix F
AGHCF Carbide FEW, 2nd Batch, >1/2" Fuel Remnants	Mass determination of discrete fuel specimens in individual drums in conjunction with ORIGEN2.2 Analysis	N/A	

5.4.3.1.1 Development of AGHCF Debris Radiological Characterization

The overall approach to the radiological characterization of the AGHCF Debris is a DTC approach. In this approach, the gamma dose (exposure) rate is measured for an individual drum, and from the measured dose rate, the concentration of gamma radionuclide such as Cs-137 is determined. The dose rate used in the calculation of the Cs-137 concentration is the average of several gamma dose rate measurements at specific locations around the drum in conformance with the geometric modeling used to derive the DTC relationship. The weight of the drum is measured and the tare weight of the container is subtracted to yield a net weight of the waste that is used in the density determination and, ultimately, in the DTC determination. Once the Cs-137 concentration has been determined, scaling factors are used to derive the concentrations of the remainder of the radionuclides that are required to be reported (Reference 13).

The development of scaling factors for the AGHCF debris included identification of virtually all of the fuel pins and reactor materials that were included in the examination program in the AGHCF. The relevant pre-irradiation fuel composition information and post-irradiation estimated burnup data were collected for each of the identified fuels. With the composition and burnup data, ORIGEN2.2 analysis yielded the post-irradiation composition of the fuel pins. Average ratios or scaling factors for radionuclides of interest were derived from the ORIGEN2.2 results (Reference 13).

5.4.3.1.2 Development of K-Wing Debris Radiological Characterization

The K-Wing debris waste was contaminated by a variety of research experiments conducted in the K-wing hot cells involving a variety of irradiated fuel materials. Some of the experiments included the sectioning of the fuel materials for the purpose of preparing the materials for subsequent processing, testing and analysis. The K-Wing also conducted long-term leaching and corrosion studies, and the demonstration of the UREX solvent extraction process (Refer to Section 4.7).

Although there is considerable detailed information on the composition and burnup of the fuel materials examined in the K-Wing hot cells, the potential separation of the Cs-137 in the UREX processing relative to the actinides and other insoluble radionuclides preclude the development of scaling factors based on ORIGEN2.2 analyses and modeling. Therefore, the scaling factors were developed by conducting a sampling campaign of the actual waste materials stored in the hot cell prior to the packaging of the waste, and measuring the radionuclide concentrations in the samples. Accordingly, a sample plan was developed and implemented to collect the samples. The sample plan required that smears be collected from a variety of waste items and surfaces in the hot cell. Once the scaling factors were developed based on the sampling and analysis results, the DTC process was implemented as described in Section 5.4.3.1.1 above (References 11 and 19).

5.4.3.1.3 Development of the K-Wing FEW Radiological Characterization

This portion of the RH TRU debris waste stream AERHDM includes the FEW waste generated by the experiments conducted in the K-Wing hot cells. The waste consists of residual fuel specimens and remnants from the irradiated materials involved in research experiments conducted in the hot cells. There were many pieces of the leftover fuel specimens stored in the hot cells. The RH TRU FEW waste from these experiments in the hot cells has been placed into shielded fuel capsules and subsequently placed in 55-gallon drums fitted with 140 mil fiberboard liners. Other non-FEW trash debris has also been loaded into the drums along with the fuel. Because of the expected small contribution of the non-FEW trash debris to the total activity as compared to the FEW waste, it is not included in the drum total activity (References 11 and 21).

Because of the discrete form of the fuel materials involved in K-Wing FEW population and the availability of records and information on these materials, an approach other than DTC has been used to accomplish the radiological characterization of the drums of K-Wing fuel examination waste. The overall approach that is used for the radiological characterization of the FEW drums is to determine the total mass of the discrete fuel specimen(s) loaded into the individual drums. This approach is superior to a DTC approach in terms of accuracy by the elimination of the uncertainties associated with conversion of dose to curies (References 11 and 21).

For the fuel specimens that were contained in the intact fuel pin cladding, the length of each piece of fuel specimen was determined. The length for these fuel samples was determined by directly measuring the specimen during packaging or by obtaining the lengths reported by the K-Wing researchers in the AK record. The length of the fuel specimen was then multiplied by the fuel mass per unit length value derived from the design information on the fuel specimens. For the fuel specimens that were not contained by the intact cladding, but were in jars or containers, the weights of the fuel materials in the containers that had been recorded as part of the original research work in K-Wing scientific notebooks were extracted (References 11, 21, C3000, and P5003).

ORIGEN2.2 analyses of individual fuel pins involved in the K-Wing research experiments were used to derive the activity distributions for the radionuclides of interest. The ORIGEN2.2 analyses resulted in the activities of the individual radionuclides on a per mass unit basis of the fuel material. This information was coupled with the mass quantities determined for each of the different fuel specimens loaded into the waste drums. The activity values for each quantity of fuel specimen for each radionuclide placed in a drum were summed to derive the total activity content of the drum (Reference 13).

Four targets from the Intense Pulsed Neutron Source are also included in K-Wing FEW population. The ANL-E staff has calculated the radioactivity content of each target using Monte Carlo N-Particle Transport Code. These activity totals are added to the activity from the fuel specimens included in the drums containing the targets (Reference 13).

5.4.3.1.4 Development of the AGHCF FEW Radiological Characterization

This portion of the RH TRU debris waste stream AERHDM includes the FEW generated by experiments conducted in the AGHCF. The waste consists of residual fuel specimens and remnants from the irradiated materials involved in research experiments conducted in the hot cells (Reference 13).

Like the K-Wing FEW portion of the waste stream, the AGHCF FEW waste includes the discrete form of the fuel materials involved in this waste stream, and records and information on the residual fuel specimens are available that allow for a radiological characterization approach other than DTC. The overall approach that will be used for the radiological characterization of the AGHCF FEW drums will be to determine the total mass of the discrete fuel specimen(s) loaded into the individual drums (References 11 and 21).

For the fuel specimens that are contained in the intact fuel pin cladding, the length of each piece of fuel specimen will be measured and documented in the VE records. The measured length will then be multiplied by the fuel mass per unit length value derived from the design information on the fuel specimens. Specimens that are in a configuration, such as a melt or crucible, that does not lend itself to dimensional measurements will be weighed to derive the fuel mass. For the RERTR plates, a whole plate or all of the pieces of a sectioned plate will be placed into a drum such that the mass of fuel identified with each RERTR plate can be used to account for the loaded fuel quantity. For other items, either dimensional or gravimetric measurements will be made, as appropriate for the specimen, to derive the fuel quantity associated with specimens at the time of loading (References 11 and 21).

The ORIGEN2.2 analyses resulted in the activities of the individual radionuclides on a per mass unit basis of the fuel material. This information was coupled with the mass quantities determined for each of the different fuels loaded into the waste drums. The activity values for each quantity of fuel specimen for each radionuclide placed in a drum will be summed to derive the total activity content of the drum (Reference 13).

5.4.3.1.5 Development of the K-Wing Solidified Liquid and Debris Radiological Characterization

This portion of the RH TRU debris waste stream AERHDM includes the solidified liquids and debris waste generated by the extraction and corrosion study experiments conducted in the K-Wing hot cells described in Section 4.7. The liquid wastes were generated from the UREX processes. The UREX process involved the separation of dissolved spent fuel into seven fractions. The liquid wastes were consolidated into 20-liter plastic carboys (also known as clearboys) in preparation for the solidification step. The liquids from the consolidation carboys were pumped into 20-liter carboys and 2.5-liter pitchers for solidification. The solidified liquids were packaged into 55-gallon drums along with solid waste debris from the K-wing hot cells (References 13, C2033, U2021, and U2022).

Although there is considerable detailed information on the composition and burnup of the fuel materials used in the UREX processing, the separation of the Cs-137 in the UREX processing relative to the actinides and other insoluble radionuclides preclude development of scaling factors based on ORIGEN2.2 analyses and modeling. Therefore, the scaling factors were developed by taking liquid samples from each of the consolidation carboys prior to the solidification of the liquids and then measure the radionuclide concentrations in the samples. Accordingly, a sample plan was developed and implemented to collect the samples. The sample plan required that a minimum of two samples be collected from each consolidation carboy in the first batch of liquids. In the second batch of liquids to be solidified, the sample plan required that a minimum of six samples be collected from the bulking tank during the mixing of the tank (References 11, 20, and 22).

For drums containing solidified liquids and debris, the scaling factors used for the radiological characterization were derived from a composite of the scaling factors derived for the solidified liquids portion in the drum and the scaling factors developed for the K-Wing debris. Development of the scaling factors for the K-Wing debris waste is described in Section 5.4.3.1.2 (Reference 11, 20, and 22).

5.4.3.1.6 Development of the AGHCF RERTR FEW Radiological Characterization

This portion of the RH TRU debris waste stream AERHDM includes the RERTR FEW waste generated by experiments conducted in the AGHCF. The waste consists of residual RERTR fuel specimens and remnants from the irradiated materials involved in research experiments conducted in the hot cells. Although there are a variety of residual fuel specimens from the experiments conducted in the AGHCF hot cells, this portion of the waste stream includes only the residual RERTR fuel specimens (Reference 13).

The examinations at ANL-E involved the sectioning, grinding, and polishing of the plates for metallography, gamma spectroscopy and scanning, high-temperature testing, fission gas collection and analysis, and macrophotography. At the end of these experiments, there were many pieces of the leftover RERTR fuel specimens stored in the hot cells. The leftover RERTR fuel specimens are placed into lead-shielded containers or shield pots and subsequently placed in 7-gallon cans which will be placed into 30-gallon drums fitted with 140 mil polyethylene liners (Reference 13).

The primary source of information used to identify the RERTR fuel plates that were destructively examined in the AGHCF was the FIMS database. The information in the database spreadsheet identifies the specific fuel plates involved in the experiments, miscellaneous information regarding the fuel type, the research program involving the fuel pin and the reactor involved in the irradiation. The FIMS also contained the estimated U-235 and plutonium quantities and enrichments for each of the fuel plates. However, the information on the U-235 and plutonium quantities and the enrichments were not used in the radiological characterization program. This spreadsheet was the starting point for the collection of additional information on the majority of the RERTR fuel plates. Based on the A/G numbers, a variety of records and documents were

retrieved from ANL-E to obtain information on the pre-irradiation fuel compositions, burnups, and the date of discharge from the reactor for the RERTR fuel. The requisite information was retrieved for 330 of the RERTR fuel specimen entries identified as the inventory for the FEW waste in the AGHCF hot cells. Information for 24 of the RERTR fuel plates could not be located. To account for these fuel specimens, representative fuel pins from the same program and/or of the same fuel type were selected as appropriate substitutes in order to estimate the missing information. The average scaling factors representing the total population were calculated by summing the ORIGEN2.2 activities over all of the RERTR fuel plates and then taking the ratios of the total curies of each radionuclide over the total curies of Cs-137 in a metric ton of fuel. The averages were used as the scaling factors to derive the quantities and distribution of the radionuclides in each drum, as described in Section 5.4.3.1.1 above (Reference 13).

5.4.3.1.7 Development of the AGHCF Carbide 2nd Batch FEW Radiological Characterization

This portion of the RH TRU debris waste stream AERHDM was generated by experiments conducted in the AGHCF. The fuel specimens included in this population are a second batch of fuel pins that were initially set aside because of sodium concerns and accordingly were not included in the original batch of fuel pins addressed in AGHCF FEW population (Refer to Section 5.4.3.1.4 above).

The variety of fuel specimens in the second batch of fuel specimens involved in the experiments conducted in the AGHCF hot cells was relatively small. The reactor fuels involved in these experiments were principally carbide fuels irradiated in the MTR and EBR-II reactors. A total of 179 fuel specimens were identified in the 2nd batch of fuel pins. The specimens were separated into two groups; one that included met mounts and fuel segments with lengths less than 1/2" and a second group with fuel segments with lengths greater than 1/2". The radiological characterization approach for the first group (with lengths less than 1/2" is described in this section). The second group (with fuel lengths greater than 1/2") is addressed in the same fashion as described for the AGHCF FEW population described in Section 5.4.3.1.4 above (References 11 and 21).

Because of the small fuel quantities associated with the met mounts and pieces of fuel involved in this population, a DTC approach is used to accomplish the radiological characterization of the drums of fuel examination waste (Reference 11). The primary source of information used to identify the reactor fuel pins in the 2nd batch of pins that were destructively examined in the AGHCF was the FIMS database. A total of approximately 104 fuel specimens were identified representing the inventory of fuel examination waste from the 2nd batch of fuel pins. ORIGEN2.2 analyses of individual fuel pins specimens involved in the AGHCF research experiments has been used to derive the activity distributions for the radionuclides of interest, followed by the DTC process described in Section 5.4.3.1.1 above (Reference 11).

5.4.3.2 Argonne Reported Radiological Characterization for AGHCF

This section summarizes the documentation supplied by Argonne related to radiological content of the packaged 30-gallon containers from AGHCF. In 1996, the Waste Management Compliance Team Audit noted that the AGHCF had a complex process for characterizing the radiological content of the waste, although the process was undocumented. The AGHCF responded and included the procedure in the 1996 revision of the AGHCF Operations Manual, Chapter 11.0. This revision indicated the use of a new method to determine radiological composition of the waste for the purpose of meeting fissile material accountability requirements and to show compliance with the maximum allowable fissile content of a RH TRU drum. The earliest version of this procedure is dated after the initial time period of generation of this waste steam; however, the reported radiological content of waste generated prior to 1996 is consistent with the methodology (References P051 and U332).

Although 7-gallon waste containers were loaded in the AGHCF during operations, groups of waste containers were administratively combined after a period of time into "campaigns" for the purposes of determining the radiological composition of the waste. For example, waste requisition numbers 78102 – 78117 are all dated 5/26/1999; however, these 16 30-gallon drums contain 32 7-gallon cans loaded in the AGHCF beginning as early as 3/7/1994. The characterization procedure first calls for identifying all sectioning and defueling performed within the time period of the waste campaign. The amount of U-235 and plutonium (and U-233, if any) assigned to RH TRU waste for the time period is identified from the FIMS. The FIMS has an RH TRU file that is updated whenever an element is sectioned or defueled or a segment is mounted. Each record in the file is associated with a specific sectioning or mounting operation and each contains the estimated grams of fissile material generated. When segments are mounted, it is assumed that 50 percent of the segment length is lost as swarf. When segments are defueled, it is assumed that 100 percent of the segment's fuel is lost as swarf. Clean-up efforts are estimated to collect approximately 75 percent of the swarf, which is typically placed in a paint can. The remaining 25 percent is assumed to be adventitious "dust" divided as follows: 7.5 percent is assumed to be on the cell's fixed surfaces and 17.5 percent is assumed to be adventitious on the typical materials in RH TRU waste (References C067, DR016, P031, P051, P380, and P414).

Once the fissile material in RH TRU waste for the campaign is identified, the fission products of the campaign are calculated according to the values in Table 7, Scaling Factors Used by Argonne to Quantify Fission Products in AGHCF Waste. Table 7 is curies per gram of U-235 and Pu-239, where U-233 is accounted for with the reported values for the fissile U-235 (References P051 and P414).

Table 7. Scaling Factors Used by Argonne to Quantify Fission Products in AGHCF Waste

Isotope	U-235 Factor	Pu-239 Factor
Ag-110	2.274E-13	5.460E-04
Cd-113	1.059E-01	4.115E-01
Ce-144	11.117	7.598
Cs-134	5.802E-04	3.135E-03
Cs-137	4.654	4.992
Eu-152	4.091E-06	1.050E-04
Eu-154	1.691E-04	3.673E-03
Eu-155	2.333E-02	1.371E-01
Pm-147	6.234	4.831
Ru-106	1.267	16.716
Sb-125	2.751E-01	5.725E-01
Sm-151	1.219E-01	3.356E-01
Sn-123	1.111E-04	1.007E-03
Sn-126	5.407E-05	1.162E-04
Sr-90	6.826	2.663
Tc-99	1.109E-03	1.110E-03
Te-127	4.182E-02	5.492E-06
Zr-93	1.785E-04	1.092E-04

Note: To obtain fission product values for each isotope, multiply U-235 factor times the gram value for U-235 and add the Pu-239 factor times the gram value for Pu-239.

The fission product values in Table 7 were obtained using information given in the AGHCF Safety Analysis Report (SAR). The SAR uses conservative values of the maximum AGHCF inventory of fissionable materials administratively allowed by the Special Materials Group, along with several general conservative assumptions, including the type of fuel cladding, irradiation reactor, fuel composition and burn up. The SAR identifies several of the methodology factors as conservative, resulting in an over estimate of the actual fission product inventory (References P031, P051, P380, and P414).

Once the total radionuclide inventory for the campaign is established, the surface dose rate of each can is then used to ratio the inventory of the campaign to each waste can. The procedure provides for adjustment of short-lived isotopes (Ag-110, Ru-106, and Ce-144) based on fuel age and assignment of activation products (Mn-54, Fe-55, and Co-60) if a significant amount of non-fuel sectioning had been performed during the campaign time period (References C349, P051, P414, and U332).

Table 8, Summary of Argonne Reported Radiological Content of Packaged 30-Gallon Drums, presents the distribution of generator-reported radionuclides for existing containers in waste stream AERHDM. The "Total Radionuclide weight percent (Wt%)" values in Table 8 are the reported gram values for each radionuclide over the entire waste stream divided by the total radiological mass reported by the generator in all containers in the waste stream. The same calculation produced the values for the

"Total Radionuclide curies percent (Ci%)" using the sum of activity values for each radionuclide over the entire waste stream (Reference C349).

The "Radionuclide Ci% Range for Individual Drums" illustrates the reported ranges of radionuclides in individual containers by identifying the maximum and minimum values for each radionuclide on a container-by-container basis over the entire waste stream (Reference C349).

Table 8. Summary of Argonne Reported Radiological Content of Packaged 30-Gallon Drums

Radionuclide	Number of Containers Radionuclide Reported	Total Radionuclide Wt% [weight percent]	Radionuclide Wt% Range for Individual Drums	Total Radionuclide Ci% [curies percent]	Radionuclide Ci% Range for Individual Drums
Ag110	1	6.3E-10	0 - 2.8E-08	5.4E-08	0 - 0.0002%
Am241	4	0.0665%	0 - 0.7482%	0.0545%	0 - 0.6139%
Am242m	4	0.0006%	0 - 0.0068%	0.0015%	0 - 0.0163%
Am243	4	0.1098%	0 - 1.2366%	0.0053%	0 - 0.0596%
Cd113m	45	0.0070%	0.0045% - 0.0674%	2.5946%	0.2723% - 2.9324%
Ce144	45	0.0056%	0.0005% - 0.2240%	4.5967%	0.9386% - 12.8594%
Cf249	4	8.1E-09	0 - 9.1E-08	8.0E-09	0 - 9.0E-08
Cf251	4	1.0E-09	0 - 1.2E-08	4.0E-10	0 - 4.5E-09
Cm243	4	0.0002%	0 - 0.0020%	0.0022%	0 - 0.0250%
Cm244	4	0.0878%	0 - 0.9888%	1.7156%	0 - 19.3029%
Cm245	4	0.0120%	0 - 0.1349%	0.0005%	0 - 0.0055%
Cm247	4	0.0001%	0 - 0.0016%	3.1E-11	0 - 3.5E-10
Co60	45	0.0023%	0.0001% - 0.0987%	0.2896%	0.0267% - 2.0075%
Cs134	45	3.6E-08	1.5E-08 - 0.0001%	0.0049%	0.0011% - 0.0055%
Cs137	45	0.2535%	0.1354% - 3.9574%	30.1172%	6.1970% - 33.9523%
Dy154	1	1.5E-10	0 - 6.5E-09	0.0613%	0 - 2.7589%
Eu152	45	2.2E-08	1.5E-08 - 1.5E-07	0.0007%	5.0E-07 - 0.0008%
Eu154	45	4.7E-07	3.2E-07 - 0.0004%	0.0210%	0.0018% - 0.0237%
Eu155	44	0.0001%	0 - 0.0009%	0.1661%	0 - 0.1905%
Eu156	1	2.7E-10	0 - 1.2E-08	0.0041%	0 - 0.1842%
Fe55	45	0.0275%	0.0011% - 1.1871%	7.4513%	0.6869% - 51.4959%
Kr85	1	0.0021%	0.0E+00 - 0.0930%	0.0146%	0 - 0.6575%
Mn54	45	0.0003%	1.4E-07 - 0.0145%	0.2923%	0.0269% - 2.0249%
Np237	4	0.1344%	0 - 1.5148%	2.3E-07	0 - 0.0003%
Pm147	45	0.0156%	0.0046% - 0.4476%	11.0635%	2.3748% - 12.3296%
Pu238	4	0.1432%	0 - 1.6125%	0.5873%	0 - 6.6076%
Pu239	45	47.4837%	24.2590% - 72.8192%	6.2657%	0.0271% - 7.1226%
Pu240	5	0.6098%	0 - 8.4396%	0.0242%	0 - 0.2640%
Pu241	5	0.2077%	0 - 2.2576%	4.8496%	0 - 54.4111%
Pu242	4	0.1841%	0 - 2.0719%	0.0002%	0 - 0.0020%
Ru106	45	0.0046%	0.0012% - 0.1400%	10.2836%	2.1994% - 11.4114%
Sb125	45	0.0012%	0.0005% - 0.0256%	1.3882%	0.3001% - 1.5576%
Sm151	45	0.0498%	0.0310% - 0.5335%	2.0835%	0.2525% - 2.3511%
Sn123	45	1.2E-09	3.2E-10 - 3.7E-08	0.0007%	0.0002% - 0.0008%
Sn126	45	0.0162%	0.0098% - 0.1934%	0.0007%	0.0001% - 0.0008%
Sr90	45	0.1178%	0.0452% - 2.8228%	16.0502%	3.4578% - 17.9697%
Tc99	45	0.3039%	0.1631% - 4.7626%	0.0070%	0.0014% - 0.0079%
Te127	45	1.7E-10	2.5E-15 - 7.6E-09	0.0008%	1.6E-09 - 0.0358%
U235	45	49.9235%	10.7391% - 59.6801%	0.0003%	1.9E-08 - 0.0004%
Zr93	45	0.2291%	0.1071% - 4.3630%	0.0007%	0.0002% - 0.0008%
Total	45	100%	- - -	100%	- - -

Shipping information and the ORIGEN2 code were used to obtain a revised, more accurate estimate of the isotopic content of the fuel inventory stored in the AGHCF, including the accountable FEW materials not previously included. The revised estimate evaluated the inventory as provided by two separate fuel types: LWR fuel and fast reactor (FR) fuel. LWR fuel rod segments and cutting swarf came from H.B. Robinson Reactor (HBR), Limerick, Surrey, Quad Cities, and TMI reactors, as well as smaller amounts from Big Rock Point, BR3, Dresden, and CANDU reactors, the RERTR program, and N-Reactor. FR fuel rod segments came from EBR-II, FFTF, TREAT, and MTR. Table 9, Total AGHCF Isotopic Radioactivity Inventory, and Table 10, Total AGHCF Isotopic Mass Inventory, provide dose-important isotopes in total curies and mass for entire AGHCF. The two tables summarize individual isotopic and mass inventory data for each of the individual major or grouped smaller reactor fuel rod segment sources (References P2033 and U076).

Table 9. Total AGHCF Isotopic Radioactivity Inventory

Isotope	LWR fuel Activity (Ci)	FR fuel Activity (Ci)	Total Activity (Ci)
U-235	1.07E-03	1.94E-02	2.05E-02
U-238	2.39E-02	2.17E-03	2.60E-02
Pu-238	6.60E+02	2.29E+01	6.83E+02
Pu-239	2.45E+01	3.12E+02	3.37E+02
Pu-240	4.39E+01	1.87E+02	2.31E+02
Pu-241	5.84E+03	6.51E+02	6.50E+03
Pu-242	2.70E-01	7.53E-02	3.45E-01
Am-241	2.14E+02	2.01E+02	4.15E+02
Am-242m	---	7.21E-01	7.21E-01
Am-243	6.31E+00	---	6.31E+00
Cm-244	1.26E+03	2.32E+00	1.26E+03
Sr-90	5.25E+03	2.63E+03	7.88E+03
Ru-106	1.49E+01	2.85E-01	1.52E+01
Cs-134	3.97E+02	4.30E+00	4.02E+02
Cs-137	8.18E+03	2.98E+03	1.12E+04

Table 10. Total AGHCF Isotopic Mass Inventory

Isotope	LWR fuel Mass (g)	FR fuel Mass (g)	Total Mass (g)
U-235	4.95E+02	9.00E+03	9.50E+03
U-238	7.09E+04	6.48E+03	7.74E+04
Pu-238	3.85E+01	1.34E+00	3.99E+01
Pu-239	3.94E+02	5.03E+03	5.43E+03
Pu-240	1.93E+02	8.25E+02	1.02E+03
Pu-241	5.67E+01	6.32E+00	6.30E+01
Pu-242	7.04E+01	1.91E+01	8.96E+01
Am-241	6.22E+01	5.87E+01	1.21E+02
Am-242m	---	6.89E-02	6.89E-02
Am-243	3.16E+01	---	3.16E+01
Cm-244	1.55E+01	2.87E-02	1.55E+01
Sr-90	3.84E+01	1.90E+01	5.74E+01
Ru-106	4.46E-03	8.63E-05	4.55E-03
Cs-134	3.07E-01	3.33E-03	3.11E-01
Cs-137	9.40E+01	3.44E+01	1.28E+02

The stated purpose of the method employed by Argonne to estimate the radiological composition in individual waste containers was implemented to address site accountability requirements and to comply with the maximum allowable fissile content of RH TRU drums. While the Argonne reported radiological content of containers in this waste stream was used to support the CCP waste stream delineation, RH, and TRU determinations, the Argonne methodology did not produce results adequate for the purposes of WIPP certification. For this reason, it is not appropriate to compare these Argonne inventory estimates to the results of the CCP radiological characterization activities for purposes of AK accuracy evaluations. However, for FEW materials the amount of fuel material recorded for specific specimens recorded in the Argonne records will be confirmed using direct measurement techniques. The approach employed by CCP to fully characterize this waste stream is described in Section 6.0, and the results of the CCP radiological characterization are documented in CCP-AK-ANLE-501 (References 11, 12, C350, P051, and P414).

5.4.3.3 Argonne Reported Radiological Characterization for K-Wing

This section summarizes the documentation supplied by Argonne related to radiological content of the radionuclide inventory associated with the waste presently stored in the three hot cells and two support areas in K-Wing, and which is not yet packaged. Based on records review performed by Argonne, the large majority of sources and samples were moved into K-Wing following the 1995 cleanout campaign that removed all historic waste materials remaining in K-Wing. These accountable materials are tracked and documented in the CMT Nuclear Materials Inventory Database (References P2000, U2002, and U2004).

ANL-E personnel calculated the isotopes in the four IPNS depleted uranium target disks taking into account their proton and neutron irradiation history, using radiation transport code MCNPX to determine the neutron fluxes and high-energy spallation product generation and transmutation code CINDER90 to calculate the buildup and depletion of the radionuclides in each target, thus allowing the determination of total activity in each disk (References C2032 and P2000).

The sources and samples moved into K-Wing following the 1995 cleanout generally were irradiated actinide-containing materials. Due to resulting fission, transmutation, and nuclear decay these materials are radiologically complex. In most cases, comprehensive information concerning their radionuclide content is only available from calculations using computer codes such as ORIGEN (an acronym for Oak Ridge Isotopic Generation). The materials shipped to K-Wing are grouped by their origin and the type of information available as to their radionuclide content, as described below (References P2000, U2002, and U2004).

Most of the sources and samples were segments of spent fuel specimens from commercial nuclear power reactors, accumulated at Hanford by Pacific Northwest Laboratories (PNL). These fuel specimens were termed ATM and characterized at PNL for burnup properties, radionuclide content, and radiochemical quantification of many actinide and some fission product isotopes. K-Wing received some ATM samples

directly from PNL and some from AGHCF. ORIGEN-2 calculations are the source of radioisotope data for K-Wing samples of ATM-101, ATM-103, ATM-105, ATM-106, and ATM-108 (References P2000, U2002, and U2004).

The AGHCF approach described above was used for ATM-109, H.B. Robinson high burnup, Limerick, LWBR, N-Reactor, RERTR, and TMI-1 samples, due to insufficient isotopic data (References P2000, U2002, and U2004).

A modified version of ORIGEN was used to calculate the isotopic content of an MOX sample irradiated to high burnup in EBR-II (References P2000, U2002, and U2004).

ORIGEN-2 calculations provided isotopic data for a Big Rock fuel rod segment that was sectioned and sent to K-Wing. The spent fuel was dissolved and underwent chemical separations processing in K-Wing. Some of the separated Pu and Np was removed from K-Wing but some remains in undissolved sludge in K-Wing. Conservatively, it is assumed that none of the radioisotopes in the Big Rock fuel have been removed from K-Wing (References P2000, U2002, and U2004).

Table 11, K-Wing Isotopic Inventory Data, provides a list of the significant isotopes calculated in the total amount of fuel presently stored in K-Wing, along with the total grams of each isotope present in the K-Wing portion of the AERHDM waste stream. The data are provided fuel by fuel and totaled for each isotope in the K-Wing. It should be noted that uranium isotopic data were not generated as part of the ORIGEN calculations. The approach employed by CCP to fully characterize the K-Wing containers and the results of the CCP radiological characterization is presented in CCP-AK-ANLE-501 (References 11, C2032, P2000, U2002, and U2004).

Table 11. K-Wing Isotopic Inventory Data

		ATM-101 (fuel mass 5.02E+02g)		ATM-103 (fuel mass 6.93E+02g)		ATM-104 (fuel mass 3.04E+02g)		ATM-105+ATM-108 (fuel mass 1.45E+03g)	
Radionuclide	**Specific activity (Ci/g)**	**Activity (Ci)**	**Nuclide mass (g)**	**Activity (Ci)**	**Nuclide mass (g)**	**Activity (Ci)**	**Nuclide mass (g)**	**Activity (Ci)**	**Nuclide mass (g)**
Am241	3.43E+00	1.21E+00	3.53E-01	1.86E+00	5.42E-01	9.57E-01	2.79E-01	3.40E+00	9.90E-01
Am242m	1.05E+01	3.33E-03	3.17E-04	6.59E-03	6.28E-04	4.08E-03	3.89E-04	3.43E-02	3.27E-03
Am243	2.00E-01	1.38E-02	6.91E-02	1.69E-02	8.46E-02	1.33E-02	6.64E-02	1.90E-02	9.48E-02
Ba137m	5.38E+08	*	*	*	*	*	*	*	*
Cm243	2.57E+01	4.45E-03	1.73E-04	6.14E-03	2.39E-04	4.60E-03	1.79E-04	9.25E-03	3.60E-04
Cm244	8.09E+01	1.08E+00	1.34E-02	1.08E+00	1.33E-02	1.10E+00	1.36E-02	8.98E-01	1.11E-02
Cs137	8.68E+01	3.39E+01	3.90E-01	4.18E+01	4.81E-01	2.31E+01	2.66E-01	6.97E+01	8.03E-01
Pu238	1.71E+01	1.22E+00	7.16E-02	1.73E+00	1.01E-01	1.28E+00	7.48E-02	3.16E+00	1.85E-01
Pu239	6.20E-02	1.41E-01	2.28E+00	1.93E-01	3.11E+00	8.49E-02	1.37E+00	3.84E-01	6.19E+00
Pu240	2.27E-01	2.59E-01	1.14E+00	3.52E-01	1.55E+00	1.71E-01	7.54E-01	8.40E-01	3.70E+00
Pu241	1.04E+02	3.08E+01	2.96E-01	3.36E+01	3.23E-01	1.72E+01	1.65E-01	5.46E+01	5.25E-01
		ATM-106 (fuel mass 9.98E+02g)		ATM-109 (fuel mass 3.51E+02g)		Big Rock Point (fuel mass 1.24E+03g)		H.B. Robinson High Burnup (fuel mass 5.87E+01g)	
Radionuclide	**Specific activity (Ci/g)**	**Activity (Ci)**	**Nuclide mass (g)**	**Activity (Ci)**	**Nuclide mass (g)**	**Activity (Ci)**	**Nuclide mass (g)**	**Activity (Ci)**	**Nuclide mass (g)**
Sr90	1.38E+02	2.15E+01	1.56E-01	2.70E+01	1.96E-01	1.88E+00	1.36E-02	4.84E+01	3.51E-01
Am241	3.43E+00	3.46E+00	1.01E+00	4.15E-01	1.21E-01	2.94E+00	8.57E-01	8.71E-02	2.54E-02
Am242m	1.05E+01	1.65E-02	1.57E-03	1.05E-02	1.00E-03	5.63E-03	5.36E-04	2.21E-03	2.10E-04
Am243	2.00E-01	7.30E-02	3.65E-01	3.74E-02	1.87E-01	6.78E-03	3.39E-02	7.86E-03	3.93E-02
Ba137m	5.38E+08	*	*	4.43E+01	8.23E-08	*	*	9.31E+00	1.73E-08
Cm243	2.57E+01	2.19E-02	8.54E-04	7.63E-03	2.97E-04	2.25E-03	8.74E-05	1.60E-03	6.22E-05
Cm244	8.09E+01	7.92E+00	9.79E-02	1.16E+01	1.44E-01	2.56E-01	3.17E-03	2.44E+00	3.01E-02
Cm245	1.72E-01			3.30E-03	1.92E-02			6.93E-04	4.03E-03
Cs134	1.29E+03			2.48E+01	1.92E-02			5.19E+00	4.02E-03
Cs137	8.68E+01	8.33E+01	9.60E-01	4.74E+01	5.46E-01	6.16E+01	7.10E-01	9.98E+00	1.15E-01
Pu238	1.71E+01	5.37E+00	3.14E-01	4.16E+00	2.43E-01	1.55E+00	9.07E-02	8.72E-01	5.10E-02
Pu239	6.20E-02	2.73E-01	4.41E+00	1.02E-01	1.65E+00	4.22E-01	6.80E+00	2.14E-02	3.45E-01
Pu240	2.27E-01	5.99E-01	2.64E+00	1.81E-01	7.99E-01	4.38E-01	1.93E+00	3.79E-02	1.67E-01
Pu241	1.04E+02	6.14E+01	5.90E-01	3.71E+01	3.57E-01	4.93E+01	4.74E-01	7.77E+00	7.47E-02
Ru106	3.30E+03			5.74E+00	1.74E-03			1.20E+00	3.65E-04
Sr90	1.38E+02	4.66E+01	3.38E-01	2.58E_01	1.87E-01	4.68E+01	3.39E-01	5.40E+00	3.91E-02
Y-90	5.44E+05					*	*		
		Limerick (fuel mass 2.50E+01g)		LWBR (ThO_2 + UO_2) (fuel mass 5.87E+01g)		MOX (fuel mass 4.09E+01g)		N-Reactor (fuel mass 6.31E+01g)	
Radionuclide	**Specific activity (Ci/g)**	**Activity (Ci)**	**Nuclide mass (g)**	**Activity (Ci)**	**Nuclide mass (g)**	**Activity (Ci)**	**Nuclide mass (g)**	**Activity (Ci)**	**Nuclide mass (g)**
Am241	3.43E+00	3.27E-02	9.53E-03	8.71E-02	2.54E-02	2.70E-01	7.87E-02	7.55E-03	2.20E-03
Am242m	1.05E+01	8.30E-04	7.90E-05	2.21E-03	2.10E-04	1.71E-03	1.63E-04	1.91E-04	1.82E-05
Am243	2.00E-01	2.94E-03	1.47E-02	7.86E-04	3.93E-02			6.80E-04	3.40E-03
Ba137m	5.38E+08	3.49E+00	6.48E-09	9.31E+00	1.73E-08	*	*	*	*
Cm243	2.57E+01	6.01E-04	2.34E-05	1.60E-03	6.22E-05			1.39E-04	5.39E-06
Cm244	8.09E+01	9.14E-01	1.13E-02	2.44E+00	3.01E-02	3.66E-01	4.52E-03	2.11E+00	2.61E-03
Cm245	1.72E-01	2.60E-04	1.51E-03	6.93E-04	4.03E-03			6.00E-05	3.49E-04
Cs134	1.29E+03	1.95E+00	1.51E-03	5.19E+00	4.02E-03			4.49E-01	3.48E-04
Cs137	8.68E+01	3.73E+00	4.30E-02	9.98E+00	1.15E-01	3.28E+00	3.78E-02	8.60E-01	9.91E-03
Pu238	1.71E+01	3.27E-01	1.91E-02	8.72E-01	5.10E-02	1.05E-01	6.13E-03	7.54E-02	4.41E-03
Pu239	6.20E-02	8.06E-03	1.30E-01	2.14E-02	3.45E-01	2.81E-01	4.54E+00	1.85E-03	2.99E-02
Pu240	2.27E-01	1.43E-02	6.28E-02	3.79E-02	1.67E-01	2.43E-01	1.07E+00	3.29E-03	1.45E-02
Pu241	1.04E+02	2.92E+00	2.81E-02	7.77E+00	7.47E-02	5.80E+00	5.58E-02	6.73E-01	6.47E-03
Ru106	3.30E+03	4.52E-01	1.37E-04	1.20E+00	3.65E-04			1.04E-01	3.16E-05
Sr90	1.38E+02	2.03E+00	1.47E-02	5.40E+00	3.91E-02	8.47E+00	6.14E-02	4.66E-01	3.38E-03
Y-90	5.44E+05					*	*		

*Y-90 is the short-lived decay daughter of Sr-90 and is secular equilibrium with it.
Ba137m is the short-lived decay daughter of Cs-137 and is in secular equilibrium with Cs-137.

Table 11. K-Wing Isotopic Inventory Data (Continued)

		RERTR (U + Mo) (fuel mass N/A)		TMI-1 High Burnup (fuel mass 1.09E+02g)		IPNS U Targets (fuel mass N/A)		Totals	
Radionuclide	**Specific activity (Ci/g)**	**Activity (Ci)**	**Nuclide mass (g)**	**Activity (Ci)**	**Nuclide mass (g)**	**Activity (Ci)**	**Nuclide Mass (g)**	**Activity (Ci)**	**Nuclide mass (g)**
Am241	3.43E+00	3.77E-03	1.10E-03	1.41E-01	4.11E-02			1.49E+01	4.34E+00
Am242m	1.05E+01	9.54E-05	9.09E-06	3.58E-03	3.41E-04			9.18E-02	8.74E-03
Am243	2.00E-01	3.40E-04	1.70E-03	1.27E-02	6.36E-02			2.13E-01	1.06E+00
Ba137m	5.38E+08	4.01E-01	7.45E-10	1.51E+01	2.80E-08	9.90E-01	1.84E-09	8.28E+01	1.54E-07
Cm243	2.57E+01	6.91E-05	2.69E-06	2.60E-03	1.01E-04			6.29E-02	2.45E-03
Cm244	8.09E+01	10.5E-01	1.30E-03	3.96E+00	4.89E-02			3.44E+01	4.25E-01
Cm245	1.72E-01	2.99E-05	1.74E-04	1.12E-03	6.53E-03			6.16E-03	3.58E-02
Cs134	1.29E+03	2.24E-01	1.74E-04	8.40E+00	6.51E-03			4.62E+01	3.58E-02
Cs137	8.68E+01	4.30E-01	4.95E-03	1.61E+01	1.86E-01	1.05E+00	1.21E-02	4.05E+02	4.68E+00
Pu238	1.71E+01	3.76E-02	2.20E-03	1.41E+00	8.26E-02	2.12E-02	1.24E-03	2.22E+01	1.30E+00
Pu239	6.20E-02	9.24E-04	1.49E-02	3.47E-02	5.59E-01	2.85E-01	4.59E+00	1.97E+00	3.64E+01
Pu240	2.27E-01	1.64E-03	7.23E-03	6.15E-02	2.71E-01	5.86E-03	2.58E-02	3.24E+00	1.43E+01
Pu241	1.04E+02	3.36E-01	3.23E-03	1.26E+01	1.21E-01	2.59E-02	2.49E-04	3.22E+02	3.09E+00
Ru106	3.30E+03	5.21E-02	1.58E-05	1.95E+00	5.91E-04	1.71E-02	5.18E-06	1.07E+01	3.25E-03
Sr90	1.38E+02	2.33E-01	1.69E-03	8.75E+00	6.34E-02	8.20E-01	5.94E-03	2.49E+02	1.81E+00

*Y-90 is the short-lived decay daughter of Sr-90 and is secular equilibrium with it.
Ba137m is the short-lived decay daughter of Cs-137 and is in secular equilibrium with Cs-137.

5.4.4 Polychlorinated Biphenyls (PCBs)

Electrical equipment that might have contained polychlorinated biphenyls (PCBs) (such as ballasts, capacitors, and transformers) is located outside of the AGHCF on the second floor of the wing for ease of maintenance. Numerous light fixture items were identified in historical packaging documents; however, the ballasts for the lighting in the AGHCF were located outside of the cells and would not have been included in the RH TRU waste stream. No other potential sources for PCBs were identified in the AK record. Therefore, waste stream AERHDM is not regulated as a Toxic Substances Control Act (TSCA) waste under 40 CFR 761 (References C029, C066, C137, U019, U066, U072, U332, and U2001).

5.4.5 Prohibited Items

Items prohibited from AGHCF RH TRU waste containers during the entire generation period for waste stream AERHDM included residual liquids greater than one percent, compressed gases including aerosol cans, pyrophorics, explosives, and incompatible or "potentially reactive chemicals." As described in Section 5.4.1 fuel examination residues (e.g., specimen fragments, swarf, cladding) have been added to waste stream AERHDM. Prior to packaging these residues are inspected, tested, deactivated, and/or stabilized as necessary to ensure that the final waste form does not contain potentially reactive or phyrophoric materials (References 2, C333, C2025, P412, P2032, P2035, P5002, P5004, P5005, P5006, P5007, P5008, and U332).

Residual liquids are not expected to be routinely present in any waste container in waste stream AERHDM, due to the AGHCF standard practice of evaporating and/or absorbing all liquids as described in Section 5.4.2.3. The absence of liquids is further supported by the fact that safety limits in the AGHCF allowed only three liters total of

hydrogenous liquids in AGHCF Areas I or III and the INL waste acceptance criteria have prohibited liquids in excess of 1 percent since 1975. Additionally, none of the waste requisition forms (or other information provided by generators at the time of waste packaging) identify liquids in any quantity (References 2, C333, P407, P472, and U332). However, prohibited liquids were observed during VE (videotape) of record. Drums containing prohibited items are not eligible for disposal at WIPP until the prohibited items are removed or remediated (Reference DR017).

As described in Section 5.5, organic liquids presently in the K-Wing will be segregated and not included in the waste stream AERHDM. Aqueous solutions will be neutralized and immobilized prior to packaging. The absence of all prohibited items will be verified by VE during the packaging of the K-Wing waste materials (References P2010, P2011, and P2013).

5.5 Waste Packaging

As described in Section 4.7, waste stream AERHDM was generated from the destructive and nondestructive examination of irradiated and unirradiated reactor fuel materials and associated hot cell support operations. Figure 5, AGHCF Waste Management, provides a flow diagram depicting typical waste movements in the AGHCF. Waste cans (3-, 5-, and 7-gallon) are generally used to collect waste materials at individual work stations and then moved to the waste packaging area in WS 5 for temporary storage. The waste was then stockpiled until the next packaging campaign. Technicians in WS 5 visually examine, sort, and load the waste. The material is then sorted into combustible and non-combustible waste, and the absence of prohibited items, such as compressed gases and liquids, is visually verified before being placed into 7-gallon steel waste cans. During the Argonne packaging operations VE will be performed by CCP to verify and document the physical form of the waste and ensure the absence of prohibited materials and residual liquids. The waste will then be placed into 30-gallon drums for final disposal (References DR010, P001, P031, P380, P415, and P604).

The 30-gallon waste drums generated in the AGHCF prior to February 2008 (from inside to out) contain two 7-gallon metal waste cans, a fiber drum pouch spreader, an inner heat-sealed PVC pouch (with HEPA filters beginning in 1990), a 0.1-inch polyethylene drum liner (140-mil liner used beginning April 2008), an outer heat-sealed PVC pouch (with HEPA filters beginning in 1990), and a DOT 17H 30-gallon drum (with filter vent). The filter vents used on the PVC pouches were specified as NFT NUCFIL-030 and NUCFIL-034. The 30-gallon drums are vented with NFT NUCFIL filter vents. Beginning in February 2008, the fiber drum pouch spreader and inner PVC pouch were not included in the packaging configuration resulting in the waste cans being loaded directly into the polyethylene drum liner. An estimated additional 100 30-gallon drums containing both debris and irradiated fuel test materials and residues (fuel pin fragments, samples, and capsules) will also be packaged as follows. The fuel materials will be placed into non-air tight, lead-lined 7-gallon FEW containers, not to exceed 100 lbs. Each of these additional 30-gallon drums will contain either one or two FEW containers with one or more centering rings, one 7-gallon metal waste can

(if needed), a 140-mil polyethylene drum liner with HEPA filter, an outer 20-mil polyethylene liner with NUCFIL-034 filter, and a DOT Spec 7A 30-gallon drum with NUCFIL filter (References 2, C144, C332, C382, P001, P024, P031, P035, P052, P380, P413, P415, P604, P625, P626, P2032, P2036, P2037, U2013, and U2020).

Individual waste items (collected at various work stations in waste collection cans) may be loose, plastic-bagged, contained in 4-in. diameter x 10-in. high portal cans or contained in 1-gallon paint cans. After segregation of combustibles and noncombustibles, the items are placed in 7-gallon steel cans. Waste is directly loaded into the steel waste cans equipped with toggle-latch cover clamp rings. After processing and testing, swarf is packaged in 1-gallon cans that are placed into the 7-gallon steel cans. When filled, the waste can is closed with a uniquely numbered, tamper-indicating device. Because there are no gaskets in the lids of the waste cans, and because holes are drilled for the lifting cable attachment, the cans are not sealed (References C003, DR016, P009, P031, P380, and P604).

Argonne is planning to package AGHCF waste directly into the 30-gallon drum without the inner 7-gallon waste cans. This packaging configuration will consist of the waste placed directly into an inner heat-sealed PVC pouch (with a NFT NUCFIL 034 filter) placed into DOT 17H 30-gallon drum (with a NFT NUCFIL filter vent) lined with a 140-mil polyethylene drum liner (Reference C2008).

Figure 6 provides a flow diagram depicting waste movements in the K-Wing. The waste remaining in the three K-Wing hot cells and supporting areas consists of liquids and solid debris. Liquids presently stored in the A- and B-Cells consist of about 110 liters of aqueous, organic, and multi-phasic solutions. Three additional 5-gallon cans of debris and approximately 15 gallons of liquids transferred from these operations will be returned to the K-Wing for processing with the materials stored in the cells. The aqueous solutions are primarily nitric acids; the organic solutions are primarily TBP/n-dodecane; and the multi-phasic solutions are composed of both aqueous and organic liquids. Only the aqueous solutions in their neutralized and solidified form are included in waste stream AERHDM. The organic portion of the multi-phasic solutions and the organic solutions are transferred to a glovebox located outside of B-Cell for future processing under another waste stream. Twenty-liter polycarbonate Chemical Waste Processing Containers (CWPC), also known as carboys or clearboys, are filled approximately halfway with Acid Bond and aqueous liquids transferred into the CWPC either by pouring directly from the aqueous solution container or by suctioning the aqueous portion of the multi-phasic solution from the bottom of the container. Alternative methods such as Acid Bond/aqueous solution layering may also be used as needed. The organic portion of the multi-phasic solutions and the organic solutions are poured into liquid bulking containers (LBCs) and transferred to the B-Iso glovebox outside of B-Cell for processing outside of the AERHDM waste stream (References C2029, C2030, C2031, P2010, P2011, P2013, and U2021).

The solid debris located inside A- and B-Cells is size-reduced, if necessary, and loaded into the 55-gallon drum. The RH debris waste stored in K-108 and K-116 is transferred into B-Cell for size reduction and/or waste packaging or packaged in place, depending

on the R/hr dose rate. There are approximately 80 containers (capsules, jars, paint cans, etc.) containing specimen fragments and residues. Due to the high dose rate of some of these items, these fuel specimen debris are encapsulated in lead-lined high-integrity stainless steel tubes prior to packaging for removal from the B-Cell (References P2011, P2012, P2014, P2038, P2039, U2011, U2012, and U2020). The packaging configuration for the K-Wing containers (i.e., stainless steel tubes, CWPCs, inner containers, and cans) in waste stream AERHDM consists of (from inside to out) an inner drop chute PVC pouch (with HEPA filter vent), a polyethylene or fiberboard 30- or 55-gallon drum liner, one PVC drum pouch with inner plastic, fiberboard, or wood discs for protecting top and bottom of pouch (with filter vent), and a DOT 17H 30 or 55-gallon drum (with filter vent). The filter vents used on the bags were specified as NFT NUCFIL-034. The 30- and 55-gallon drums are vented with WIPP-approved NUCFIL filter vents, respectively (References P2011, P2038, P2039, U2011, U2012, and U2020).

6.0 CHARACTERIZATION/QUALIFICATION METHODS

CCP-AK-ANLE-502 (Reference 12), describes how each DQO and QAO will be met along with the rationale for selection of the characterization/AK qualification methods used. As required by the WCPIP (Reference 1), the description of waste stream AERHDM is provided in Sections 4.0 and 5.0. The description of the confirmatory testing process, the percentage of containers that will be subjected to the process, a discussion of why the process is considered representative of the waste stream, and quantitative acceptance criteria is presented in CCP-AK-ANLE-502 (Reference 12).

The CCP intends to use characterization methods listed in WCPIP Sections 4.2 and 4.3 to generate the information defining the isotopic ratios, physical form, and absence of liquids associated with waste stream AERHDM because it makes the best use of the information available (such as video records of waste packaging and fuel composition data), and will avoid the radiation exposure of opening previously packaged waste. Table 12, Waste Stream AERHDM DQO Determination Summary, lists the DQOs to be addressed using AK associated with waste stream AERHDM relating to the defense waste, radiological, and physical waste stream determinations. The location (page number, section, etc.) of the relevant information is identified in the AK Source Document Summary forms for each AK source identified in Table 12.

Table 12. Waste Stream AERHDM DQO Determination Summary

DQO Determinations	Summary of Characterization/Qualification Method	AK Sources
Defense High-Level Waste Spent Nuclear Fuel	As described in the defense waste justification in Section 4.4, there is sufficient evidence to demonstrate that TRU wastes generated by AGHCF and K-Wing operations are contaminated with materials from atomic energy defense activities associated with naval reactor development, materials security and safeguards, and defense research and development activities. As described in Section 4.5, this waste stream does not contain spent nuclear fuel or high-level waste.	C006, C011, C046, C068, C073, C074, C092, C103, C124, C127, C131, C138, C152, C157, C301, C304, C305, C329, C330, C331, C335, C338, C812, C2007, P002, P004, P008, P010, P016, P017, P028, P029, P320, P325, P329, P374, P375, P380, P389, P394, P520, P551, P575, P583, P584, P585, P586, P587, P599, P603, P606, P607, P815, P816, P819, P821, P826, P827, P829, P2010, P2011, P2018, P2023, P2024, P5001, U001, U003, U007, U009, U011, U023, U040, U045, U067, U068, U076, U307, U330, U830, and U2004, U5001
TRU Waste	Evaluation of generator reported concentrations of alpha-emitting TRU isotopes with half lives greater than 20 years, this is a TRU waste stream. Dose to Curie (including ORIGEN2.2 modeling or direct sampling) and Mass Determination methods are described in CCP-AK-ANLE-502.	C349, P031, P051, P380, P414, P2011, P2016, U332, U335, U2002, U2004, and CCP-AK-ANLE-501

Table 12. Waste Stream AERHDM DQO Determination Summary (Continued)

DQO Determinations	Summary of Characterization/Qualification Method	AK Sources
RH Waste	Generator reported dose rates for containers in waste stream AERHDM range from 200 Mr/hr up to 180 R/hr and demonstrate that this is a RH waste stream. Dose rate measurements are taken for each container as described in CCP-AK-ANLE-502.	C349, P031, P051, P380, P414, P2011, P2016, U332, U335, U2002, U2004, and CCP-AK-ANLE-501
Activity	This DQO is specific to payload containers and will not be assessed until the final payload configuration has been established.	Not Assessed
WIPP 10 Required Radionuclides	As shown in Table 6, the only WIPP radionuclides reported by the generator consistently are Sr-90, Cs-137 and Pu-239. The relative activity of the WIPP 10 required radionuclides for this waste stream is documented in CCP-AK-ANLE-501 and will be quantified during implementation of the Dose to Curie Method. Dose to Curie (including ORIGEN2.2 modeling or direct sampling) and Mass Determination methods are described in CCP AK-ANLE-502.	CCP-AK-ANLE-501
Physical Form	As described in Section 5.4 waste stream AERHDM consists primarily of organic and inorganic debris meeting the WCPIP definition for Summary Category Group S5000. Section 5.4.1.2 identifies the Waste Material Parameters, including the estimated amount of each in the waste stream. VE or RTR is performed on 100% of the containers as described in CCP-AK-ANLE-502.	C333, C2027, C2029, P2010, P2011, P2012, U332, U335
Liquids	As described in Section 5.4.5, liquids were/are prohibited during the packaging of waste stream AERHDM and are not expected in prohibited amounts in any container. VE or RTR is performed on 100% of the containers as described in CCP-AK-ANLE-502.	C333, C2029, P407, P412, P472, P2010, P2011, and U332

7.0 CONTAINER SPECIFIC INFORMATION

Container specific information for each drum in waste stream AERHDM is maintained in the most current Container Tracking Spreadsheet. The Container Tracking Spreadsheet identifies the drum number, internal waste can identification number, summary category group, vent date, and closure date for each drum, based on AK and the most current information from AK characterization activities, as applicable.

8.0 REFERENCES

1. DOE/WIPP-02-3214, *Remote-Handled TRU Waste Characterization Program Implementation Plan*, Carlsbad, New Mexico, U.S. DOE Carlsbad Field Office

2. CCP-AK-INL-500, *Central Characterization Program Acceptable Knowledge Summary Report For Remote-Handled Transuranic Debris Waste from Argonne National Laboratory-East Stored at the Idaho National Laboratory – Waste Stream: ID-ANLE-S5000,* Carlsbad, New Mexico, Nuclear Waste Partnership, LLC.

3. 40 CFR Part 191, *Environmental Radiation Protection Standards for Management and Disposal of Spent Nuclear Fuel, High-Level and Transuranic Radioactive Wastes*, Washington, D.C., U.S. EPA, December 20, 1993

4. 40 CFR Part 194, *Criteria for the Certification and Re-Certification of the Waste Isolation Pilot Plant's Compliance with the 40 CFR Part 191 Disposal Regulations*, Washington, D.C., U.S. EPA, February 9, 1996

5. *Criteria for the Certification and Re-Certification of the Waste Isolation Pilot Plant's Compliance with the 40 CFR Part 191 Disposal Regulations: Certification Decision*, Washington, D.C., U.S. EPA, May 18, 1998

6. Public Law 102-579, *The Waste Isolation Pilot Plant Land Withdrawal Act*, October 30, 1992 as amended by Public Law 104-201, September 23, 1996

7. CCP-AK-ANLE-001, *Central Characterization Project Acceptable Knowledge Summary Report For Argonne National Laboratory-East Contact-Handled TRU Waste Facility Maintenance and Laboratory Operations*, Carlsbad, New Mexico, Nuclear Waste Partnership, LLC.

8. CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*, Carlsbad, New Mexico, Nuclear Waste Partnership, LLC.

9. 42 U.S.C 10101, *Nuclear Waste Policy Act of 1982*, U.S. Congress

10. CCP-PO-002, *CCP Transuranic Waste Certification Plan*, Carlsbad, New Mexico, Nuclear Waste Partnership, LLC.

11. CCP-AK-ANLE-501, *Central Characterization Program Remote-Handled Transuranic Radiological Characterization Technical Report For Remote-Handled Transuranic Debris Waste From Argonne National Laboratory-East,* Carlsbad, New Mexico, Nuclear Waste Partnership, LLC.

12. CCP-AK-ANLE-502, *Central Characterization Program RH TRU Waste Certification Plan for 40 CFR Part 194 Compliance for ANL RH Waste Stream: AERHDM*, Carlsbad, New Mexico, Nuclear Waste Partnership, LLC.

13. CCP-TP-005, *CCP Acceptabie Knowledge Documentation*, Carlsbad, New Mexico, Nuclear Waste Partnership, LLC.

14. *Waste Isolation Pilot Plant Hazardous Waste Facility Permit*, Waste Analysis Plan, New Mexico Environment Department, Santa Fe, New Mexico

15. 40 CFR, Part 261, *Identification and Listing of Hazardous Waste*, U.S. EPA

16. McCoy and Associates, Inc. 2002. *McCoy's RCRA Unraveled*. Second Edition

17. CCP-AK-ORNL-005, *Central Characterization Project Acceptable Knowledge Summary Report For Oak Ridge National Laboratory Contact-Handled Transuranic Waste from Analytical Chemistry Laboratory Operations, Waste Stream: OR-CHEM-CH-HET*, Carlsbad, New Mexico, Nuclear Waste Partnership, LLC.

18. DOE Manual 435.1-1, *Radioactive Waste Management Manual*

19. CCP-AK-ANL-505A, *Central Characterization Program Sampling and Analysis Plan for Argonne Remote-Handled Debris Waste, Waste Stream: AERHDM*, Carlsbad, New Mexico, Nuclear Waste Partnership, LLC.

20. CCP-AK-ANL-505B, *Central Characterization Program Sampling and Analysis Plan for Argonne Remote-Handled Debris Waste, Waste Stream: AERHDM*, Carlsbad, New Mexico, Nuclear Waste Partnership, LLC.

21. CCP-AK-ANL-505C, *Central Characterization Program Fuel Weight Confirmation Test Program for Argonne Remote-Handled K-Wing Fuel Examination Waste Stream: AERHDM*, Carlsbad, New Mexico, Nuclear Waste Partnership, LLC.

22. CCP-AK-ANL-505D, *Sampling and Analysis Plan for Argonne Remote-Handled Debris Waste, Waste Stream: AERHDM,* Carlsbad, New Mexico, Nuclear Waste Partnership, LLC.

23. DOE/WIPP-02-3122, *Transuranic Waste Acceptance Criteria For the Waste Isolation Pilot Plant,* Carlsbad, New Mexico, U.S. DOE Carlsbad Field Office

24. CCP-PO-505, *CCP Remote-Handled Transuranic Waste Authorized Methods for Payload Control (CCP-RH-TRAMPAC)*, Carlsbad, New Mexico, Nuclear Waste Partnership, LLC.

25. DOE/TRU-12-3425, *Annual Transuranic Waste Inventory Report – 2012*, Carlsbad, New Mexico, U.S. DOE Carlsbad Field Office

9.0 AK SOURCE DOCUMENTS

Source Document Tracking Number	Title
C001	Fax to Larry Neimark re: Defense versus Non-Defense Waste
C003	Intra-Laboratory Memo to Harvey Welsh re: Dimensions of Intermediate TRU Waste Containers
C004	Intra-Laboratory Memo to R. S. Wisner, HFEF re: Estimates of Total AGHCF Inventory for Future Shipments to ANL-W
C006	Interview with Larry Neimark re: AGHCF samples, applicable programs, defense relationship to materials, and commingling of waste
C007	Correspondence to L. A. Neimark, Manager, IP Section re: Assessment of Nuclear Materials Inventory, Fissile Inventory Records and Handling Procedures in FF12
C008	Intra-Laboratory Memo to J. V. Natale, SPM re: TRU Scrap Shipment No. 4, SPM-43 No. CZC-168
C009	Intra-Laboratory Memo to W. D. Jackson, MCT/ANL-E, re: Fissile Scrap and Irradiated Structural Materials Waste Shipments from ANL-E to ANL-W for retrievable Storage in the RSWF
C011	Intra-Laboratory Memo to D. A. Donahue, MCT, re: Work Plan for the Examination of LILY-1 and LILY-1A Specimens
C012	Intra-Laboratory Memo to Operations Personnel re: Facility Nitrogen Purge Change and Storage of Flammable Liquids
C013	Correspondence to Mr. E. M. King, Oak Ridge National Laboratory re: Radioactive Waste, i.e., nonrecoverable material, being transferred from ANL to ORNL for storage and/or processing
C014	Correspondence to A. Cohen re: Process and Procedure with all and WMO for Sampling 1st Stage HEPA Filters. Description-8'x8'x3' w/ 5/8' Wood Frame Ultra Aire - MSA
C016	Intra-Laboratory Memo to C. E. Crouthamel, CMT, and M. J. Steindler, CMT re: LWR Hot-Cell Capability at ANL-E: The D-200 M-Wing Situation
C020	Intra-Laboratory Memo to Environmental Compliance Representatives re: Photo Processing Solutions - Waste Characterization
C023	Intra-Laboratory Memo to M. J. Ryan, SEC re: Potentially Hazardous Materials in "Operational Clean Sweep"
C025	Correspondence to D. A. Donahue re: Transfer of Special Materials from G-118 Glovebox 3 to Building 212 Caves
C026	Intra-Laboratory Memo to Melanie Tompkins re: Annual Forecast for Waste Management Operations-94
C029	Letter re: Survey of Waste Streams in Building 212
C035	Intra-Laboratory Memo to Distribution re: Management of Broken Fluorescent Lamps
C036	Letter to Sheildon Meyers, Deputy Assistant Secretary for Nuclear Waste Management re: Disposition of TRU from LWR Program: Documentation of Agreements Reached in August 15, 1980 Meeting
C039	Intra-Laboratory Memo to L. A. Neimark re: Procedure for Disposal of "Clean Sweep" Pyrophoric Waste
C046	Intra-Laboratory Memo to D. C. Parzyck re: DOE request for Information Regarding Materials Not Classified as Waste
C066	Record of Communication with Bill Kettman and Dennis Donahue, AGHCF re: AGHCF Operations and Waste Packaging

Source Document Tracking Number	Title
C067	Record of Communication with Fred Pausche and Terry Bray, AGHCF
C068	Correspondence to Craig R. Tyler, Lockheed Martin Idaho Technologies Co. re: ANL Transuranic Waste - Definition as Defense Waste
C073	Letter to Ms. Trisha Dedik, Director, International Policy and Analysis Division, NN-42, U.S. Department of Energy re: Transmittal of ANL Quarterly Reports
C074	Letter to Mr. Hilary Rauch, Manager, U.S. Department of Energy re: "TREAT Experiment Program"
C077	Letter to Mr. Mahlon Heileson, Lockheed Idaho Technologies Company re: Liquids absorbed on pelletized clay are non hazardous
C081	Intra-Laboratory Memo to Larry Neimark, ET re: Use of Carbon Tetrachloride in Alpha Gamma Hot Cell Facility (AGHCF) Experiments
C082	Fax to Ray Lang, DOE-CH re: ANL-E fuel Pins
C088	Correspondence to Mr. W. M. Heileson, Waste Generator Interface, EG&G Idaho, Inc. re: Content of ANL-E RHTRU Drums Stored at INEL
C089	Intra-Laboratory Memo to Dennis Donahue, Supervisor/AGHCF re: Waste Management Quality Assurance Surveillance Report No. 93-MCT-03a
C091	Correspondence to W. Mahlon Heilson, Waste Management, RWMC Technical Support, EG&G Idaho, Inc. re: Lead in Remote Handled Transuranic Waste Stored at Idaho National Engineering Laboratory (INEL)
C092	Intra-Laboratory Memo to J. L. Hooper, DOE (ARG) re: Experimental Fuel Segments in the AGHCF
C094	Correspondence to L. Neimark, Materials & Components Technology re: Metallographic Samples
C097	Correspondence to AGHCF, Operational Personnel re: Work Station III Fissile Grinding Waste
C098	Interview with Cindy Rock (WMO) re: hazardous waste procedures, etc.
C099	Correspondence to Mr. Dennis Wilkinson, RWMC/SWEP re: TRU Waste at Argonne National Laboratory-East
C103	Intra-Laboratory Memo to C. A. DeLorenzo, OOS re: Safety Analysis for Handling Tritium-containing Compounds in the AGHCF
C106	Email to Whitworth, Julia re: Exploding Drum at ANL
C108	Correspondence to Mr. J. T. Case, U.S. Department of Energy, Idaho Field Office re: Strategy Plan for Long-term Management and Storage of Remote-handled (RH) Transuranic (TRU) Waste - TLC-224-92
C115	Intra-Laboratory Memo to W. H. Kline, Waste Management Coordinator re: Waste Packaging Criteria, Transuranic Waste, Idaho National Engineering Laboratory, Revision 1, IDO-10074
C116	Fax to M. Heileson re: Pelletized Clay
C118	Intra-Laboratory Memo to A. C. Smith, PFS re: Chemical Forms in AGHCF Transuranic Wastes
C124	Fax to Mark Wyco and Larry Neimark, ANL-E re: Request for ANL-E to Identify Items of ANL-W Origin
C125	Intra-Laboratory Memo to Steve Gehl, MSD re: Burnup on LWR Samples
C127	Radiological Health Handbook

Source Document Tracking Number	Title
C128	Intra-Laboratory Memo to Distribution re: Revised Procedure for Determining Specimen Density by Immersion, Operations Manual Section 7.21
C130	Intra-Laboratory Memo to Waste Handling Procedures Manual Holders re: Packaging of Intermediate Level* Radioactive Waste for Disposal (Liquids)
C131	Record of Communication with Larry Neimark, AGHCF re: Apparent discrepancies in the batch codes assigned to various elements as reported in different databases
C133	Intra-Laboratory Memo to Division Directors/Department Heads re: Potentially Unstable Chemicals
C136	Intra-Laboratory Memo to Distribution re: Responsibility for Waste Disposal
C137	Email to Douglas W. Parker re: RH TRU Waste
C138	Intra-Laboratory Memo to Distribution re: Hot-cell Survey
C143	FAX to Cheryl Schulz re: Information on AGHCF Mercury Vapor Lamps and Lighting Fixtures
C144	Record of Communication with Curtis Merks re: Specifications for filter vents used on ANL-E drums and bags
C147	Letter to Mr. John M. Schaffer re: Additional Information to Complete Actions Associated with Preexisting Condition (PEC) 316 - Argonne National Laboratory-East (ANL-E) Transuranic Waste - (EM-WM-03-055)
C148	Interview of Terri Bray, ANL-E AGHCF Manager re: Lead Solder and First Stage HEPA Filters
C152	Intra-Laboratory Memo to D.A. Donahue, MCT/IPS re: Work Plan for the Examination of LILAC Target No.19 for Battelle Pacific Northwest Laboratories
C155	Intra-Laboratory Memo to D. A. Donahue MCT re: Work Plan for the Preparation of Specimens for NPR Tests MA-2, -3, and -4
C157	Intra-Laboratory Memo to L. Neimark MCT re: Test Specification and Operating Procedure for NPR Tests ALCL-1 and -2.
C158	Collection of Memos beginning with: Inter-Laboratory Memo to ANL-E Environmental Compliance Representatives re: Illinois Environmental Protection Agency (EPA) Air Pollution Control Permit Applications
C160	Fax Memo to Mahlon Heileson, LITCO/RWMC re: Underlying Hazardous Constituents Waste Stream ANL212951004T
C301	Memo from T. Bray to Document File: Shipment of EBR-II Fuel to ANL-W
C302	Memo from L. A. Neimark to Distribution. Subject: Revision 1 to the Work Plan for the Preparation of Fuel Rods for Return Shipment to Idaho, HFS-015-00-00, December 8, 2004.
C303	Handwritten memo dated 10/21/1994. Subject: Change postings in to Areas I, III, IV to reconcile books to SPM - attached logbooks for Area I FGE, and Area III FGE
C304	Memo from T. S. Bray to OO Holders. Subject: New Pu Equivalent Mass Limits for Area IV
C305	Memo from R. J. Page and A. Miron to T. S. Bray. Subject: Inventory and Dose Estimates for Radionuclides Stored in the Alpha-Gamma Hot Cells Facility. Report attached.
C314	Memo from M. C. Billone to Irradiation Performance Section. Subject: Deletions for the AGHCF Operations Manual (EBL Documents)
C315	Memo from M. C. Billone to Irradiation Performance Section. Subject: Deletions for the AGHCF Operations Manual (PROG documents)

Source Document Tracking Number	Title
C316	Memo from Omesh Chopra to Distribution. Subject: Laboratory ALARA Committee Review of the Work Plan for Unloading and Transferring Irradiated Stainless Steel Mechanical Test Specimens
C318	Memo from Carlos Martinez to Nick Harmon. Subject: Limerick Decay Heat and Activity Level
C329	Memorandum to CCP Central Records: Evaluation of FFTF Fuel History and Defense Experiments
C330	Memorandum to Ines Triay, Acting Manager, CBFO: Determination and Findings, Defense Origin of Nuclear Waste, Kerr-McGee Waste
C331	Memorandum to CCP Central Records: Evaluation of Kerr-McGee Fuel Production and FFTF History
C332	Memorandum to CCP Central Records: Assessment of Waste Material Parameters for Waste Stream ID-ANLE-S5000
C333	Memo to CCP Central Records: Assessment of Waste material Parameters (WMPs) for Waste Stream AERHDM
C335	CCP Review Comments and Resolutions for Draft A, Rev. 0, CCP-AK-ANLE-500
C338	Shaw Discrepancy Report R1 for INEEL RH-TRU Waste from ANL-E- AGHCF re: Defense Relationship
C341	Shaw Discrepancy Report R4 - RH TRU Waste from ANL-E- AGHCF re: Possible Presence of Lead in Waste
C344	Shaw Discrepancy Report R7 for RH TRU Waste from ANL-E- AGHCF re: Waste Generated in K-Cells
C349	Radiological Evaluation for Waste Stream AERHDM
C350	Evaluation for Radiological Waste Stream Delineation for Waste Stream ID-ANLE-S5000
C351	Letter to W. E. Bergholz, DOE-Idaho Operations Office, Argonne National Laboratory-East (ANL-E) Remote Handled (RH) Transuranic Waste Stored at the Radioactive Waste Management Complex (RWMC)
C382	Email to K. Peters Regarding ANL Rigid Liner Thickness
C812	Memo from T. S. Bray & R. V. Strain to M. Goldberg re: Characterization of N-Reactor Fuel Samples; ANL ID 3983
C2002	Memo to Dr. Frank Y. Fradin re: Safety Analysis Report (SAR) Rev 02 and Technical Safety Requirements (TSRs) Rev 01 for the Argonne National Laboratory - East (ANL-E) Building 205 G & K Wing Laboratories
C2003	Memo from Robert C. Wunderlich to Dr. Hermann A. Grunder regarding Approval of the Safety Analysis Report (SAR) Revision 04 and the Technical Safety Requirements Revision 03 for Building 205 G-Wing and K-Wing Laboratories
C2004	Safety Review for Unsaturated Testing of Uranium Metal Spent Fuel in Bldg. 205 Senior Cave and K-116 Facilities
C2005	Safety Review of Tests with Samples of Spent Fuel in Bldg. 205, K-104 (Senior Cave) and, in K-116, Sampling of Leachate Solutions from the Tests
C2006	Work Plan for the Preparation of Unirradiated Al-clad Specimens for CMT
C2007	Work Plan for the Preparation of Specimens from the Characterization of Pins UW02010 (A/G 498A) and UW08036 (A/G 498B)
C2008	Interview of D. Pancake, D. Hodge, J. Emery, L. Maggos, and J. Mackin regarding Waste Handling practices, use of chemicals, time periods of waste generation for K-Wing hot cells, Bldg. 205

Source Document Tracking Number	Title
C2009	Communication from Laura E. Maggos to Judith Stewart regarding 205 K-Wing - contactor cleaning solutions
C2010	Evaluation of the Physical Waste Composition for K-Wing Waste in Waste Stream AERHDM.
C2011	ANL Memo to R.J. Page re: Estimating Mass and Radioactivity for EBR-2 Element Segments Stored in Building 212 - More Numbers
C2012	ANL Memo to R.J. Page re: Estimating Mass and Radioactivity for HBR Rods Stored in the AGHCF
C2013	ANL Memo to R.J. Page re: Estimating Mass and Radioactivity for Surry Unit 2 Elements Stored in the AGHCF
C2014	ANL Memo to R.J. Page re: Limerick Fuel Rod Activity Analysis
C2015	ANL Memo to R.J. Page re: Estimating Activity for Limerick Rods Stored in the AGHCF - More Numbers
C2016	ANL Memo to R.J. Page re: Quad Cities Unit 1 Fuel Rod Activity Analysis
C2017	ANL Memo to R.J. Page re: Estimating Activity for Quad Cities Rods Stored in the AGHCF - More Numbers
C2018	ANL Memo to R.J. Page re: Three Mile Island Unit 1 Fuel Rod Activity Analysis
C2019	ANL Memo to R.J. Page re: Estimating Activity for TMI Rods Stored in the AGHCF - More Numbers
C2020	ANL Memo to R.J. Page re: Estimating Mass and Radioactivity for BRP, HBR, and BR3 Elements Stored in the AGHCF
C2021	ANL Memo to R.J. Page re: Estimating Activity for BRP, HBR, and BR3 Rods Stored in the AGHCF - More Numbers
C2022	ANL Memo to R.J. Page re: Pu-241/Am-241 Cooling Effects for EBR-2 Element T473
C2023	ANL Memo to R.J. Page re: Estimating Mass and Radioactivity for FFTF Element Segments Stored in Building 212 - More Numbers
C2024	ANL Memo to R.J. Page re: Estimating Mass and Radioactivity for EBR-2 and PFR Element Segments from the TREAT Facility Stored in Building 212 - More Numbers
C2025	Communication with Dan Pancake: Inventory Update and the Management of Potentially Reactive and Pyrophoric Materials
C2026	WMP Calculations for addition of 100 30-gal drums to AERHDM
C2027	Waste Stream Delineation Evaluation for Waste Stream AERHDM to include K-Wing Waste
C2029	Waste Container Evaluation Memorandum for Waste Stream AERHDM
C2030	Letter from Laura Maggos to Kevin Peters, Inclusion of Previously Packaged K-Wing Waste into ANL RH-TRU Waste Stream
C2031	Letter from Laura Maggos to Kevin Peters, Inclusion of Previously Packaged K-Wing Waste into ANL RH-TRU Waste Stream, Part 2
C2032	Intra-Laboratory Memo to Dan Pancake; Radionuclide Inventories of IPNS Targets
C2033	Communication with Dan Pancake and Laura Maggos Regarding Clarification on the Management of Corrosion Study Liquids and West Valley and SRS Vitrified High-Level Waste Samples in the K-Wing
C3000	Comparison of Fuel Rod Length Measurements from AK Records and VE Records for K-Wing FEW

Source Document Tracking Number	Title
C5001	Interpreting observations from tests for sodium metal using phenolphthalein/ethanol reagent
DR010	Discrepancy Regarding the Volume of 7-Gallon Waste Cans
DR013	Discrepancy Resolution Form Regarding the Argonne Waste Population of 44 Drums vs. 45
DR014	Discrepancy Report for the RCRA Assignment of EPA HWNS to Waste Stream ID-ANLE-S5000
DR016	Unsealed 1-gallon Waste Can Discrepancy Report
DR017	Discrepancy involving free liquids in waste
DR023	Acceptable Knowledge Discrepancy Resolution concerning underestimated original projections for AGHCF debris, FEW, and K-Wing debris waste materials
P001	AGHCF Operations Manual
P002	Central Characterization Project Acceptable Knowledge Summary Report for Argonne National Laboratory-East Contact-Handled TRU Waste Facility Maintenance and Laboratory Operations
P004	Safety Analysis Report for the Alpha-Gamma Hot Cell Facility (BLDG. 212)
P006	Safety Analysis for Twenty Year Retrievable Storage of Intermediate Gamma Level Transuranic Waste
P008	ANL-W History - Reactors (IFR)
P009	TRU-RH Waste Certification Plan for Waste Management Operations
P010	Argonne News Articles re: General Information; IFR Fuel; Low-Enrichment Fuel
P012	The Status of Uranium-Silicon Alloy Fuel Development for the RERTR Program
P013	Frontiers: Research Highlights 1946-1996
P014	Institutional Plan: FY 1980-FY1985; Institutional Plan FY 1981 - FY1986
P016	Liquid Metal Fast Breeder: Right Answer, Wrong Question
P017	1992 Congressional Hearings Intelligence and Security: Naval Reactors, Arms Control, Office of Intelligence, 03/11/1992, Question and Answer
P023	Argonne National Laboratory-East Remote Handled Waste
P024	Certification of Remote-Handled Transuranic Waste at the Tan Hot Cells
P025	Argonne National Laboratory-East, Transuranic Waste Acceptable Knowledge Report
P027	Preliminary Engineering Proposal on Alpha-Gamma Hot Laboratory for Fuels Technology Center, Argonne National Laboratory
P028	Presentation to DOE Office of Nuclear Safety re: Alpha-Gamma Hot Cell Facility (AGHCF)
P029	Engineering Test Plan for the Irradiation Testing of U3Si Dispersion Fuels: Reduced Enrichment Research and Test Reactor Program
P031	Alpha-Gamma Hot Cell Facility (AGHCF) Safety Analysis Report

Source Document Tracking Number	Title
P032	Procedure for Sorting Remote-Handled TRU Waste (30-Gallon Intermediate-Level Waste)
P034	AGHCF Operations Manual: 15.6 Procedure for Acid Cleaning a Zinc-Bromide Shielding Window
P035	AGHCF Operations Manual: 15.9 Procedure for Installing Vents in Pre-packaged 30-gal. TRU Waste Drums
P038	AGHCF Operations Manual: 15.13 Procedure for Installing a Modified D-301 Window Tank in a Type A Window Cavity
P039	AGHCF Operations Manual: 15.15 Procedure for Installing Lead Shielding Around a Tank Insert in an AGHCF Window Cavity
P040	AGHCF Operations Manual: 15.17 Procedure for Changing an In-line Filter in a Radioactive Gas Collective System
P051	AGHCF Operations Manual: 11.0 Waste Management; 15.3 Procedure for Operation of the Fuel Behavior Test Apparatus (FBTA)
P052	Test and Evaluation Document for the US DOT Specification 7A Type A Packaging
P055	Waste Handling Procedures
P059	AGHCF Operations Manual: Section VII - Examination Procedures
P060	AGHCF Operations Manual: 7.0 Standard Examination Procedures
P061	Examination Techniques for High Burnup U-Pu Elements for Fast Breeder Reactors
P062	AGHCF Operations Manual: 7.15 Preparation of Metallographic Specimens
P068	AGHCF Operations Manual: 7.14 Mounting Metallographic Specimens
P069	AGHCF Operations Manual: 7.13 Fuel Element Sectioning
P070	AGHCF Operations Manual: 7.21 Specimen Density by Immersion
P304	Work Plan for Oxidizing Zircaloy Cladding Samples for the Zn-Zircaloy Interaction Study; Memo to IPS Document File
P320	Management Plan for Irradiation Performance Section Facilities, Energy Technology Division; Memo to H. Grunder, Director
P325	Functional Requirements for Hydrogen-Charged Materials to be Used as Standards for Hydrogen Content Determination; Memo to IPS Documentation file
P326	Procedures beginning with: Work Plan for Determining the Effectiveness of Defueling a Short Cladding Segment from High Burnup In-cell LOCA Test Sample ICL#2 in Room-Temperature Nitric Acid
P327	Procedure for Thinning Gauge Sections of Tensile Specimens after Tensile Tests; Memo to IPS Document File
P329	Feasibility Study for Defueling Irradiated Cladding Using Non-Volatile Methods; Memo to IPS Documentation File
P331	Work Plan for Preparation of Samples for LECO Hydrogen or Oxygen Analysis Memo to distribution
P333	Procedure for the Steam Oxidation Tests at High Temperature on Unirradiated Advanced Cladding Alloys M5, E110, ZIRLO and Zry-4 Cladding within the Out-of-cell LOCA Integral Test Apparatus; Memo to M. C. Billone and T. S. Bray

Source Document Tracking Number	Title
P344	Analysis of Spent Nuclear Fuel Sample A/G 574B2 (Limerick Reactor) to Determine Selected Isotopes and Estimate Fuel Burnup
P358	Procedure for Changing the Glove Rings in the Glove Niche: OO No. 42
P366	Operations Order on the Collection of Cutting Swarf
P372	Review of Zirconium-Zircaloy Pyrophoricity
P373	Metallographic Analysis of irradiated RERTR-3 Fuel Test Specimens
P374	The RERTR Program: A Status Report
P375	Progress of the RERTR Program in 1999
P378	Argonne National Laboratory-East Building 212 Energy Technology Division Alpha-Gamma Hot Cell Facility Preliminary Decontamination and Decommissioning Plan
P379	Design Basis Threat Impact Assessment and Implementation Plan for the Argonne Illinois Site
P380	Alpha-Gamma Hot Cell Facility (AGHCF); Safety Analysis Report
P381	AGHCF Criticality Hazards Control Statement Use of a Safe Vac Vacuum Cleaner in Alpha-Gamma Hot Cell Facility Areas 1 and 3, Addendum 1 to IPS-6
P386	CRIEPI Posttensile SEM Fractography, Supplemental Instruction SI 197 for Rod/Specimen 583D1 (S1T4), 583E1 (S1T5) in accordance with IPS-311-00-00
P387	Prep of Creep Samples, Supplemental Instruction 340 of Rod/Specimen A/G 611C16, A/G 611C17, A/G 592C in accordance with IPS-393-00-02
P389	AGHCF Supplemental Instructions for IRIS-11, A/G 558 in accordance with IPS-295-00-00
P392	Procedures for Conducting Tests in the Whole-Pin furnace System (IPS-2-04-00)
P394	Work Plan for the Preparation of Fuel Rods for Return Shipment to Idaho
P395	Work Plan for the Replacement of the Area 3 GM Manipulator Power Cord
P396	AGHCF Special Nuclear material Inventory Management Plan
P397	ET-PFS Facility Support Agreement
P398	Seal (TID) Application and Removal
P399	Cask Handling at the AGHCF
P401	Movements and Transfers In or Out of Material Balance Area
P402	Loading and Unloading of Shielded Casks
P403	Movement of Materials Through the Alpha Barrier
P404	Movement of Material In-Cell

Source Document Tracking Number	Title
P407	Criticality Control
P410	Changing a Final HEPA Filter in the Main Exhaust
P412	Remote Handled Transuranic Waste Sorting and Packaging
P413	30 gallon Remotely Handled Transuranic Waste Drum Assembly
P414	Estimation of Activity in Waste Containers
P415	RH-TRU 30-gal Waste Drum Outloading
P416	Chemical and Other Regulated Waste Management
P456	Electron Beam Laboratory User's Guide
P469	Changing an In-line Filter in a Radioactive Gas Collective System
P470	Alpha-Gamma Hot Cell Facility Operations Manual. ANL-E Energy Technology, Irradiation Performance Section. Removing Master Manipulator at Work Station 5.
P471	Removal and Installation of Model A Slave Manipulators
P472	Manipulator Movement, Cleaning and Repair
P473	Changing Glove Rings in AGHCF Glove Niche
P475	Acid-Clean Windows
P478	Preparation of a Type A Tank-in-a-Tank Replacement Window Assembly
P480	Painting a Drained Shielding Window Cavity
P484	Installing a Type A "Tank-in-a-Tank" Window Assembly
P485	Procedure for Installing Lead Shielding Around a Tank Insert in an AGHCF Window Cavity
P486	Hydroxylamine Hydrochloride Addition to Zinc Bromide Solution
P487	Installation of Lead-Glass Glovebox Window Panes
P489	Work Plan for Decontaminating the CTA after the Completion of the ANL/JNC Tensile Testing; Memo to IPS Document File
P490	Work Plan for Diameter Measurements of Irradiated V-alloy Creep Specimens from the HFIR-2J Experiment
P492	Procedure for Cutting Uranium Metal or Uranium Alloys on the South Bay Diamond Bandsaw in the South Hood, Room F-206; Memo to IPS Document File
P493	Specification for Plastic Tunnel Suit, Alpha-Gamma Hot Cell Facility
P503	Work Plan for Microstructural Examination on V-4Cr-4Ti Rods for Making Creep Tube; Supplemental Instruction 252 for Rod/Specimen A/G 625A 1 through 14; Memo to IPS Document File
P505	Work Plan for the Heat Treatment and Microstructural Examination on V-4Cr-4Ti Rods for Making Creep Tubing; Memo to IPS Document File

Source Document Tracking Number	Title
P507	Photography and Met of Weld Samples, Supplemental Instruction 252 for Rod/Specimen A/G 625A 1 through 14 in accordance with IPS-327-00-00
P509	Work Plan for the LOCA Mock-up - Phase 1; Memo to NRC Program File
P515	Work Plan for Determining Hydrogen Contents in TMI-1 Cladding; Memo to IPS Document File
P516	Replacement of the WPF Furnace; Memo to IPS Document File
P518	Work Plan for the Steam Oxidation Tests at 1200 degrees on Unirradiated Zry-4 and Irradiated TMI-1 Cladding; Memo to NRC Program File; Several Supplemental Instructions
P519	Work Plan for cutting Limerick Rod Sections and Loading into Shipping Tubes; Memo to IPS Document File
P520	Work Plan for the Examination of Fuel Nano-plates from the RERTR-3 Experiment in ATR; and Supplemental Instruction 305 for PIE of RERTR-3 on Rod/Specimen A/G 580AB, and Supplemental Instruction 286 Repolish Sample and Specimen Ring for EMPA
P521	Workplan for Assessment of Auger Analyzer: Examination of NERI Stainless Steel Samples; Memo to Distribution
P523	Work Plan for CMT Samples from TMI Fuel Rod Segments; Memo to Distribution
P525	Work Plan for Inspection and Storage of CRIEPI Tensile Coupons; Memo to IPS Document File
P532	Complete Axial Specimen Preparation for Rod/Specimen ID: 592C2C, 592C14C Surry; According to IPS-382-00-00
P536	Decontamination and Transfer of A/G 587 Tensile Specimens to Clean Vials; Memo to IPS Document File
P537	Revised Work Plan for Unloading and Transferring Irradiated Stainless Steel Mechanical Test Specimens to Cell 2 of the IML
P539	Work Plan for Examination and Testing of Limerick Rod F9, Mid Segment, A/G 574C; Memo to IPS Document File
P540	Work Plan for Preparation of Low-Oxygen Vanadium Alloy Test Specimens; Memo to IPS Document File
P545	Work Plan for End-fitting to Cladding Welding for LWR Fuel Rod Segments and Supplemental Instruction 133; Memo to NRC Program file
P546	Work Plan for Conducting Melt Dilution Tests on Al-clad Fuels and Supplemental Instruction 184; Memo to SRTC Characterization File
P548	Work Plan for Conducting the Zn-Zircaloy Interaction Tests; Memo to IPS Document File
P550	Work Plan for Tensile and Impact Testing of 832864 GA Heat of V-4Cr-4Ti Specimens after 1-Yesr DIII-D Exposure; Work Plan for the Initial Characterization and Sectioning of Surry Rod FA-434 (A/G 591)
P551	Work Plan for the Examination of Fuel Plates from the RERTR-4 Experiment in ATR; Work Plan for Cutting H. B. Robinson Rod Sections and Loading into Shipping Tubes, and Supplemental Instruction 153
P552	Oxygen Pickup by LECO Oxygen Determinator for the LOCA Zry-2 Test #6 and Work Plan for Preparing Samples for Oxygen Analyses from Zry Cladding after Steam Oxidation Test at High Temperature
P553	Procedure for the Removal, Repair, and Replacement of Valves in the Vacuum System for the ETEC Scanning Electron Microscope

Source Document Tracking Number	Title
P554	Work Plan for the Initial Characterization and Sectioning of H. B. Robinson Rod RA1 8235 (A/G 611) and Supplemental Instruction 328
P556	Work Plan for Cutting Axial Tensile Specimens from Surry Cladding with the EDM in Cell 3 of the IML; Memo to IPS Document File and Supplemental Instruction 260
P557	Load Train Assembly and Testing Procedure for Axial Tensile Testing of Surry Cladding, and Supplemental Instruction 338, Rev. 1; Memo to IPS Document File
P560	Work Plan for Unloading a Spent IPNS Target into the AGHCF Hot Cell; Memo to IPS Document File
P562	Work Plan for Disassembly of IPNS Spent Target REU-1 in the AGHCF Hot Cell; Memo to IPS Document File
P566	Work Plan for Characterization of Surry Rod G6 (A/G 592)
P568	Pre-oxidized Zry for TC Welding Practice, Supplemental Instruction 294 for Rod/Specimen Unirradiated 0.48" Zry cladding in accordance with IPS-395-00-00
P569	Procedure for Calibration of Pressure Transducers (PTs) in the NRC Thermal Creep Systems Memo to IPS Document File
P571	Procedure for Measuring Diameters and Lengths of Cladding Creep Specimens with the Zmike Laser Profilometer Memo to IPS Document File
P572	Optical Metallography Test Weld, Supplemental Instruction 262 for Rod/Specimen A/G 625D5
P574	Procedure for the Repair of the Driver Screw Mechanism of AGHC Shield Door Number 2, Supplemental Instruction 354
P575	Work Plan for the Examination of Fuel Plates from the RERTR-4 Experiment in ATR, Revision 1
P577	Work Plan for Cladding Annealing Tests for Dry Cask Storage and Supplemental Instruction 291
P578	General Work Plan for Preparing Segments of Fuel Cladding for Programmatic Investigations and Supplemental Instruction 303
P580	In-cell LOCA Integral Test with unirradiated Zry-2, Supplemental Instructions 357 for Rod/Specimen 12" long unirradiated Zry-2, A/G 581C41 in accordance with IPS-409-01-03
P583	Roadmap for SP-100 Fuel Pin Irradiation Testing
P584	U.S. Department of Energy - The Secretary's Annual Report to Congress 1992-1993
P585	Safety issues at the DOE Test and Research Reactors, A Report to the U.S. Department of Energy
P586	Report to Congress - The Liquid Metal Fast Breeder Reactor Program - Past, Present, and Future
P587	Program Scoping Plan for the Fast Flux Test Facility, A Nuclear Science and Irradiation Services User Facility
P588	An Overview of the Argonne National Laboratory Fast Critical Experiments 1963-1990
P599	The Defense Programs Origin of Transuranic waste at Argonne National Laboratory-West
P602	Analysis of Three Mile Island and Quad Cities Spent Nuclear Fuel Samples
P603	Validation of the Rebus-3/RCT Methodologies for EBR-II Core-Follow Analysis

Source Document Tracking Number	Title
P604	Criticality Hazards Control Statement, Alpha-Gamma Hot Cell Facility, Special Facility FF12, and Addendum 1, Use of a Safe Vac Vacuum Cleaner in Alpha-Gamma Hot Cell Facility Areas 1 and 3
P606	Status and Progress of the RERTR Program in the Year 2000
P607	Initial Assessment of Radiation Behavior of Very-High-Density Low-Enriched-Uranium Fuels
P611	Waste Handling Procedures Manual - Appendix I Radioactive Waste Management Basis
P625	RH-TRU 30-Gallon Waste Drum Out-Loading
P626	30-Gallon Remote Handled Transuranic Waste Drum Assembly
P815	Paper: Initial Assessment of Radiation Behavior of Very-High-Density Low-Enriched-Uranium Fuels; ANL ID 29330
P816	IPS-269-04-01, Metallography on an Additional RERTR-1 Microplate, A/G 549V; ANL ID 1210
P817	Miscellaneous IPS Work Instructions: IPS-292-00-00 through IPS-292-09-00
P819	IPS-306-00-00, Work Plan for the Characterization of N-Reactor Fuel Specimens (A/G 562); ANL ID 27297
P821	Metallographic Examination of Damaged N Reactor Spent Nuclear Fuel Element SFEC5,4378; ANL ID 41179
P822	IPS-338-00-00, Work Plan for the Examination of Fuel Nano-Plates from the RERTR-3 Experiment in ATR; ANL ID 6811
P826	Revised Work Plan for the Examination of Fuel Plates from the RERTR-5 Experiment in ATR; ANL DOC ID 27225
P827	Recent Observations at the Postirradiation Examination of Low-Enriched U-Mo Miniplates Irradiated to High Burnup; ANL DOC ID 29331
P829	Revised Work Plan for the Examination of Fuel Plates from the RERTR-4 Experiment in ATR, Revision 1; ANL DOC ID 27220
P1001	From Test Tube to Pilot Plant; A 50 Year History of the Chemical Technology Division at Argonne National Laboratory
P1002	Design, Operation, and Performance Data for High Burnup PWR Fuel from the H.B. Robinson Plant for Use in the NRC Experimental Program at Argonne National Laboratory
P2000	Facility Hazard Category 2 Threshold Ratio Values for the K-Wing Nuclear Facility in Building 205
P2001	Retention of Neptunium in Uranyl Alteration Phases Formed During Spent Fuel Corrosion
P2002	Corrosion Mechanisms of Spent Fuel Under Oxidizing Conditions
P2003	Elements Present in Leach Solutions from Unsaturated Spent Fuel Tests
P2004	Oxidative Corrosion of Spent UO2 Fuel in Vapor and Dripping Groundwater at 90C
P2005	Corroded Spent Nuclear Fuel Examined with EELS
P2006	Corrosion Tests of LWR Fuels - Nuclide Release
P2007	Corrosion Testing of Spent Nuclear Fuel Performed at Argonne National Laboratory for Repository Acceptance

Source Document Tracking Number	Title
P2008	I-129 Release Fractions in Unsaturated Tests with Fast-Flux MOX Fuels
P2009	Measurement Techniques in Dry-Powdered Processing of Spent Nuclear Fuels
P2010	Nuclear Operations Deactivation, Decommissioning, and Demolition Program: Activity-Specific Safety Analysis for Building 205 K-Wing Hot Cell Liquid Processing
P2011	Nuclear Operations Deactivation, Decommissioning, and Demolition Program: Appendix B: Building 205 K-Wing Hot Cell Deactivation Project Plan
P2012	"Nuclear Operations Deactivation, Decommissioning, and Demolition Program: Activity-Specific Safety Analysis for Building 205 K-Wing Cell A & B Material Sorting, Size Reduction, and Transfer"
P2013	Nuclear Operations Division Work Clearance Permit: 205 K-Wing Hot Cell Liquids Processing
P2014	Nuclear Operations Division Work Clearance Permit: 205 K Wing Cell A & 8 Material Sorting, Size Reduction & Transfer
P2015	Waste Handling Procedures Manual
P2016	Basis of Interim Operations for Building 205 K-Wing Deactivation
P2017	Determination of actinide and fission-product isotopes in very-high-burnup spent nuclear fuel
P2018	Safety Analysis Report Building 205 G-Wing and K-WIng Laboratories
P2019	Test Plan for the Characterization of an Approved Testing Material Mixed Oxide Fuel
P2020	Colloidal Products and Actinide Species in Leachate from Spent Nuclear Fuel
P2021	The Dissolution and Analyses of the Dissolver Solution, Undissolved Residue, and Cladding from Big Rock Point Irradiated Nuclear Fuel
P2022	Results of the UREX+ Spent Fuel Demonstration
P2023	Results of the UREX+2 Spent Fuel Demonstration
P2024	Results of the 2005 UREX+1a Spent Fuel Demonstration
P2025	2006 UREX+1a Spent Fuel Demonstration: Preliminary Results from Fuel Dissolution and UREX Feed Adjustment
P2026	Results of the 2006 UREX+1a Spent Fuel Demonstration
P2027	Results of the 2007 Talspeak Spent Fuel Demonstration
P2028	Preliminary Results of the UREX+3a Spent Fuel Demonstration
P2029	Aqueous Dissolution of Urania –Thoria Nuclear Fuel
P2030	Advanced Proliferation Resistant, Lower Cost, Uranium-Thorium Dioxide Fuels for Light Water Reactors Nuclear Energy Research Initiative Project 99-0153 Progress Report for Work thrcugh September, 2002
P2031	K-Wing Senior Cave Operations
P2032	Building 212 Alpha Gamma Hot Cell Facility Deactivation Project Plan with Appendix 1, 2, and 3

Source Document Tracking Number	Title
P2033	Revised Estimate of the Radioactive Inventory in the AGHCF
P2034	Fuels for Sodium-Cooled Fast Reactors: US Perspective; article in Journal of Nuclear Materials
P2035	Results of Testing Metallographic (Met) Mounts for the Presence of Sodium, Performed in the Alpha Gamma Hot Cell Facility (AGHCF)
P2036	Repackaging Fuel Examination Waste into Shielded Containers
P2037	Processing Radioactive Waste Can and Drum Information
P2038	Preparation of Container Shielding Configurations for Material Transfers From C-Cell
P2039	Gated Drum Shield Operations and Movements in Building 205 K-Wing
P5001	CP-5 Converter Tubes
P5002	Non-Reactivity Verification of SWARF
P5003	Minimum FEW Specimen Measurement Length
P5004	Non-Reactivity Verification of SWARF – Working Copy
P5005	Testing the presence of reactive Sodium in AGHCF swarf cans
P5006	SWARF Conditioning Stage 1
P5007	Sodium Loop Section Processing
P5008	SWARF Conditioning Stage 2
U001	AGHCF Position Statement Regarding Defense Versus Non-Defense TRU Waste
U002	Draft Proposal For: Alpha-Gamma Hot Cell Facility Waste Management Plan
U003	Argonne National Laboratory-West Mission Description
U004	Remote-Handled Waste Content Codes Assessed
U006	Summary of Purchasing Requisitions Received from T. Bray: Heavy Metals Usage Identified by IT That May Be in the RH-TRU Waste Stream
U007	Material Control Sheets for A/G numbers 1 through 510 and some attached paperwork
U009	Transuranic Waste at Argonne National Laboratory-West: Meeting the Waste Acceptance Criteria for the TRU Repository
U011	Project Process Flow Diagram: Fuel Elements from EBR-II and FFTF
U012	Basis for Assessment of the Environmental impact of the expanded Program at Argonne-East
U013	Waste Stream Fissile Content
U015	RH-TRU 1995, Drums 798 to 809.

Source Document Tracking Number	Title
U017	RH-TRU 1994, Book 8, Drums 778 to 797
U018	RH-TRU 1993, Book 7, Drums 748 to 777
U019	RH-TRU 1991-1992, Book 6, Drums 728 to 737
U021	RH-TRU 1990, Book 4, Drums 687 to 727
U022	RH-TRU 1985-1987, Book 3, Drums 617 to 686
U023	Fuel Shipments into AGHCF 1993-1995
U030	Liquid Waste Disposal Requisition
U040	Spreadsheet Correlating Number Quota with Quota Title and Number Project
U041	Videotape Logs
U045	Material Receipt and SPM Data for AG# 285
U065	Hand written Notes: One titled "Decon & Repair Procedures for Cleaning and Repairing a Manipulator"
U066	Addendum Criticality Safety Training Quiz 7/17 or 7/21/75
U067	Information on Fuel Elements T678 and T680
U068	Information on Fuel Elements DP-15, DP-17, DP-27, DP-32, DP-21, DP-24. DP-29, DP-45, and DP-61
U069	Information on Fuel Elements UBA-15, UBB-23, UCA-37, UCD-45, UCE-47
U070	Information on Fuel Element WT-185
U072	Material Safety Data Sheets (MSDS)--various metal and chemical compounds
U073	Combustible Waste Contents (52 cans)
U074	Information on Fuel Element T61 of Subassembly X425
U076	AGHCF Fissile Inventory Management System Database
U083	HEPA Filters
U084	Report of Analytical Results
U085	Procedure for Determining Fuel Pellet Density Using a Mercury Prinometer (handwritten)
U304	Robinson Report
U307	Report 105 - Custodian Batch Balance (Pure)
U309	Limerick Power - Fuel Rods Retrieved from Assembly YJ1433
U321	Area 1 Hydrogenous Liquid Inventory (Limit 3L plus fluids sealed in equipment)

Source Document Tracking Number	Title
U322	Hydrogenous Liquid in Cell Area I
U330	West Valley Demonstration Project Transuranic Waste Defense Waste Determination
U332	Waste Requisitions - WMO-195, Radioactive and Mixed Waste Disposal Requisitions
U335	Various Excel Spreadsheets Regarding Fissile Material and Waste Management Tracking
U338	Appendix "B", Statement of Work, Characterization of ANL RH-TRU Waste
U830	RERTR-3 Postirradiation Examination Plan at the Alpha-Gamma Hot Cell Facility; transmitted by memo from S. L. Hayes to R. V. Strain ANL ID 6808
U911	CCP-AK-ANLE-500, Central Characterization Project Acceptable Knowledge Summary Report For Argonne Remote-Handled Debris Waste, Waste Stream: AERHDM, Revision 6, Markup
U1002	RH TRU RTR Prescreen For Repackaging/AK Worksheets and Videos
U1003	Arrgonne Special Material Receipt and Transfer Documentation by A/G Number (A/G 1 - 535)
U2001	Chemical Technology Building K-Wing Hot Cell Pictures
U2002	CMT Nuclear Materials Inventory Database - detail report with ratios and FGEs
U2003	Argonne National Laboratory A SQS Presentation
U2004	Material in K-Wing Spreadsheet OUO
U2006	Alpha Gamma Hot Cell Facility (AGHCF) Hot Cell Pictures
U2007	RW85461 WMO-195 Radioactive and Mixed Waste Disposal Requisition
U2008	RW85462 WMO-195 Radioactive and Mixed Waste Disposal Requisition
U2009	RW85463 WMO-195 Radioactive and Mixed Waste Disposal Requisition
U2010	Contactor Cleaning Procedure
U2011	Gated Drum Shield Operations and Movements in 205 K-wing
U2012	Preparation of Container/Shielding Configurations for Material Transfers from C-cell
U2013	30 Gallon Drum (Spec 7A) RH-TRU Debris + FEW Configuration
U2014	Building 212 Alpha Gamma Hot Cell Facility Deactivation Project Plan
U2020	FEW Shielded Pot and Capsule Photographs and Drawings
U2021	K-Wing RH-TRU Liquids Crosswalk
U2022	Carboy BC-004 Liquids Bulking Summary Spreadsheets
U5001	CP-5 Converter Tube Addition to ANL RH TRU FEW Waste Stream

Source Document Tracking Number	Title
U5002	Determination of Flammable Volatile Organic Compounds Concentration for the RH- TRU Debris Waste from ANL-E (Waste Stream AERHDM)
U5003	2nd Batch of AGHCF Fuel Fins

Figure 1 – Location of the Argonne Site

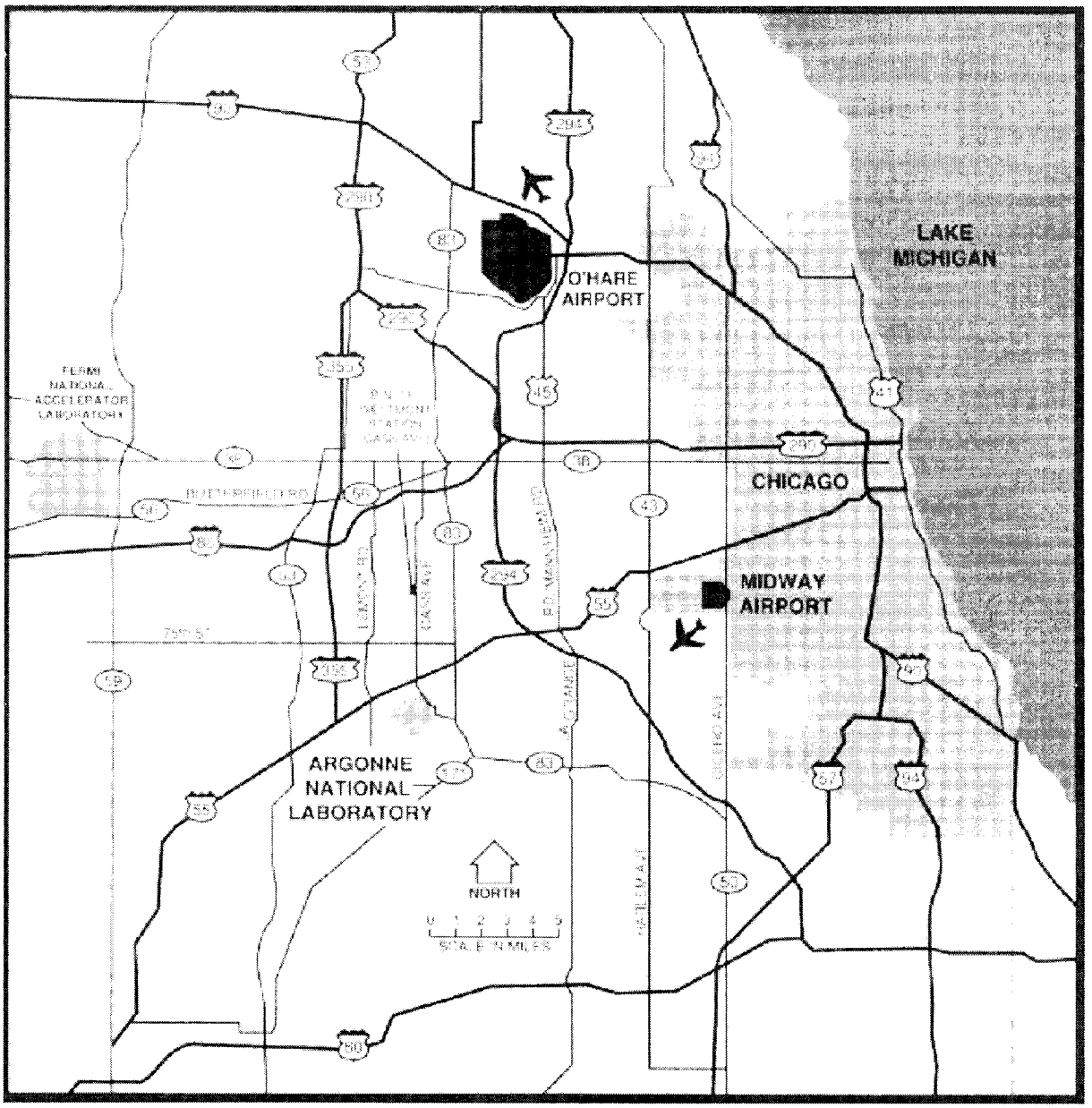


Figure 2 – Argonne Site Map

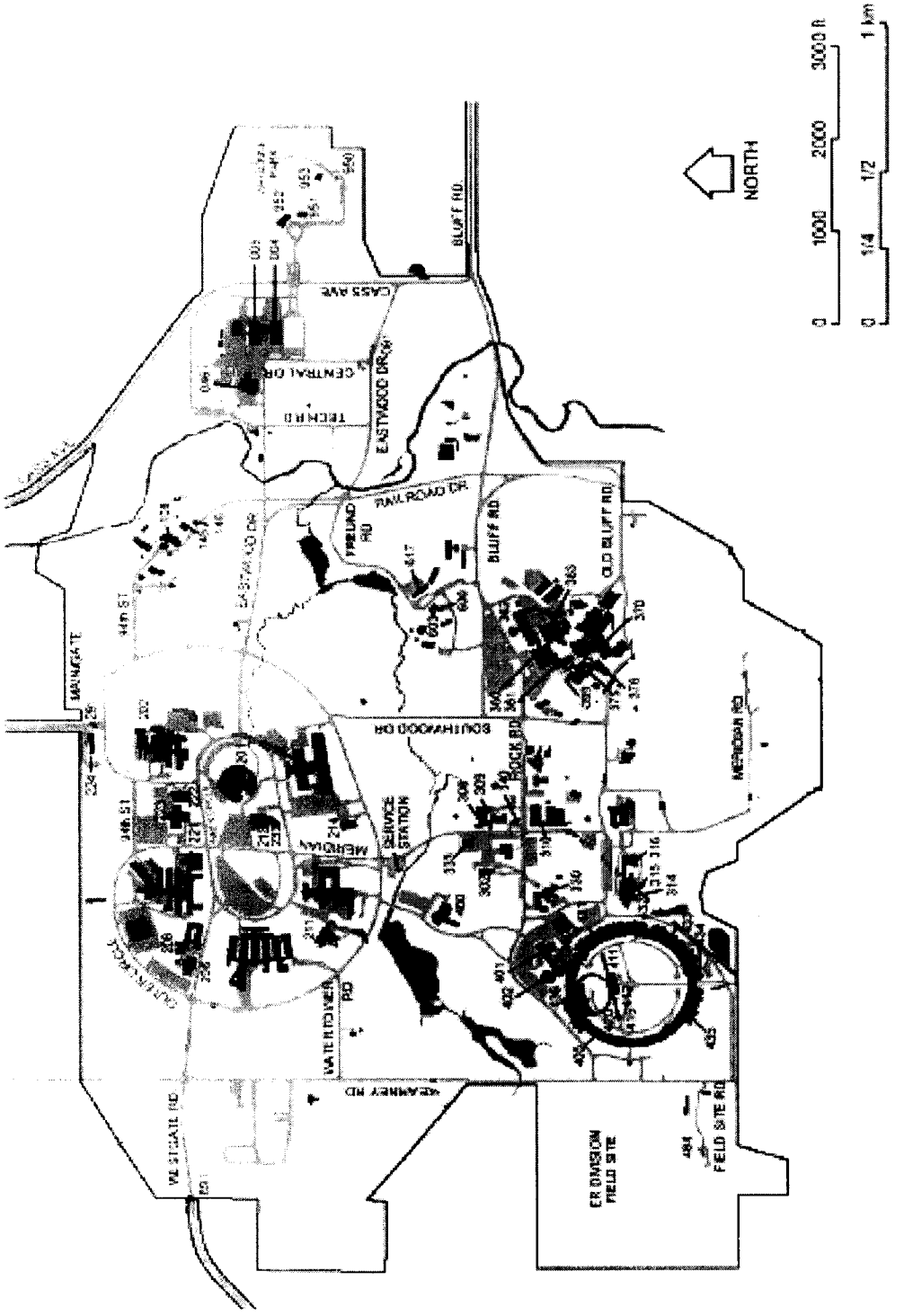


Figure 3 – AGHCF Process Areas

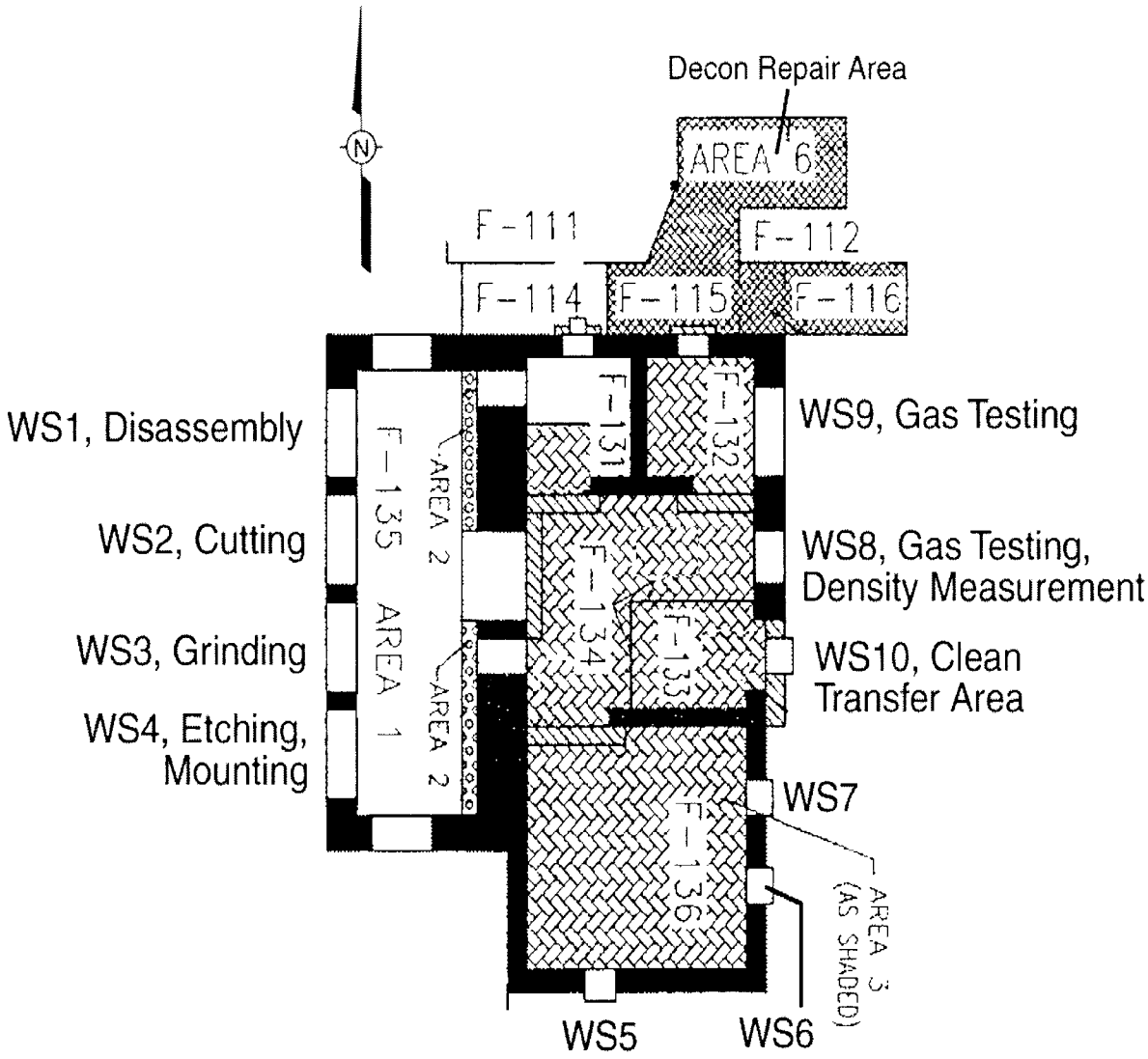
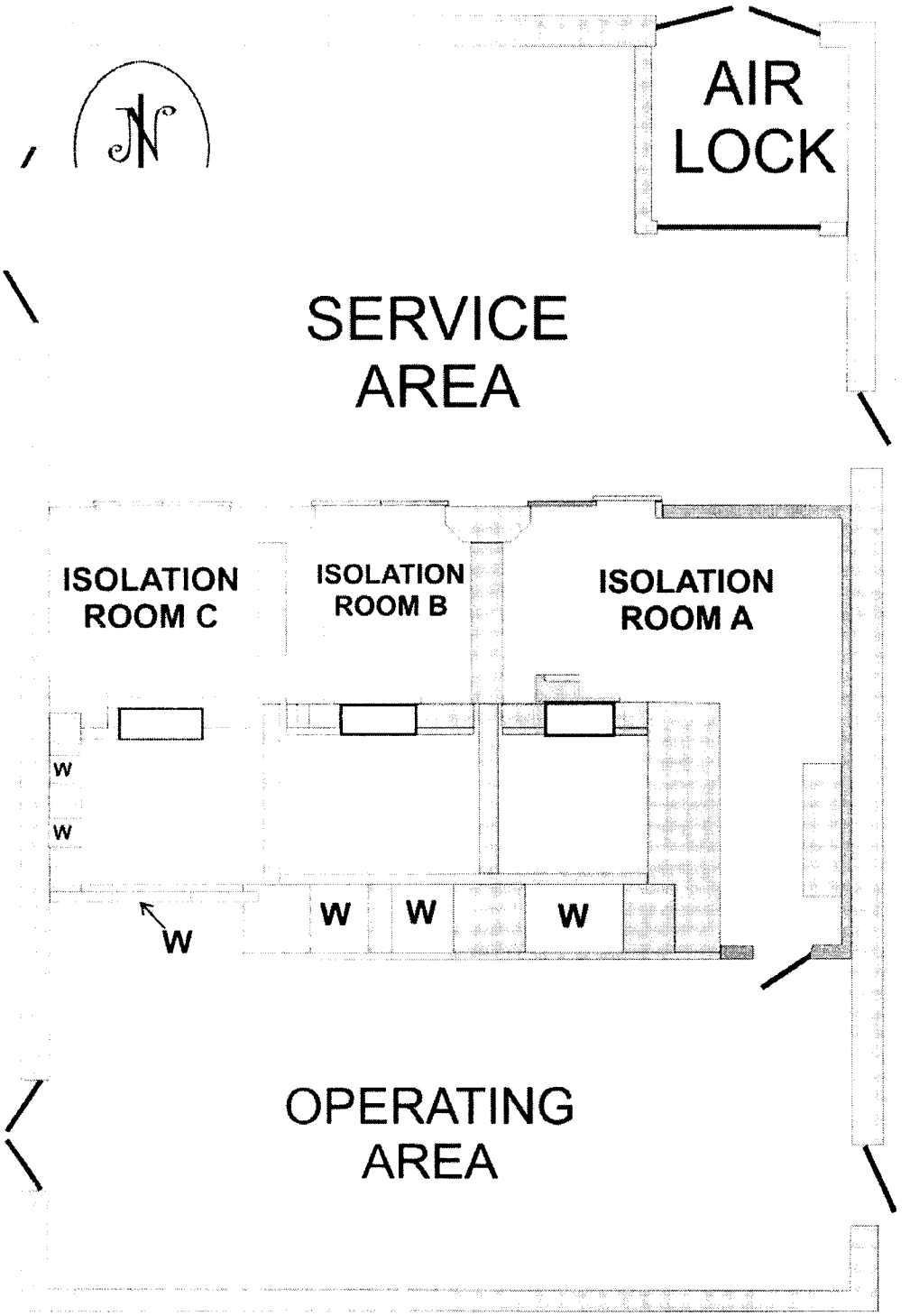


Figure 4 – K-Wing Process Area



W = WINDOW

Figure 5 – AGHCF Waste Management

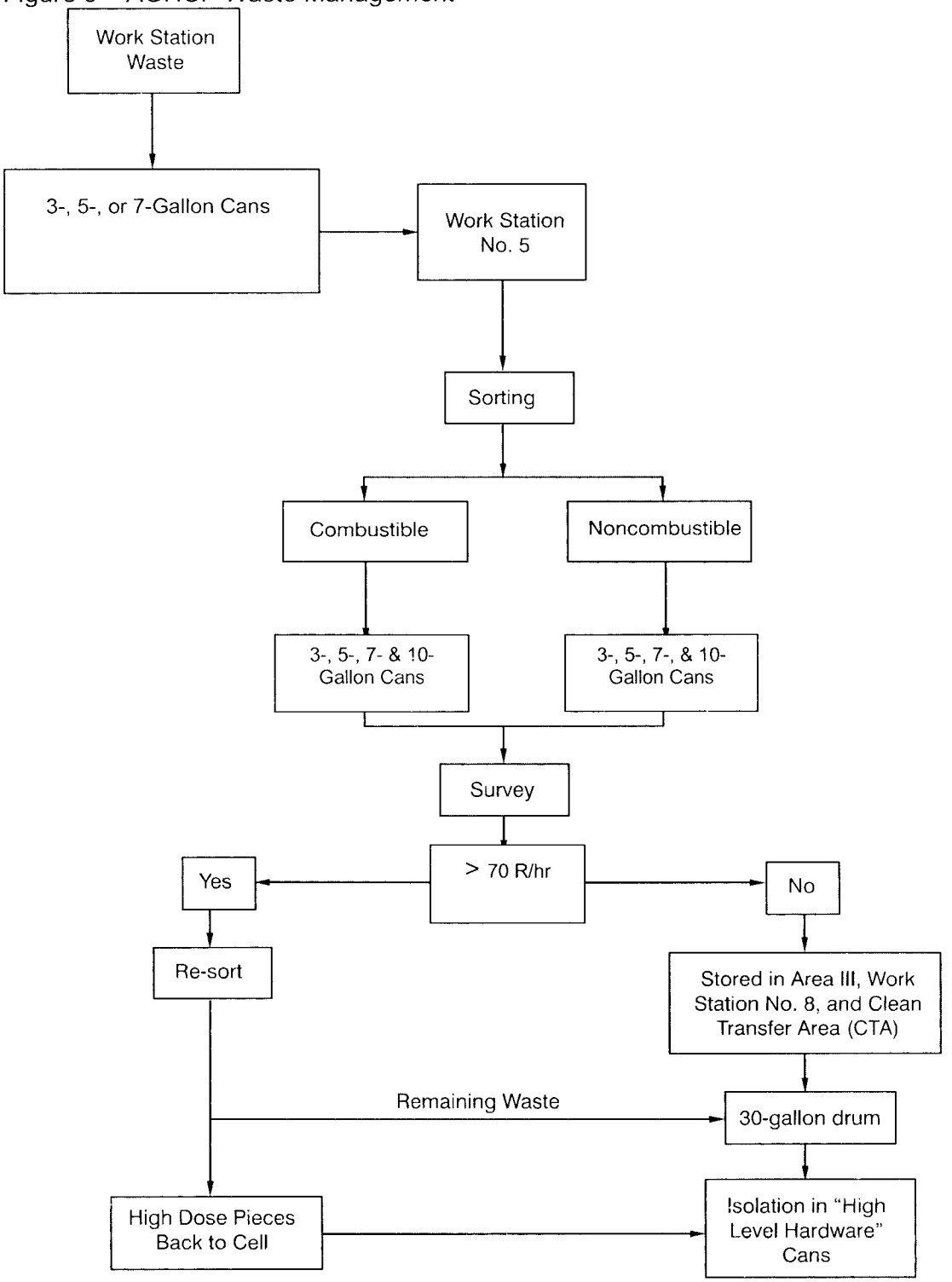
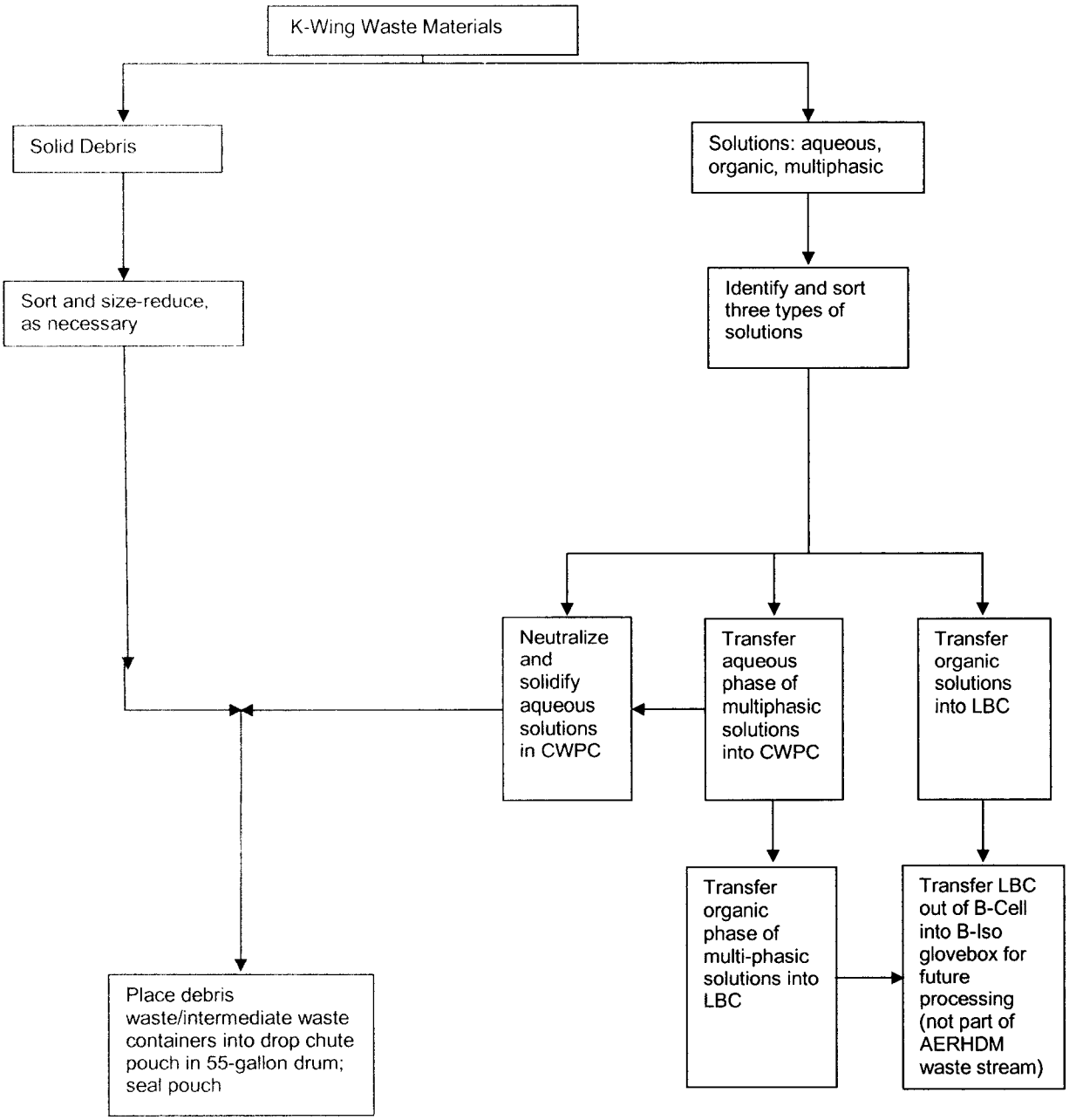


Figure 6 – K-Wing Waste Management



AK2

Attachment 2 – CCP Waste Stream Profile Form

(1) Waste Stream Profile Number: AERHDM					
(2) Generator site name: Argonne National Laboratory			(4)Technical contact: Larry Porter		
(3) Generator site EPA ID: IL3890008946			(6) Technical contact phone number: 505-234-7481		
(5) Date of audit report approval by New Mexico Environment Department (NMED): 10/31/2007					
(7) Title, version number, and date of documents used for WAP Certification: CCP-PO-001, CCP Transuranic Waste Characterization Quality Assurance Project Plan, Revision 16, October 31, 2007 CCP-PO-002, CCP Transuranic Waste Certification Plan, Revision 20, November 2, 2007 CCP-PO-500, CCP/ANL RH-TRU Waste Interface Document, Revision 1, November 16, 2006					
(8) Did your facility generate this waste?	YES	X	NO		
(9) If no, provide the name and EPA ID of the original generator:					
Waste Stream Information[1]					
(10) WIPP ID: AE-T009			(11) Summary Category Group: S5000		
(12) Waste Matrix Code Group: Heterogeneous Waste			(13) Waste Stream Name: Remote Handled Heterogeneous Debris from the Argonne National Laboratory		
(14) Description from the TWBIR: This waste is generated primarily as a result of fuel research activities.					
(15) Defense TRU Waste:	YES	X	NO		
(16) Check One:	CH		RH	X	
(17) Number of SWBs 0	(18) Number of Drums 0			(19) Number of Canisters 48[3]	
(20) Batch Data report numbers supporting this waste stream characterization: See Characterization Information Summary (CIS) Correlation of Container Identification Numbers to Batch Data Report Numbers					
(21) List applicable EPA Hazardous Waste Numbers:[2] D004, D005, D006, D007, D008, D009, D010, D011, D019, D028, D029, F002 and F005					
(22) Applicable TRUCON Content Numbers: AE 321, AE 325					
(23)**Acceptable Knowledge Information**[1]					
[For the following, enter the supporting documentation used (i.e., references and dates)]					
Required Program Information					
(23A) Map of site: CCP-AK-ANLE-500, Rev. 3, May 8, 2008, Attachments 1 and 2					
(23B) Facility mission description: CCP-AK-ANLE-500, Rev. 3, May 8, 2008, Section 4.1.3					
(23C) Description of operations that generate waste: CCP-AK-ANLE-500, Rev. 3, May 8, 2008, Sections 5.3					
(23D) Waste identification/categorization schemes: CCP-AK-ANLE-500, Rev. 3, May 8, 2008, Sections 5.4.1 and 5.4.2					
(23E) Types and quantities of waste generated: CCP-AK-ANLE-500, Rev. 3, May 8, 2008, Sections 4.2.1					
(23F) Correlation of waste streams generated from the same building and process, as applicable: CCP-AK-ANLE-500, Rev. 3, May 8, 2008, Section 4.2.2					
(24) Waste certification procedures: CCP-TP-530, CCP RH TRU Waste Certification and WWIS Data Entry, Rev. 5, July 23, 2007					
(25)Required Waste Stream Information					

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(25A) Area(s) and building(s) from which the waste stream was generated: CCP-AK-ANLE-500, Rev. 3, May 8, 2008, Section 5.1			
(25B) Waste stream volume and time period of generation: CCP-AK-ANLE-500, Rev. 3, May 8, 2008, Section 5.2			
(25C) Waste generating process description for each building: CCP-AK-ANLE-500, Rev. 3, May 8, 2008, Section 5.3			
(25D) Waste Process flow diagrams: CCP-AK-ANLE-500, Rev. 3, May 8, 2008, Attachment 4			
(25E) Material inputs or other information identifying chemical/radionuclide content and physical waste form: CCP-AK-ANLE-500, Rev. 3, May 8, 2008, Section 5.4			
(25F) Waste Material Parameter Weight Estimates per unit of waste: See Table 2 of the Summation of Aspects of AK Summary Report: AERHDM			
(26) Which Defense Activity generated the waste: (check one)			
	Weapons activities including defense inertial confinement fusion	X	Naval Reactors development
	Verification and control technology		Defense research and development
	Defense nuclear waste and material by products management		Defense nuclear material production
	Defense nuclear waste and materials security and safeguards and security investigations		
(27)Supplemental Documentation			
(27A) Process design documents: See S1 AK#s on Attachment 1 to Summation of Aspects of AK Summary Report			
(27B) Standard operating procedures: See S2 AK#s on Attachment 1 to Summation of Aspects of AK Summary Report			
(27C) Safety Analysis Reports: See S3 AK#s on Attachment 1 to Summation of Aspects of AK Summary Report			
(27D) Waste packaging logs: See S4 AK#s on Attachment 1 to Summation of Aspects of AK Summary Report			
(27E) Test plans/research project reports: See S5 AK#s on Attachment 1 to Summation of Aspects of AK Summary Report			
(27F) Site databases: See S6 AK#s on Attachment 1 to Summation of Aspects of AK Summary Report			
(27G) Information from site personnel: See S7 AK#s on Attachment 1 to Summation of Aspects of AK Summary Report			
(27H) Standard industry documents: See S8 AK#s on Attachment 1 to Summation of Aspects of AK Summary Report			
(27I) Previous analytical data: See S9 AK#s on Attachment 1 to Summation of Aspects of AK Summary Report			
(27J) Material safety data sheets: See S10 AK#s on Attachment 1 to Summation of Aspects of AK Summary Report			
(27K) Sampling and analysis data from comparable/surrogate Waste: See S12 AK#s on Attachment 1 to Summation of Aspects of AK Summary Report			
(27L) Laboratory notebooks: N/A			
Confirmation Information			
For the following, when applicable, enter procedure title(s), number(s) and date(s)			
(28)	Radiography: N/A		
(29)	Visual Examination: CCP Remote-Handled Waste Visual Examination, CCP-TP-500, Revision 6, 10/25/2007		

(30)Comments:
For a list of the waste characterization procedures used and the reference and date of the respective procedures see the list of procedures on the attached CIS.

Reviewed by AK Expert:	**YES** [X]		**Date:** 5/9/008
Reviewed by STR (if necessary):	**YES** [X]	**NA** [ ]	**Date:** 1/8/08

Waste Stream Profile Form Certification:

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

(31) Irene Quintana	(32) Irene Quintana	(33) 5/19/08
Signature of Site Project Manager	Printed Name	Date

NOTE: (1) Use back of sheet or continuation sheets, if required.
(2) If radiography, visual examination, headspace gas analysis, and/or homogeneous solids/soils/gravel sample analysis were used to determine EPA Hazardous Waste Codes, attach signed Characterization Information Summary documenting this determination.
(3) This waste stream consists of 44 30-gallon drums packaged, with a projection of up to100 additional 30-gallon drums. Three 30-gallon drums will be packaged into 1 canister.

CHARACTERIZATION INFORMATION SUMMARY

WSPF # AERHDM

Lot 1

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CCP Characterization Information Summary Cover Page

Waste Stream # AERHDM Sub-Lot #: 1

AK Expert Review: Kevin Peters Date: 5/8/2008

SPM Review: Irene Quintana Date: 5/8/2008

SPM signature certifies that through Acceptable Knowledge testing and/or analysis that the waste identified in this summary is not corrosive, ignitable, reactive, or incompatible with the TSDF

A summary of the Acceptable Knowledge regarding this waste stream containing specific information about the corrosivity, reactivity, and ignitability of the waste stream is included as an attachment to the Waste Stream Profile Form. By reference, that information is included in this lot

List of procedures used:

Radiography (RTR/NDE)

NA	NA	NA	NA

Headspace Gas Sampling and Analysis (HSG):

CCP-TP-093	Rev. 13	03/19/07	CCP Sampling of TRU Waste Containers
CCP-TP-106	Rev. 5	11/16/06	CCP Headspace Gas Sampling Batch Data Report Preparation
CCP-TP-173	Rev. 0	05/03/07	CCP Analysis of Gas Samples for VOCs by GC/FID
CCP-TP-175	Rev. 0	05/02/07	CCP Analysis of Gas Samples for VOCs by GC/MS

Visual Examination (VE):

CCP-TP-500	Rev. 6	10/25/07	CCP Remote-Handled Waste Visual Examination
CCP-TP-500	Rev. 5	06/01/07	CCP Remote-Handled Waste Visual Examination
CCP-TP-500	Rev. 4	11/16/06	CCP Remote-Handled Waste Visual Examination

Project Level Data Validation / DQO Reconciliation:

CCP-TP-001	Rev. 17	09/24/07	CCP Project Level Data Validation and Verification
CCP-TP-001	Rev. 16	04/26/07	CCP Project Level Data Validation and Verification
CCP-TP-002	Rev. 19	12/22/06	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-003	Rev. 16	10/02/07	Data Analysis for S3000, S4000, and S5000 Characterization
CCP-TP-005	Rev. 18	11/16/06	CCP Acceptable Knowledge Documentation

WAP Certification:

CCP-PO-001	Rev. 16	10/31/07	CCP Transuranic Waste Characterization Quality Assurance Project Plan

CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

Waste Stream: # AERHDM

Sub-Lot # 1

Container ID Number	Historical Container ID	NDA BDR or Radiological Characterization BDR (CH only)	VE BDR	RTR BDR	Solids Sampling BDR	Solids Analytical BDR	Load Management/ Overpack Yes	Permit Required Headspace Gas BDR			
								Sample	Analysis		
00786	NA	NA	RHANLVE060002	NA	NA	NA		NA	NA	NA	NA
00790*	NA	NA	RHANLVE060002	NA	NA	NA		ANHSGS070001	ECL07038M	ECL07038G	NA
00810	NA	NA	RHANLVE060001_R1	NA	NA	NA		NA	NA	NA	NA
00811	NA	NA	RHANLVE060002	NA	NA	NA		NA	NA	NA	NA
00812	NA	NA	RHANLVE060003	NA	NA	NA		NA	NA	NA	NA
00813	NA	NA	RHANLVE060003	NA	NA	NA		NA	NA	NA	NA
00814	NA	NA	RHANLVE060003	NA	NA	NA		NA	NA	NA	NA
'00815*	NA	NA	RHANLVE060001_R1	NA	NA	NA		ANHSGS070001	ECL07038M	ECL07038G	NA
00816*	NA	NA	RHANLVE060001_R1	NA	NA	NA		ANHSGS070001	ECL07038M	ECL07038G	NA
00817	NA	NA	RHANLVE060001_R1	NA	NA	NA		NA	NA	NA	NA
00818*	NA	NA	RHANLVE060002	NA	NA	NA		ANHSGS070001	ECL07038M	ECL07038G	NA
00819*	NA	NA	RHANLVE060002	NA	NA	NA		ANHSGS070001	ECL07038M	ECL07038G	NA
00820*	NA	NA	RHANLVE060001_R1	NA	NA	NA		ANHSGS070001	ECL07038M	ECL07038G	NA
00821	NA	NA	RHANLVE060002	NA	NA	NA		NA	NA	NA	NA
00822*	NA	NA	RHANLVE060002	NA	NA	NA		ANHSGS070001	ECL07038M	ECL07038G	NA
00823	NA	NA	RHANLVE060003	NA	NA	NA		NA	NA	NA	NA
00824	NA	NA	RHANLVE060001_R1	NA	NA	NA		NA	NA	NA	NA
00826	NA	NA	RHANLVE060001_R1	NA	NA	NA		NA	NA	NA	NA
00827	NA	NA	RHANLVE060002	NA	NA	NA		NA	NA	NA	NA
00828	NA	NA	RHANLVE060002	NA	NA	NA		NA	NA	NA	NA
00829* #	NA	NA	NA	NA	NA	NA		ANHSGS070001	ECL07038M	ECL07038G	NA
00830	NA	NA	RHANLVE060002	NA	NA	NA		NA	NA	NA	NA
00831	NA	NA	RHANLVE060001_R1	NA	NA	NA		NA	NA	NA	NA
00832	NA	NA	RHANLVE060003	NA	NA	NA		NA	NA	NA	NA
00833*	NA	NA	RHANLVE060002	NA	NA	NA		ANHSGS070001	ECL07038M	ECL07038G	NA
00834	NA	NA	RHANLVE060002	NA	NA	NA		NA	NA	NA	NA
00836	NA	NA	RHANLVE060003	NA	NA	NA		NA	NA	NA	NA
00837	NA	NA	RHANLVE060002	NA	NA	NA		NA	NA	NA	NA
00839*	NA	NA	RHANLVE060002	NA	NA	NA		ANHSGS070001	ECL07038M	ECL07038G	NA
00840	NA	NA	RHANLVE060002	NA	NA	NA		NA	NA	NA	NA
00841	NA	NA	RHANLVE060003	NA	NA	NA		NA	NA	NA	NA
00842	NA	NA	RHANLVE060002	NA	NA	NA		NA	NA	NA	NA
00843	NA	NA	RHANLVE060002	NA	NA	NA		NA	NA	NA	NA
00844	NA	NA	RHANLVE060003	NA	NA	NA		NA	NA	NA	NA
00846	NA	NA	RHANLVE060002	NA	NA	NA		NA	NA	NA	NA
00847	NA	NA	RHANLVE060002	NA	NA	NA		NA	NA	NA	NA
00848	NA	NA	RHANLVE060003	NA	NA	NA		NA	NA	NA	NA
00849	NA	NA	RHANLVE060003	NA	NA	NA		NA	NA	NA	NA

CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

Waste Stream: # AERHDM

Sub-Lot # 1

Container ID Number	Historical Container ID	NDA BDR or Radiological Characterization BDR (CH only)	VE BDR	RTR BDR	Solids Sampling BDR	Solids Analytical BDR	Load Management/ Overpack Yes	Permit Required Headspace Gas BDR	
								Sample	Analysis

* HSG lot 1 randomly selected for verifying the assignment of Hazardous Waste Numbers.

Container rejected in VE process and can not be certified for shipment to WIPP.

Signature of Site Project Manager

Irene Quintana
Printed Name

5/8/2008
Date

CCP Headspace Gas UCL_{90} Evaluation Form

WSPF #: AERHDM

Waste Stream Lot Number 1 through 1

ANALYTE	Transform Data Used (No, Data-Log, SQRT, other)	# Samples above MDL (1)	# Samples	Maximum (ppmv)	Mean (ppmv)	SD (ppmv)	UCL_{90} (ppmv)	PRQL (ppmv)	Transformed PRQL (N/A or Value)	UCL_{90} > PRQL Yes	EPA Code
Benzene	SQRT	5	10	0.84	0.50	0.20	0.59	10	3.16		
Bromoform	Log	0	10	-1.58	-3.46	1.00	-3.02	10	2.30		
Carbon tetrachloride	Log	0	10	-1.09	-2.97	1.00	-2.53	10	2.30		
Chlorobenzene	Log	0	10	-0.77	-2.63	1.00	-2.20	10	2.30		
Chloroform	Log	8	10	1.03	-0.57	1.02	-0.12	10	2.30		
Cyclohexane [a]	Log	0	10	-0.51	-2.42	1.01	-1.98	10	2.30		
1,1-Dichloroethane	Log	0	10	-0.36	-2.20	0.99	-1.76	10	2.30		
1,2-Dichloroethane	Log	0	10	-0.60	-2.44	1.00	-2.01	10	2.30		
1,1-Dichloroethylene	Log	0	10	-0.36	-2.22	1.00	-1.78	10	2.30		
cis-1,2-Dichloroethylene	Log	0	10	-0.51	-2.41	1.01	-1.87	10	2.30		
trans-1,2-Dichloroethylene	Log	0	10	-0.43	-2.30	1.00	-1.87	10	2.30		
Ethyl benzene	Log	5	10	1.67	-0.69	2.09	0.23	10	2.30		
Ethyl ether	Log	0	10	-0.11	-1.98	1.00	-1.54	10	2.30		
Methylene chloride	Log	3	10	-0.51	-2.11	0.99	-1.67	10	2.30		
1,1,2,2-Tetrachloroethane	Log	0	10	-1.45	-3.30	0.99	-2.87	10	2.30		
Tetrachloroethylene	Log	8	10	2.77	-0.52	2.08	0.39	10	2.30		
Toluene	Log	6	10	4.38	-1.25	2.14	-0.32	10	2.30		
1,1,1-Trichloroethane	Log	1	10	-0.98	-2.77	1.02	-2.33	10	2.30		
Trichloroethylene	Log	3	10	0.59	-1.96	1.53	-1.29	10	2.30		
1,1,2-Trichloro-1,2,2-trifluoroethane	Log	1	10	-0.80	-2.56	1.01	-2.12	10	2.30		
1,2,4-Trimethylbenzene[a]	Log	5	10	1.13	-1.09	2.10	-0.17	10	2.30		
1,3,5-Trimethylbenzene[a]	SQRT	5	10	1.00	0.56	0.33	0.70	10	3.16		
m-Xylene[b]	Log	6	10	3.00	0.02	2.70	1.20	10	2.30		
p-Xylene[b]	Log	6	10	3.00	0.02	2.70	1.20	10	2.30		
o-Xylene	Log	5	10	2.23	-0.40	2.38	0.63	10	2.30		
Acetone	Log	10	10	4.70	2.77	1.02	3.21	100	4.61		
1-Butanol	Log	10	10	1.74	0.75	0.69	1.05	100	4.61		
Methanol	Log	3	10	4.23	2.89	0.59	3.15	100	4.61		
Methyl ethyl ketone	Log	9	10	2.30	0.76	0.92	1.16	100	4.61		
Methyl isobutyl ketone	Log	5	10	0.10	-1.89	1.12	-1.40	100	4.61		

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AERHDM

CCP Headspace Gas UCL_{90} Evaluation Form

WSPF #: AERHDM **Waste Stream Lot Number** 1 through 1

ANALYTE	Transform Data Used (No, Data-Log, SQRT, other)	# Samples above MDL (1)	# Samples	Maximum (ppmv)	Mean (ppmv)	SD (ppmv)	UCL_{90} (ppmv)	PRQL (ppmv)	Transformed PRQL (N/A or Value)	UCL_{90} > PRQL Yes	EPA Code
Chloromethane[c]	Log	8	10	1.41	-0.22	1.03	0.23	10	2.30		
Carbon Disulfide[c]	Log	4	10	-0.36	-1.49	0.74	-1.17	10	2.30		
1,2-Dichloropropane[c]	Log	0	10	-0.78	-2.64	1.00	-2.20	10	2.30		
Trichlorofluoromethane[c]	Log	0	10	0.10	-2.45	0.99	-2.01	10	2.30		

[a] These compounds are from the TRAMPAC and are flammable VOCs that do not appear in the QAPJP or the WIPP WAP. These are not part of the target analyte list, but samples may be analyzed for these compounds.
[b] These xylene isomers cannot be resolved by the analytical methods employed in the program. m-Xylene and p-Xylene will be reported as "Total m-p-Xylene."
[c] Compounds are reported as target analytes by the Idaho Laboratory and have been added to the evaluation accordingly.

Comments:
(1) For analytes where there were no samples measured above the MDL value, 1/2 of the MDL value was used. (Per section B4 of the WAP, 1/2 of the MDL value is used in calculating the mean concentration.)

Signature of Site Project Manager

Irene Quintana
Printed Name

5/8/2008
Date

CCP Headspace Gas Summary Data

Waste Stream Number AERHDM Sub-Lot Number (s) 1

Tentatively Identified Compound	Maximum Observed Estimated Concentrations (ppmv)	# Samples Containing TIC	% Detected
None			

Data Supports EPA Hazardous Waste Numbers Assigned by AK? Yes ☑ No ☐

If no, describe the basis for assigning the EPA Hazardous Waste Codes:

SPM Signature [signature] Date 5/8/2008

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CCP RTR/VE Summary of Prohibited Items and AK Confirmation

Waste Stream Number: AERHDM

Sub-Lot(s)#: 1

Container Number	RTR Prohibited Items [a]	Visual Examination Prohibited Items [a]
See correlation of container ID numbers for list of remaining drum numbers in this Lot.	Radiography was not used for verification of prohibited items in this lot.	None of the containers in this lot had prohibited items identified in Visual Examination.

a. See Batch Data Reports

b. If AK has assigned U134 to this waste stream, then any liquids in these containers are prohibited items (not acceptable by the TSDF).

Site Project Manager Signature	Irene Quintana Printed Name	5/8/2008 Date

5/8/08

CCP Reconcilliation with Data Quality Objectives

WSF# AERHDM Lot # 1

Sampling Completeness

VE
Number of Valid Samples: 37 Number of Total Samples Analyzed: 37
Percent Complete: 100 (QAO is 100%)

RTR
Number of Valid Samples: NA Number of Total Samples Analyzed: NA
Percent Complete: NA (QAO is 100%)

HSG
Number of Valid Samples: 10 Number of Total Samples collected: 10
Percent Complete: 100 (QAO is ≥90%)

Total VOC
Number of Valid Samples: NA Number of Total Samples collected: NA
Percent Complete: NA (QAO is ≥90%)
Number of Valid Samples: NA Number of Total Samples analyzed: NA
Percent Complete: NA (QAO is ≥90%)

Total SVOC
Number of Valid Samples: NA Number of Total Samples collected: NA
Percent Complete: NA (QAO is ≥90%)
Number of Valid Samples: NA Number of Total Samples analyzed: NA
Percent Complete: NA (QAO is ≥90%)

Total Metals
Number of Valid Samples: NA Number of Total Samples collected: NA
Percent Complete: NA (QAO is ≥90%)
Number of Valid Samples: NA Number of Total Samples analyzed: NA
Percent Complete: NA (QAO is ≥90%)

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CCP Reconcilliation with Data Quality Objectives

WSF# AERHDM Lot # 1

	Y/N/NA	Reconcilliation Parameter
1	Y	Waste Matrix Code.
2	Y	Waste Material Parameter Weights.
3	Y	The waste matrix code identified is consistent with the type of sampling and analysis used to characterize the waste.
4	Y	The TRU activity reported in the BDRs for each container demonstrates with a 95% probability that the container of waste contains TRU radioactive waste.
5	NA	AK Sufficiency. Is there an approved AK sufficiency Determination for this waste stream?
6	Y	Mean concentrations, UCL90 values for the mean concentration, standard deviations, and the number of samples collected for each VOC in the HSG of each container were calculated and compared with the program required quantitation limits, as reported in CCP TP 003, Attachment 3, and additional Environmental Protection Agency (EPA) Hazardous Waste Numbers were assigned as required. Samples were randomly collected (when appropriate).
7a	NA	Mean concentrations, UCL90 values for the mean concentration, standard deviations, and the number of samples collected for solids VOCs were calculated and compared with the program required quantitation limits and regulatory thresholds, as reported in the Characterization Information Summary, CCP-TP-003-Attachment 4, and additional EPA Hazardous Waste Numbers were assigned as required. Samples were randomly collected.
7b	NA	Mean concentrations, UCL90 values for the mean concentration, standard deviations, and the number of samples collected for solids SVOCs were calculated and compared with the program required quantitation limits and regulatory thresholds, as reported in the Characterization Information Summary, CCP TP 003 Attachment 5, and additional EPA Hazardous Waste Numbers were assigned as required. Samples were randomly collected.
7c	NA	Mean concentrations, (UCL90) values for the mean concentration, standard deviations, and the number of samples collected for total metals were calculated and compared with the program required quantitation limits and regulatory thresholds, as reported in the Characterization Information Summary, CCP TP 003 Attachment 6, and additional EPA Hazardous Waste Numbers were assigned as required. Samples were randomly collected.

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CCP Reconcilliation with Data Quality Objectives

WSF# AERHDM Lot # 1

8	Y	The data demonstrates whether the waste stream exhibits a toxicity characteristic under Title 40 Code of Federal Regulations (CFR), Part 261, Identification and Listing of Hazardous Waste, Subpart C, Characteristics of Hazardous Waste.
9	Y	Does the waste stream contain listed waste found in 20.4.1.200 NMAC incorporating 40 CFR Part 261, Subpart D, Lists of Hazardous Wastes.
10	Y	Waste stream can be classified as hazardous or nonhazardous at the 90-percent confidence level.
11	Y	Appropriate packaging configuration and Drum Age Criteria (DAC) is applied and documented in the headspace gas sampling documentation, and the drum age met prior to sampling.
12	Y	TICs were appropriately identified and reported in accordance with the requirements of Section B3-1 of the QAPjP.
13	Y	The PRQLs for headspace gas VOCs were met for all analyses as evidenced by the analytical batch data reports.
14		The overall completeness, comparability, and representativeness QAOs were met for each of the analytical and testing procedures as specified in CCP-PO-001 Sections B3-2 through B3-9 prior to submittal of a waste stream profile form for a waste steam or waste stream lot.

	Completeness	Comparability	Representativeness
Radiography	NA	NA	NA
VE	Y	Y	Y
Headspace Gas Analysis	Y	Y	Y
Solids Sampling	NA	NA	NA
Solids VOCs	NA	NA	NA
Solids SVOCs	NA	NA	NA
Solids Metals	NA	NA	NA

Comments: N/A

Signature of Site Project Manager	Irene Quintana Printed Name	5/8/2008 Date

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SUMMATION OF ASPECTS OF AK SUMMARY REPORT: AERHDM

Overview:

Waste Stream AERHDM is remote handled (RH) mixed heterogeneous debris generated at Argonne National Laboratory (ANL) Alpha Gamma Hot Cell Facility (AGHCF). Founded in 1946 as the first national laboratory by the U.S. Atomic Energy Commission, ANL has been instrumental in the development of nuclear reactors and associated systems, materials, fuel elements, and components for use in both civilian and defense programs. This work included participation in the development of nuclear reactor systems for isotope production, power generation, and naval submarine propulsion, as well as experimental or proposed applications for weapons destruction, defense waste management, defense security and safeguards, and space propulsion. This waste stream consists of TRU mixed waste generated in support of ANL defense related activities, specifically naval reactor development.

This Summation of the AK Summary Report includes information to support Waste Stream Profile Form (WSPF) number AERHDM for RH TRU debris. The primary source of information for this Summation is CCP-AK-ANLE-500, *CCP Acceptable Knowledge Summary Report For Argonne Remote-Handled Debris Waste, Waste Stream: AERHDM*, Revision 2, December 18, 2006. CCP-AK-ANLE-500 includes information obtained from numerous sources, including facility safety basis documentation, historical document archives, generator and storage facility waste records and documents, procedures for waste packaging and generation activities, container-specific waste packaging and characterization documentation, and interviews with knowledgeable AGHCF personnel.

Waste Stream Identification Summary:

Site Where TRU Waste Was Generated:	Argonne National Laboratory
Waste Stream Name:	Remote Handled Heterogeneous Debris from the Argonne National Laboratory
Waste Stream Number:	AERHDM
Dates of Waste Generation:	1993 to present
Summary Category Group:	S5000 – Debris Waste
Waste Matrix Code Group:	Heterogeneous Waste
Waste Matrix Code:	S5400
Waste Stream TWBIR Identification:	AE-T009
Waste Stream Volume:	15 canisters (current)* 33 (projected)

* This waste stream consists of 44 30-gallon drums packaged, with a projection of up to100 additional 30-gallon drums. Three 30-gallon drums will be packaged into 1 canister.

RCRA EPA Hazardous Waste Numbers: D004, D005, D006, D007, D008, D009, D010, D011, D019, D028, D029, F002 and F005

TRUCON Content Numbers: AE 321 and AE 325 (RH 72-B Content Numbers)

Waste Stream Description and Physical Form:

Waste stream AERHDM consists of RH mixed heterogeneous debris that was generated by destructive and nondestructive examination of radiological materials such as fuel pins, reactor structural materials, and targets in the ANL AGHCF between 1993 to present. Waste from this stream was contaminated primarily with fissile materials and mixed fission products (MFP).

This waste stream consists predominantly of organic and inorganic debris. Examples of material in this waste stream are: paper, cardboard, cotton, and synthetic (nylon) rags, cloth, towels, grinding paper, boxes, liners, filter media, tissues, string, rope, swabs, mop heads, and gloves. Examples of waste items include brooms, mop handles and heads, rulers, brushes, wooden blocks, and Masonite® (an engineered wood product that does not contain glue), plywood, and chipboard items, polyethylene, polypropylene, polyvinyl chloride (PVC), phthalate, Koroseal® (high impact PVC), Tygon® tubing, styrene butadiene, polyurethane, Lucite® (methyl methacrylate polymer plastic), Teflon®, paint (dried), and epoxy (hardened), metallurgical (Bakelite- plastic made from synthetic components) sample mounts, bottles, tubing, funnels, pipe, bags, sheeting, tape, syringes, markers, Neoprene®, and silicone O-rings, gaskets, stoppers, hose, gloves, wire/cord insulation, glass, ceramic, alumina, Transite® (asbestos), porcelain, quartz, Vycor® (heat resistant silica glass), and boron nitrite bottles, jars, tubing, beakers, plates, insulation (fiberglass), firebrick, insulators, light bulbs, thermometers, lenses, carbon steel, stainless steel, and cast iron cans, buckets, equipment, tools, tubing, fittings, rods, rings, chain, saw blades, dustpans, motors, manipulator tape, capsules, aluminum, brass, bronze, copper, lead, tungsten, tantalum, and tin cans (including punctured aerosol cans), sheeting, foil, tools, wire, rods, cable, tubing, fittings, gauges, plates, motors, and light fixtures.

Waste Stream AERHDM contains lesser amounts (less than 50 percent in any container) of homogeneous organic and inorganic materials. Clay and vermiculite based absorbents were used during the neutralization and evaporation of acids, etchants, and alcohol solutions (Reference RCRA Determinations-Hazardous Waste Determinations Section of this Summation). Solidification agents such as Portland cement, or Aquaset™ (vermiculite based absorbent), Petroset™ (natural clay absorbent) were also used. Charcoal and ion exchange resin filter media was also included in this waste stream. No individual payload container consists of more than 50 percent homogenous solids.

This waste stream is assigned Waste Matrix Code S5400, Heterogeneous Debris. This category includes waste that is at least 50% by volume debris materials that do not meet the criteria for assignment as either an Inorganic Debris (S5100) or Organic Debris (S5300). The waste material that comprises waste stream AERHDM was generated from a single process or from an activity that is similar in material, physical form, and hazardous constituents and is therefore a single waste stream.

Point of Generation - Area and Building of Generation

This TRU mixed heterogeneous debris waste stream was generated at the AGHCF between 1993 to present during the examination of irradiated and non-irradiated fuel pins and other reactor materials from reactor programs at ANL and U.S. Department of Energy (DOE) reactors. The AGHCF is a hot cell complex that includes office space, shielded gloveboxes, a hot cell under nitrogen atmosphere with work stations (WS) for remote manipulation of materials, and a Decontamination and Repair Area (DRA).

Generating Process

The AGHCF conducted research programs for advance reactor technology, with an emphasis on the use of plutonium as fuel. The AGHCF was a hot cell facility that was used for the characterization and testing of irradiated reactor materials. The primary AGHCF capabilities consist of the following nondestructive and destructive examination activities:

Nondestructive Examinations
- Visual inspection and examination
- Capsule disassembly
- Macrophotography
- Bow, length, and weight measurement
- Diametral profilometry
- Diameter measurements with micrometers
- Eddy current inspection
- Fuel element length measurement
- Irradiated fuel element balance point
- Weight determination
- Irradiated fuel element helium leak test
- Autoradiography
- X-ray analysis and gamma scanning
- Irradiated material transfer, management, and storage

Destructive Examinations
- Fuel element fission gas sampling and tritium gas collection
- Plenum volume determination and gas analysis
- Fuel element sectioning
- Metallographic specimen mounting
- Microphotography
- Microhardness
- Immersion density testing
- Optical microscopy and photography
- Scanning electron microscopy
- Scanning auger microscopy
- Electron microprobe
- Mechanical testing
- Specimen preparation (e.g. creep, charpy, bend, and tensile)
- Mock fuel pin fabrication (e.g. defueling, annealing, hydriding, welding and pressurization)

The AGHCF was designed to examine plutonium-bearing fuel elements from the ANL-W Experimental Breeder Reactor, although over the years, the sources of specimens examined expanded to include other national laboratories, commercial nuclear power plants, international clients, and universities. Numerous fuel and specimen types were examined over the years of operation but the waste generating activities remained unchanged and the RH TRU waste generated consists of the same materials in the same approximate percentages.

The AGHCF consisted of operations areas, rooms, and remote work stations (WSs). Fuel elements were moved from one WS to another depending upon the examination operation. The AGHCF contained electro-mechanical devices, including master-slave manipulators at each WS, a robot, remote operated manipulators,

and radio controlled carts. These pieces of equipment allowed for remote handling at a specific WS and between WSs.

The Electron Beam Laboratory consisted of an unshielded glovebox, two additional gloveboxes and a Scanning Electron Microscope (SEM), an Electron Microprobe (EMP), and a scanning auger microscope (SAM) and its associated glovebox. The EMP, SEM, and the SAM were used for electron beam analysis of samples. The gloveboxes in the Shielded Glovebox Facility (SGF) were used to prepare small specimens for electron microscopy or other tests.

Fuel elements or other specimens were received at the AGHCF in a shielded cask and assigned an identification number. The cask was moved to the Clean Transfer Area (CTA) and the fuel element was unloaded. The elements were then moved into interim storage or long-term storage. Smaller casks were moved into the CTA for specimen removal.

Initial capsule examination and disassembly was then performed. Nondestructive testing was conducted and included bow measurement, diametral profilometry, weight and length measurements, determination of balance point, diameter measurements, visual examination (VE), macrophotography, gamma spectrometry and gamma profiling of the fuel elements.

If a fuel element was received unpunctured and the fission gas had not been released, the element was punctured. The gas was collected and analyzed to quantify the amounts of fission and other gases present. Excess fission-gas was exhausted by the cell ventilation system.

Fuel element fission gas sampling, tritium gas collection, plenum volume determinations and gas analysis, in addition to helium leak testing, X-ray examination, and gamma scanning were conducted during gas testing and density measurements. Profilometry equipment was used to determine the amount of radial strain due to irradiation growth.

After the nondestructive examinations were completed, the fuel element was sent for destructive examinations. The fuel element was sectioned, each section was numbered and was placed in an aluminum pipe; the aluminum pipe had the number stamped on the side. Samples requiring metallographic examination were mounted using epoxy resin {e.g. phenol, 4,4-(1-methylethylidene)bis, polymer with (chloromethyl) oxirane}. Grinding and polishing of the element was conducted. The sample was then moved to the metallograph. Specimens could also be prepared for examination on the EMP and quantitative chemical analysis of the specimens then performed.

Lower level radioactive samples were taken to the SEM or the SAM glovebox. The SEM and the energy dispersive X-ray system were used for microstructural and microchemical examination of small segments. The SAM was used for surface or grain boundary analysis of irradiated (low level) or contaminated specimens.

Other experimental systems were set up on a temporary basis such as the furnace (used for elevated temperature testing of fuel segments), controllers, data collection equipment, and gas collection apparatus. Post-test examinations included mounting of the test sample and optical or electron beam examination. Post-test examinations included both nondestructive and destructive examinations, similar to the typical examinations described above for a fuel element.

After the examinations were completed, the samples were placed into storage pending future evaluation or shipment to a designated storage facility. If the samples were stored, they were placed in a storage can (1-gal or smaller) and sealed.

Equipment maintenance and repair also generated RH TRU waste. Maintenance ranged from routine replacement of saw blades, air-system filters, broken glassware, and light bulbs, to non-routine replacement or repair of experimental apparatus, furnaces, glove rings, HEPA filters, cell windows and broken electrical motors. Non-routine repairs of manipulator arms or other in-cell equipment were conducted. In 1983, a manipulator DRA was constructed to better handle higher level contamination associated with the manipulators. The DRA utilized a shower stall to decontaminate the manipulators prior to repair. Because the WSs were designed to handle multiple examinations, the specific locations of the examinations and other activities varied. Waste was either placed in cans at WSs or moved to the waste packaging area for temporary storage. Miscellaneous items generated in the hot cell included sample containers, plastic bags, plastic bottles, and sphincter cans. Waste cans were used to collect waste materials at WSs and then moved for temporary storage. Sorting and packaging activities were performed and videotaped after February 1993. After the waste cans were surveyed, they were packaged into 30-gallon drums.

Table 1 identifies toxicity characteristic and F-listed chemicals in this waste stream. These chemicals and constituents were used in processes and contaminate the debris waste, but the chemical itself was not discarded in this waste stream as commercial chemical product, an off specification commercial chemical product, or a container residue or spill residue thereof (40 CFR 261.33).

Table 1 – Metals or organic TC and F-Listed Contaminants

Waste Stream AERHDM

Chemical	CAS Number	EPA HWNs
Arsenic	7440-38-2	D004
Barium	7440-39-3	D005
Benzene	71-43-2	F005
Cadmium	7440-43-9	D006
Carbon tetrachloride	56-23-5	D019
Chromium	7440-47-3	D007
Isobutanol	78-83-1	F005
Lead	7439-92-1	D008
Mercury	7439-97-6	D009
Selenium	7782-49-2	D010
Silver	7440-22-4	D011
Tetrachloroethylene	127-18-4	F002
Toluene	108-88-3	F005
1,1,1-trichloroethane	71-55-6	F002
1,1-dichloroethylene	75-35-4	D029
1,2-dichloroethane	107-06-2	D028

RCRA Determinations - Hazardous Waste Determinations

Ignitability, Corrosivity, Reactivity

Waste generated in this waste stream does not qualify for any of the exclusions outlined in 40 CFR 260 or 261. Review of historical VE video tapes is used to verify that the waste stream is not a liquid waste and does not contain explosives, non radioactive pyrophoric materials, compressed gasses or reactive waste. Therefore,

this waste stream does not exhibit the characteristic for ignitability (D001), corrosivity (D002), or reactivity (D003).

Ignitability

This waste does not meet the definition of ignitability as defined in 40 CFR 261.21. The waste is not a liquid or compressed gas, nor does the waste contain ignitable materials or compressed gases. AGHCF operations used small amounts of ignitable solvents including acetone, xylene, ethyl ether, ethanol, n-butyl alcohol, and methanol. These chemicals were used primarily during cleaning operations in the hot cell. Solvents were also used during sample preparation to clean the surfaces of the metallographic specimens. The AGHCF evaporated all organic liquids to dryness, therefore no solvent liquids are expected in the waste stream. The waste is not capable of causing fire through friction or absorption of moisture. The waste does not meet the definition of a Department of Transportation (DOT) oxidizer as defined in 49 CFR 173.151. The waste does not exhibit the characteristic of ignitability. Therefore, the hazardous waste number for ignitability (D001) does not apply to this waste stream. (References C029, C066, C097, C106, C115, C118, C130, C137, C147, P472, P025, P032 and U332)

Corrosivity

This waste does not meet the definition of corrosivity as defined in 40 CFR 261.22. Small amounts of etchant solutions were prepared in the AGHFC with hydrofluoric, sulfuric, hydrochloric, chromic, phosphoric, nitric, citric, acetic, and oxalic acids. A silver nitrate solution was used for etching the surface of (zirconium-tin alloy) specimens. Waste etchant solutions were neutralized using either sodium carbonate or sodium hydroxide to a pH between 5 and 10, absorbed into pelletized clay (Oil-Dri®), then heated to dryness. The waste is not liquid, and review of historical VE video tapes is performed to ensure the absence of liquids. Therefore the characteristic of corrosivity (D002) does not apply to this waste stream. (References C066, C077, C147, P032, P062, P578, U006 and U332).

Reactivity

This waste stream does not meet the definition of reactivity as defined in 40 CFR 261.23. The waste is stable and will not undergo violent chemical change. The waste will not react violently with water, form potentially explosive mixtures with water, or generate toxic gases, vapors, or fumes when mixed with water. Potentially reactive metals were prohibited from disposal in the RH TRU waste. Wastes containing sodium (Na), sodium-potassium (NaK) alloy, and lithium metals, found in some fuel pins were generated during disassembly and sectioning activities during preparation of metallurgical specimens. Na and NaK were reacted with alcohol (ethanol) and lithium was reacted with an ammonia solution. The resulting solutions were absorbed into pelletized clay and heated to dryness. The characteristic of reactivity does not apply to this waste stream. Therefore, the EPA hazardous waste number for reactivity (D003) is not assigned. (References C009, C029, C066, C099, C118, C130, C137, C147, C333, P372, P412, P540 and U332)

Toxicity Characteristic

This waste stream exhibits the characteristic of toxicity per 40 CFR 261.24. The toxicity characteristic contaminants fall into two categories; metals and organics.

The following toxicity characteristic metals have been identified as contaminants in this debris waste stream: arsenic (D004), barium (D005), cadmium (D006), chromium (D007), lead (D008), mercury (D009), selenium (D010) and silver (D011). (Reference DR014)

Examples of sources of these contaminants are as follows:

- D004- hydrogen charging solution (sodium arsenite)
- D005- contaminant of HEPA filters, clay absorbent, fluorescent bulbs
- D006- neutron shielding, Ni-Cd batteries, contaminant of HEPA filters
- D007- chromic acid, chromic oxide polishing abrasive, pelletized clay
- D008- leaded glass, aprons, gloves
- D009- mercury vapor lamps, batteries, thermometers
- D010- irradiation experiment reagent, contaminant of HEPA filter media
- D011- silver nitrate etchant, mounting epoxy, silver solder

Review of the AK source documents identified the use of organic toxicity characteristic compounds including carbon tetrachloride (D019), 1,2-dichloroethane (D028) and 1,1-dichloroethylene (D029). Sources of these compounds include, but are not limited to metallurgy reagents, preparation of metallography samples, cell cleaning and immersion density measurements. (Reference DR014)

Because the more specific F-listed EPA HWNs have been assigned for benzene and tetrachloroethylene, assignment of the corresponding toxicity characteristic HWNs (D018 and D039) are not applied. (Reference DR014)

Where a constituent has been identified and there is no quantitative data available to demonstrate that the concentration is below regulatory threshold, the applicable EPA HWN is conservatively applied to the waste stream. EPA HWNs D004, D005, D006, D007, D008, D009, D010, D011, D019, D028 and D029 are assigned to waste stream AERHDM.

Listed Waste

Waste stream AERHDM was mixed with or derived from F-listed hazardous wastes from non-specific sources as listed in Title 40 *Code of Federal Regulations* (CFR) 261.31. F002 and F005 listed solvents were used in the AGHCF and potentially contaminate the waste. The following F-listed constituents may contaminate the waste and are conservatively applied:

(F002)
Tetrachloroethylene, 1, 1, 1-trichloroethane

(F005)
Benzene, isobutanol, toluene

F003 constituents, including acetone, n-butyl alcohol, ethyl ether, methanol, and xylene were also used in the AGHCF. These solvents are listed solely for ignitability. The waste stream does not exhibit the characteristic of ignitability because it is not liquid; therefore, F003 is not assigned. Although several F001-listed solvents were identified in the AK record (i.e., 1,1,1- trichloroethane, carbon tetrachloride, and tetrachloroethylene), these listed solvents were not used in "large-scale" degreasing operations such as cold cleaning or vapor degreasing. The AGHCF did not conduct large-scale degreasing operations, and therefore, EPA HWN F001 is not assigned to this waste stream. Waste stream AERHDM is assigned EPA HWNs F002 and F005 for 1,1,1-trichloroethane, benzene, isobutanol, tetrachloroethylene, and toluene (Reference DR014, C012, C066, C137, C147, U065, and U072).

U, K, and P-Listed Chemicals

Waste stream AERHDM was not mixed with or contaminated with a discarded commercial chemical product, an off-specification commercial chemical product, or a container residue or spill residue thereof (40 CFR 261.33). Waste stream AERHDM was not mixed with or contaminated with any of the sources specified in 40 CFR 261.32.

Production scale activities involving beryllium were not performed at the AGHCF. The only source of beryllium identified was special nuclear material samples that were analyzed for beryllium. Based on the form of beryllium in the waste generating processes (not Be powder), the waste stream will not meet the definition of P015 waste and beryllium will not exceed 1 percent in any payload container.

Hydrofluoric acid was used in the AGHCF as a metallurgical etchant, however no unused acid or materials from spills of the acid were disposed of in this waste stream. Additionally, as described above, corrosive liquids were neutralized, evaporated and immobilized prior to disposal (References C066, C077, C147, P032, P062, P578, U006, and U332). Waste stream AERHDM is therefore not assigned a U-, K- or P-listed HWN.

Headspace Gas/Volatile Organic Compound Information

Lot 1 representative sampling from waste stream AERHDM consisted of 10 randomly selected 30-gallon drums. The UCL_{90} calculated values for all of the target analytes in lot 1, using either the transformed or untransformed value, are below the program required quantitation limits (PRQLs). No tentatively identified compounds were detected in headspace gas analysis of Lot 1.

Specific information regarding the maximum, mean, standard deviation and UCL_{90} are contained in the Characterization Information Summary.

Conclusion

The following EPA hazardous waste numbers are assigned to this waste stream: D004, D005, D006, D007, D008, D009, D010, D011, D019, D028, D029, F002, and F005.

Polychlorinated Biphenyls (PCBs)

No PCBs are anticipated to be present in this waste stream. PCB waste not authorized under an EPA PCB waste disposal authorization is not in this TRU waste stream.

Prohibited Items

The absence of prohibited items is determined and documented through acceptable knowledge and characterization activities. Review of historical VE tapes and/or radiography is performed to verify the absence of prohibited items. The following items have been determined as not present in the waste:

- Liquids
- Non-radioactive pyrophoric materials
- Waste incompatible with backfill, seal and panel closure materials, container and packaging materials, or other wastes
- Explosives or compressed gases
- Waste with PCBs not authorized under an EPA PCB waste disposal authorization
- Waste exhibiting the characteristics of ignitability, corrosivity, or reactivity

- Non-mixed hazardous wastes
- Waste that has ever been managed as high-level waste and waste from tanks specified in Table B-8 of the WIPP HWFP, unless specifically approved through a Class 3 permit modification.
- Any waste container from a waste stream (or waste stream lot) which has not undergone either radiographic or visual examination of a statistically representative subpopulation of the waste stream in each shipment, as described in WIPP HWFP Attachment B7.

Each container of waste is certified and shipped only after radiography and/or VE either:

- Did not identify any prohibited items in the waste container, or
- All prohibited items found in a waste container by radiography or VE are identified and corrected (i.e., eliminated or removed) through the site non-conformance reporting system.

Method for Determining Waste Material Parameter Weights per Unit of Waste

List of AK Sufficiency Determinations

No AK Sufficiency Determinations were required for this waste stream.

Transportation

This waste stream and its chemical constituents have been reviewed for consistency with the listed TRUCON codes and they are consistent. The only sources of beryllium identified in the AK record were samples and actinide/beryllium sources. The level of beryllium contamination in individual drums will be less than one weight percent. RH-TRU 72-B canisters will contain less than 25 kg of beryllium. The waste is not machine-compacted.

Radionuclide Information

Containers in this waste stream have surface dose rates equal to or exceeding 200 mrem/hr, but less than 1000 rem/h, and contain more than 100 nanocuries per gram (nCi/g) of waste of alpha-emitting TRU isotopes with half lives greater than 20 years. The waste is contaminated primarily with fissile materials and MFPs.

Radiological characterization of this waste stream is performed using a dose-to-curie (DTC) evaluation. In this evaluation, the gamma dose (exposure) rate is measured for an individual drum, and from the measured dose rate, the concentration of a gamma radionuclide such as Cs-137 is determined. The dose rate used in the calculation of the Cs-137 concentration is the average of several gamma dose rate measurements at specific locations around the drum in conformance with the geometric modeling used to derive the DTC relationship. The weight of the drum is measured and the tare weight of the container is subtracted to yield a net weight of the waste that is used in the density determination and, ultimately, in the DTC determination. Once the Cs-137 concentration has been determined, scaling factors are used to derive the concentrations of the remainder of the radionuclides that are required to be reported.

The 10 WIPP tracked radionuclides are presented in Table 3 in addition to other radionuclides that, in aggregate, constitute 95% of the total radiological hazard.

Table 3. Summary of AERHDM Radionuclides

WIPP Tracked Radionuclides	Additional Reported Radionuclides
Am-241	Ba-137m
Pu-238	U-235
Pu-239	Pu-241
Pu-240	Y-90
Pu-242	
U-233	
U-234	
U-238	
Cs-137	
Sr-90	

No payload management will be conducted for this waste stream.

Attachment 1 AK SOURCE DOCUMENTS

Source Document Tracking Number	AK #	Title	Author	Document Number	Rev.	Date
C006	S7	Interview with Larry Neimark re: AGHCF samples, applicable programs, defense relationship to materials, and commingling of waste	Cheryl Schultz	Record of Communicatio n:ROC-C6	NA	7/17/2001
C009	N/A	Intra-Laboratory Memo to W. D. Jackson, MCT/ANL-E, re: Fissile Scrap and Irradiated Structural Materials Waste Shipments from ANL-E to ANL-W for retrievable Storage in the RSWF	L.C. Witbeck	L-W-SSS-(LCW)-88-146An-184-66	NA	11/17/1988
C011	S2, S5	Intra-Laboratory Memo to D. A. Donahue, MCT, re: Work Plan for the Examination of LILY-1 and LILY-1A Speciments	L. A. Neimark, MCT	NA	NA	11/28/1988
C012	S2	Intra-Laboratory Memo to Operations Personnel re: Facility Nitrogen Purge Change and Storage of Flammable Liquids	D. A. Donahue	NA	NA	4/9/1990
C016	S8, S13	Intra-Laboratory Memo to C. E. Crouthamel, CMT, and M. J. Steindler, CMT re: LWR Hot-Cell Capability at ANL-E: The D-200 M-Wing Situation	L. A. Neimark, MST	NA	NA	5/3/1985
C017	S8	Intra-Laboratory Memo to L. A. Neimark, MCT re: TRU-RH Waste Payload Meeting Summary	J. R. Thuot, Acting Manager, PFS-WM	NA	NA	8/14/1990
C029	NA	Letter re: Survey of Waste Streams in Building 212	Noreen Kevin, Summer Intern WMP and W. H. Livernash, Environmental Compliance Rep. Material and Components Technology Materials Science Division	NA	NA	5/31/1988
C030	S8	Westinghouse Hanford TRU Disposal Requirements	J. R. Thuot	NA	NA	NA
C031	S2	Intra-Laboratory Memo to Distribution re: New Movement Slip for SNM and Other Programmatically Valuable Materials in the AGHCF	L. A. Neimark, Manager, AGHCF	32	2	10/5/1993

C032	S2	Intra-Laboratory Memo to Distribution re: New Sectioning SLIP for SNM and Other Programmatically Valuable Materials in the AGHCF	L. A. Neimark, Manager, AGHCF	34	NA	4/5/1994
C035	S9	Intra-Laboratory Memo to Distribution re: Management of Broken Fluorescent Lamps	J. Herman, PFS-WMO	NA	NA	2/02/1999
C038	S5	Intra-Laboratory Memo to L. A. Neimark re: Self-ignition Material from "Operation Clean Sweep"	W. D. Jackson	NA	NA	4/13/1983
C039	S5	Intra-Laboratory Memo to L. A. Neimark re: Procedure for Disposal of "Clean Sweep" Pyrophoric Waste	W. D. Jackson	NA	NA	9/6/1983
C041	S12	Intra-Laboratory Memo to Distribution re: Solid Radioactive Waste Drum Failure	B. R. T. Frost, Director, MSD	NA	NA	1/7/1977
C045	S5	Intra-Laboratory Memo to G. R. Imel, Mgr., Reactor Physics & Experiments re: Disposal of Irradiated Stainless Steel	D. C. Cutforth, Mgr., Reactor Physics	NA	NA	7/13/1994
C050	S7	Intra-Laboratory Memo to L. A. Neimark and F. Pausche re: AGHCF Fissile Material Items to be Submitted for Scrappage from Area IV and Areas I and II	A. G. Hins	NA	NA	11/20/1990
C066	S7	Record of Communication with Bill Kettman and Dennis Donahue, AGHCF re: AGHCF Operations and Waste Packaging	J. Whitworth, M. Wyco	NA	NA	8/7/2001
C067	S7	Record of Communication with Fred Pausche and Terry Bray, AGHCF	J. Whitworth, M. Wyco	NA	NA	8/8/2001
C077	N/A	Letter to Mr. Mahlon Heileson, Lockheed Idaho Technologies Company re: Liquids absorbed on pelletized clay are non hazardous	Daniel Pancake	NA	NA	10/16/1995
C080	S5	Intra-Laboratory Memo to L. A. Neimark re: Work Plan for the Postirradiation Examination of Six Mixed-oxide Fuel Pins from X470 at the AGHCF	R. V. Strain	NA	NA	11/01/1990
C083	S15	Correspondance to James E. Solecki, Acting Assitant Manager for Environmental Restoration and Waste Management, Idaho Operations Office re: Resumption of Shipments of TRU Waste to INEL, enclosure: Traceability of Hot Cell Waste	Jay O. Hunze, Director Technology Management Division	NA	NA	4/11/1990
C084	S2	Intra-Laboratory Memo to Building 212 Personnel re: Disposal of Solid Radioactive Waste (SRW)	F. P. Marchetti, OHS/HP	NA	NA	2/4/1986
C089	S2	Intra-Laboratory Memo to Dennis Donahue, Supervisor/AGHCF re: Waste Management Quality Assurance Surveillance Report No. 93-MCT-03a	Georgia Anast, Acting QAR, EWM/WM	NA	NA	3/16/1993

C095	S4	Email to Cheryl Schulz re: ANL All-Drum Information	Douglas W. Parker	NA	NA	5/21/2002
C097	S2	Correspondance to AGHCF, Operational Personnel re: Work Station III Fissile Grinding Waste	Dennis Donahue, AGHCF Operations Chief	NA	NA	NA
C098	S7	Interview with Cindy Rock (WMO) re: hazardous waste procedures, etc.	Cheryl Schulz	NA	NA	8/28/2001
C099	NA	Correspondance to Mr. Dennis Wilkinson, RWMC/SWEP re: TRU Waste at Argonne National Laboratory-East	J. R. Thuot, Manager, Waste Management	NA	NA	5/17/1990
C101	S2	Memorandum to J. O. Hunze, Director, Technology Management Division, Chicago Operations Office re: WACCC Comments on ANL-E Audit Response	E. K. Hunter, Chairman, WIPP Waste Acceptance Criteria Certification Committee	WACCC: LPT 89-9050	NA	8/16/1989
C103	S3	Intra-Laboratory Memo to C. A. DeLorenzo, OOS re: Safety Analysis for Handling Tritium-containing Compounds in the AGHCF	L. A. Neimark, MST	NA	NA	5/30/1984
C106	N/A	Email to Whitworth, Julia re: Exploding Drum at ANL	Terri S Bray	NA	NA	8/30/2001
C114	S2	Intra-Laboratory Memo to Distribution re: Procedure for Installation of Gaskets on 30 Gallon DOT 17-H Drums Used for Remote Handled Transuranic Waste (RH-TRU)	W. D. Jackson	NA	NA	6/9/1983
C115	NA	Intra-Laboratory Memo to W. H. Kline, Waste Management Coordinator re: Waste Packaging Criteria, Transuranic Waste, Idaho National Engineering Laboratory, Revision 1, IDO-10074	W. D. Jackson, Alpha-Gamma Hot Cell Facility, Supervisor	IDO-10074	NA	11/1/1979
C116	S9, S12	Fax to M. Heileson re: Pelletized Clay	Judd Johnson	NA	NA	11/20/1995
C118	N/A	Intra-Laboratory Memo to A. C. Smith, PFS re: Chemical Forms in AGHCF Transuranic Wastes	L. A. Neimark	NA	NA	4/12/1989
C121	S7	Record of Communication with L. Neimark, A. Cohen, and F. Pausche (former AGHCF Section and Facility Manager and Records Chief Technician) re: AGHCF Radiological Characterization of RH-TRU Waste Shipped to INEEL	J. Whitworth and J. Biedscheid of IT Corporation; P. Kuan, R. Bhatt, and S. Kheriche of INEEL	NA	NA	12/18/2001 ,12/19/200 1
C124	S7	Fax to Mark Wyco and Larry Neimark, ANL-E re: Request for ANL-E to Identify Items of ANL-W Origin	Julia Whitworth, IT Corporation	NA	NA	2/21/2002
C127	S8	Fax to C. Schulz re: Radiological Health Handbook	Raj Bhatt	NA	NA	7/9/2003

C128	S2	Intra-Laboratory Memo to Distribution re: Revised Procedure for Determining Specimen Density by Immersion, Operations Manual Section 7.21	L. A. Neimark, Manager, IPS	00 No. 41	NA	March 13, 1995
C130	S2	Intra-Laboratory Memo to Waste Handling Procedures Manual Holders re: Packaging of Intermediate Level* Radioactive Waste for Disposal (Liquids)	C. L. Cheever, Acting Waste Management Coordinator	NA	NA	09/12/1979
C131	S7	Record of Communication with Larry Neimark, AGHCF re: Apparent discrepancies in the batch codes assigned to various elements as reported in different databases	M. Wyco	NA	NA	02/21/2002
C132	S2	Intra-Laboratory Memo to L. A. Neimark Section Manager, Irradiation Performance Section, MCT re: WMO Quality Assurance Audit (draft) dated May 26, 1988 - Finding #4	W. D. Jackson, Alpha-Gamma Hot Cell Facility Supervisor, MCT	ANL-26 (11-68)?	NA	07/11/1988
C137	S7	Email to Douglas W. Parker re: RH TRU Waste	Julia Whitworth	NA	NA	03/06/2002
C138	S1	Intra-Laboratory Memo to Distribution re: Hot-cell Survey	L. A. Neimark, MSD	ANL-26 (11-68)	NA	08/20/1973
C140	S7	Fax to Julia Whitworth, IT Corporation re: Attached Letter and 99 Questions	D. Parker, Waste Management, TSA	NA	NA	05/14/2002
C142	S7	Fax to Cheryl Schulz re: New C132 and Larry N. Comments	Julia Whitworth, Shaw	NA	NA	06/18/2002
C143	S10, S12	FAX to Cheryl Schulz re: Information on AGHCF Mercury Vapor Lamps and Lighting Fixtures	Geneine Staymates	NA	NA	03/10/2003
C144	S7, S8, S10	Record of Communication with Curtis Merks re: Specifications for filter vents used on ANL-E drums and bags	Cheryl Schulz	NA	NA	03/10/2003
C147	NA	Letter to Mr. John M. Schaffer, Project Director, RWMC Completion Project, Bechtel BWXT Idaho, LLC re: Additional Information to Complete Actions Associated with Preexisting Condition (PEC) 316 - Argonne National Laboratory-East (ANL-E) Transuranic Waste	Edward J. Ziemianski, Director, Waste Management Division, Department of Energy, Idaho Operations Office	EM-WM-03-055	NA	NA
C152	S9	Intra-Laboratory Memo to D.A. Donahue, MCT/IPS re: Work Plan for the Examination of LILAC Target No.19 for Battelle Pacific Northwest Laboratories	L. A. Neimark, MCT/IPS	IPS-46-00-00	NA	5/3/1991
C153	S9	Intra-Laboratory Memo to D. A. Donahue AGHCF Supervisor re: Work Plan for WPF Tests	Yung Y. Liu, MCT and John W. Holland, RAS	IPS-18-00-00	NA	5/3/1990

C160	S9, S12	Fax Memo to Mahlon Heileson, LITCO/RWMC re: Underlying Hazardous Constituents Waste Stream ANL212951004T	Judd Johnson, ANL/Waste Management	NA	NA	11/20/1995
C161	S2	Intra-Laboratory Memo to Waste Handling Procedures Manual Holders re: Packaging of Intermediate Level* Radioactive Waste for Disposal (Liquids)	C. L. Cheever, Acting Waste Management Coordinator	ANL-26 (11-68)	NA	9/12/1979
C162	S2	Intra-Laboratory Memo to Distribution re: Procedure for the AGHCF Remote-Handled Waste Documentation	Ralph Ditch, PFS/WMO QA Coordinator	NA	NA	10/30/1986
C302	S7	Memo from L. A. Neimark to Distrubution. Subject: Revision 1 to the Work Plan for the Preparation of Fuel Rods for Return Shipment to Idaho, HFS-015-00-00, December 8, 2004.	L. A. Neimark	HFS-015-00-01	Rev. 1	12/09/2004
C310	S11	Memo from D. A. Donahue to AGHCF Operations Personnel. Subject: New Operations Log Book	D. A. Donahue	OO No. 9	NA	01/14/1991
C311	S2	Memo from L. A. Neimark to AGHCF Operations Personnel and IPS Staff. Subject: Operations Order No. 17: Metallography Size Limitations	L. A. Neimark	OO No. 17	NA	08/15/1991
C312	S11	Memo from D. A. Donahue to Distribution. Subject: Record Log Books	D. A. Donahue	OO No. 15	NA	05/30/1991
C314	S2	Memo from M. C. Billone to Irradiation Performance Section. Subject: Deletions for the AGHCF Operations Manual (EBL Documents)	M. C. Billone	IPS-435-00-00	NA	10/28/2003
C315	S2	Memo from M. C. Billone to Irradiation Performance Section. Subject: Deletions for the AGHCF Operations Manual (PROG documents)	M. C. Billone	IPS-436-00-00	NA	10/28/2003
C316	S2	Memo from Omesh Chopra to Distribution. Subject: Laboratory ALARA Committee Review of the Work Plan for Unloading and Transferring Irradiated Stainless Steel Mechanical Test Specimens	Chopra, Omesh	NA	NA	05/15/2000
C317	S2	Memo from Hanchung Tsai to JNC Program File. Subject: Data Report No. 1 - Phase II Tensile Specimen Preparation	Tsai, Hanchung	NA	NA	01/29/2002
C320	S2	Memo from A. B. Cohen to Distribution. Subject: Criticality Rules for Sealed Cans	A. B. Cohen	OO No. 29	NA	10/27/1992

C322	S2	Memo from T. Bray to OO Holders. Subject: New Procedures for Supplemental Instructions for the AGHCF Operations	T. Bray	OO No. 57	NA	01/06/2000
C324	S2	Memo from T. Bray to OO Manual Holders. Subject: Documentation of Procedure Review and Approval Form	T. Bray	OO-70	NA	06/11/2002
C325	S2	Memo from T. S. Bray to OO Manual Holders. Subject: Use of Movement Slips for Sample Transfers Between HFS Facilities	T. S. Bray	OO-84	NA	01/05/2004
C332	S4	Memorandum to CCP Central Records: Assessment of Waste Material Parameters for Waste Stream ID-ANLE-S5000	B. Becker	NA	NA	01/03/2006
C332	S9	Memorandum to CCP Central Records: Assessment of Waste Material Parameters for Waste Stream ID-ANLE-S5000	B. Becker	NA	NA	01/03/2006
C333	S4, S9	Memo to CCP Central Records: Assessmentof Waste material Parameters (WMPs) for Waste Stream AERHDM	D. B. Becker	NA	NA	01/2006
C348	S4, S7, S9S	Evaluation of Generator Reported Radionuclides for Waste Stream ID-ANLE-S5000	S. Schafer	NA	NA	6/30/2006
C349	S4, S7, S9	Radiological Evaluation for Waste Stream AERHDM	S. Schafer	NA	NA	08/03/2006
C377	S8	Final Report of SAREF Support Facilities Requirements Task Group	J.R. Honekamp	NA	NA	7/29/1977
C380	S7	Interview with Bill Kettman	K. Peters	NA	NA	07/16/2007
C801	S5, S9	Memo to J. McDade from T. S. Bray Subject: Misidentified Fuel Elements in 1982 Fuel Shipment to the AGHCF ANL ID 17881	T. S. Bray	ANL ID 17881	NA	01/21/2004
C802	S5, S9	Memo from A. B. Cohen to J. R. McDade Subject: Shipment of RERTR Samples to PNNL ANL ID 27342	A. B. Cohen	ANL ID 27342	NA	07/31/1997
C803	S5, S9	Memo from A. B. Cohen to SRL Characterization FileSubject: Optical metallography and SEM Analysis of RERTR Irradiated Specimens (Task 2) ANL ID 27348	A. B. Cohen	ANL ID 27348	NA	03/26/1997
C804	S5, S9	Memo from A. B. Cohen to SRL Characterization File Subject: SRTC Fission-Product Collection Test 96-1 ANL ID 27352	A. B. Cohen	ANL ID 27352	NA	12/04/1996
C805	S5, S9	Memo from T. Bray to M. Goldberg Subject: Availability of Al-Clad UAlx Plate Fuel ANL ID 27294	T. Bray	ANL ID 27294	NA	05/25/1999

C806	S5, S9	Memo from D. E. Rasmussen to J. L. Welker, A. Boltax, J. H. Bottcher, and M. J. D. B. Lambert Subject: Fuel Pin Certification Data for Forty-Nine (49) SPA Fuel Pins for the DOE/PNC Phase II ORT Program ANL ID 41068	D. E. Rasmussen	ANL ID 41068 Letter ID 8952185	NA	04/07/1989
C807	S5, S9	Memo from Richard McKnight to George Fenske regarding A/G 505A, 504B, 460A, 498A, 498B, 497C ANL ID 41180	R. D. McKnight	ANL ID 41180	NA	02/19/1996
C808	S5, S9	Memo from Kou Hira to L. A. Neimark Subject: Progress of OTT Program During the Term of the Eighth Assignee	L. A. Neimark	ANL ID 2890	NA	02/12/1993
C809	S5, S9	Memo from L. A. Neimark to M. H. Derbidge Subject: SNF Inventory in the AGHCF ANL ID 41181	L. A. Neimark	ANL ID 19024	NA	05/06/1996
C810	S5, S9	Logbook for receipt & verification; GE's loading; GE's manifest; GE's instructions to carrier; GE transmittal to ANL-SPM; ANL-ESH/HP documentation; ANL-SPM receipt documentation of cask contents; AGHCF Transfer Slip	L. A. Neimark	ANL ID 17811	NA	11/12/1997
C811	S5	Memo from Terri Bray from A. B. Cohen Subject: Information on AGHCF Materials Irradiated in the State of Idaho ANL ID 17222	T. S. Bray	ANL ID 17222	NA	01/06/2003
C812	S2	Memo from T. S. Bray & R. V. Strain to M. Goldberg re: Characterization of N-Reactor Fuel Samples ANL ID 3983	T. S. Bray; R. V. Strain	NA	NA	10/4/2000
C813	S7	Email from Mike Billone to George Fenske (ANL) responding to Limerick Fuel Discharge date request.	Mike Billone	ANL ID 41167	NA	06/24/2002
C816	S7	Email from Wade Bickford to George Fenske re: Request from ANL to Characterize Mk-22 Scrap ANL DOC ID 41204	Wade Bickford	ANL ID 41204	NA	03/27/06
DR014	N/A	Discrepancy Report for the RCRA Assignment of EPA HWNs to Waste Stream AERHDM	K. Peters	NA	NA	11/16/2006
DR019	S7	Sealed Waste Cans	K. Peters	NA	NA	09/20/2007
DR020	S4	Aerosol Cans	K. Peters	NA	NA	09/20/2007
P001	S2	AGHCF Operations Manual	Argonne National Laboratory	IPS-2-00-00	2	9/10/1990
P003	S2	Procedure for Solidification of Liquid Radioactive Waste MCT Alpha-Gamma Hot Cell Facility (AGHCF)	D. A. Donahue	NA	NA	6/10/1987
P004	S2, S3, S8, S12	Safety Analysis Report for the Alpha-Gamma Hot Cell Facility (BLDG. 212)	W. D. Jackson, Materials Science and Technology Division, Argonne National	M4000-0025-SA-01	0	12/6/1982

			Laboratory			
P023	S12	Argonne National Laboratory-East Remote Handled Waste	W. Mahlon Heilseson	EDF-RWMC-759	NA	8/29/1994
P025	NA	Argonne National Laboratory-East, Transuranic Waste Acceptable Knowledge Report	WMO-AK/WIPP-001.0	Benchmark Environmental Corporation	NA	9/29/2000
P031	S3	Alpha-Gamma Hot Cell Facility (AGHCF) Safety Analysis Report	A. B. Cohen, Manager, AGHCF	IPS-221-00-00	NA	1/1/1998
P032	NA	Procedure for Sorting Remote-Handled TRU Waste (30-Gallon Intermediate-Level Waste)	Argonne National Laboratory	NA	NA	1/7/1987
P033	S2	AGHCF Operations Manual: 15.3 Procedure for Operation of the Fuel Behavior Test Apparatus (FBTA)	Argonne National Laboratory	IPS-2-03-01	1	3/11/1992
P034	S2	AGHCF Operations Manual: 15.6 Procedure for Acid Cleaning a Zinc-Bromide Shielding Window	W. C. Kettman	IPS-2-06-00	1	4/16/1996
P036	S2	AGHCF Operations Manual: 15.10 Procedure for Repackaging 30-gal. TRU Waste Drums	Argonne National Laboratory	IPS-2-10-00	0	9/14/1990
P037	S2	AGHCF Operations Manual: 15.12 Procedure for preparing Window Cavity for Modified Window Tank Inspection	Daniel J. Evans	IPS-2-12-00	0	11/14/1990
P038	S2	AGHCF Operations Manual: 15.13 Procedure for Installing a Modified D-301 Window Tank in a Type A Window Cavity	Dennis A. Donahue, Supervisor, AGHCF	IPS-2-13-01	1	12/7/1990
P039	S2	AGHCF Operations Manual: 15.15 Procedure for Installing Lead Shielding Around a Tank Insert in an AGHCF Window Cavity	Argonne National Laboratory	PS-2-15-00	0	2/1/1991
P040	S2	AGHCF Operations Manual: 15.17 Procedure for Changing an In-line Filter in a Radioactive Gas Collective System	Argonne National Laboratory	IPS-2-17-00	0	11/8/1991
P042	S2	AGHCF Operations Manual: 15.20 Procedure for Conducting Plenum-Unplugging Tests on ORT Mixed-Oxide Fuel Pins in the Whole-Pin Furnace System	G. R. Fenske, Cognizant Engineer	IPS-2-20-00	0	1/11/1994
P043	S2	AGHCF Operations Manual: 15.22 Procedure for Conducting Tests on ORT Mixed-oxide Fuel Pins in the Whole-Pin Furnace System	G. R. Fenske, Cognizant Engineer	IPS-2-22-01	1	3/16/1994
P044	S2	AGHCF Operations Manual: 15.24 Procedure for Testing the AGHCF Peripheral High-Gamma Alarm System	Argonne National Laboratory	IPS-2-24-00	0	3/24/1995

P045	S2	AGHCF Operations Manual: 15.26 Procedure for Loading Fuel Element Segments for Return to ANL-W	W. C. Kettman	IPS-2-24-00	0	1/8/1996
P046	S2	AGHCF Operations Manual: 15.27 Removal of Outer Glass from a Type B or C Shielding Window	W. C. Kettman	IPS-2-24-00	0	4/16/1996
P047	S2	AGHCF Operations Manual: 15.28 Painting a Drained Shielding Window Tank Cavity	W. C. Kettman	IPS-2-24-00	0	4/16/1996
P048	S2	AGHCF Operations Manual: 15.29 Procedure for Installation of Cold-side Gaskets	W. C. Kettman	IPS-2-24-00	0	4/16/1996
P054	S2	Procedure for Remote Outloading of RH-TRU Waste at the AGHCF	W. D. Jackson, Materials Science and Technology Division, Argonne National Laboratory	M4000-00320SA-00	0	8/1/1983
P055	S2	Waste Handling Procedures	C. L. Cheever, Manager, Waste Management Operations	NA	NA	9/18/1986
P057	S2	AGHCF Operations Manual: 15.4 Procedures for Conducting Tests in the Whole-Pin Furnace System	Yung. Y. Liu, Engineer	IPS-2-04-01	1	5/10/1990
P062	NA	AGHCF Operations Manual: 7.15 Preparation of Metallographic Specimens	Argonne National Laboratory	IPS-2-00-00	NA	6/20/1989
P063	S2	SPM Procedure for High Gamma Transuranic Waste Handling from Alpha Gamma Hot Cell Facility (AGHCF) Bldg. 212, MSD, ANL-E	N/A	NA	NA	1/20/1975
P067	S2	Procedure for High Gamma Level Transuranic Waste Handling At the AGHCF, MSD, ANL-E	N/A	M1002-0047-SP-00	0	12/30/1974
P068	S2	AGHCF Operations Manual: 7.14 Mounting Metallographic Specimens	N/A	IPS-2-00-00	1	3/29/1990
P069	S2	AGHCF Operations Manual: 7.13 Fuel Element Sectioning	N/A	IPS-2-00-00	1	3/29/1990
P070	S2	AGHCF Operations Manual: 7.21 Specimen Density by Immersion	N/A	IPS-2-00-00	0	6/20/1989
P073	S2	AGHCF Operations Manual: 8.0 Administrative Controls	N/A	IPS-2-00-00	3	12/20/1995
P230	S6	EG&G Internal Technical Report, Inventory Analysis of Stored Transuranic (TRU) waste at the Radioactive Waste Management Complex (RWMC)	C.J. Barnard	WM-PD-90-003	Rev. 1	8/31/1993
P306	S2	Procedures for Testing of SS-3-size Tensile Spcimens with the 1122 Instron Machine in the Irradiated Materials Laboratory (IML) Memo to IPS Document File	Hanchung Tsai, ET-IPS	IPS-380-00-00	NA	05/17/2001

P307	S2	Standard Operating Procedure - Analysis and Calculation of Gamma Radioactivity	Vivian S. Sullivan, Analytical Chemistry Laboratory, ANL	SOP: ACL-084	Rev. 01	03/25/2003
P308	S2	Standard Operating Procedure - Procedure for the Determination of Trace Elements in Solution by Inductively Coupled Plasma Mass Spectrometry	Waste Materials Research Department	WMRD-SOP-034	Rev. 3	08/13/2003
P309	S2	Standard Operating Procedure: Alpha Scan for Actinides Utilizing Extraction Chromotography	Vivian S. Sullivan, Analytical Chemistry Laboratory, ANL	SOP: ACL-258	00	08/08/2002
P310	S1, S5, S9	Design, Operation, and Performance Data for High Burnup PWR Fuel from the H. B. Robinson Plant for Use in the NRC Experimental Program at ANL (EPRI document)	E. J. Ruzauskas, Acting Manager, KWU Projects	EMF-2528	0	04/2001
P311	S2	Procedures for conducting LOCA Integral Tests - Phase B Memo to Distribution	Y. Yan, ET	IPS-409-01-03 and IPS-409-01-02	Revs 2 and 3	08/14/2002 and 09/11/2002
P312	S2	Procedures for conducting LOCA Integral Tests with Quench Memo to distribution	Y. Yan, ET	IPS-409-01-04	Rev. 4	12/16/2003
P314	S2	Standard Operating Procedure - Obtaining Gamma Spectra for Samples in a Calibrated Geometry Using the Ortec Gamma Vision Program	Vivian S. Sullivan, Analytical Chemistry Laboratory, ANL	SOP: ACL-259	Rev. 00	03/25/2003
P316	S1	Functional Requirements and Design Review Information for a Glovebox in the Irradiated Material Laboratory Memo to Ralph Fabian, ET, Design Review Committee Chair and Committee Members	Rob Daum, ET-IPS	IPS-413-00-00	NA	09/17/2002
P317	S2	Window Installation Procedure for IML Glovebox System	R.S. Daum	IPS-413-02-00	Rev. 0	3/19/2003
P318	S2	Update to the Design of the IML Glovebox Gas Inlet, Exhaust and Atmospheric Monitoring Systems Memo to Ralph Fabian, ET, Design Review Committee Chair	Rob Daum, ET-IPS	IPS-413-03-00	NA	04/29/2003
P319	S2	Procedure for Leak Testing of IML Instron Glovebox System Memo to IPS Documentation File	Robert, Daum, ET-IPS	IPS-416-00-00	NA	05/07/2003
P320	S2	Management Plan for Irradiation Performance Section Facilities, Energy Technology Division Memo to H. Grunder, Director	H. Drucker, Associate Lab Director EEST	IPS-417-00-00	Rev. 0	10/14/2002
P321	S2	Work Plan for Replacing Water/Acid Solution in K-2 Cell Windows with Zinc Bromide Solution Memo to distribution	S. Baumann	IPS-419-00-00	NA	12/03/2002

P322	S1, S2	Design of Shielding Containers to Store Radioactive Samples within the K2 Hot Cell in Building 200 Memo to IPS Documentation File	Robert Daum, ET-IPS	IPS-420-00-00	NA	01/20/2003
P324	S2	Shielding of Wall Ports in K2 Hot Cell Memo to IPS Documentation File	Robert Daum, ET-IPS	IPS-422-00-00	NA	01/22/2003
P325	S10	Functional Requirements for Hydrogen-Charged Materials to be Used as Standards for Hydrogen Content Determination Memo to IPS Documentation file	Robert Daum, ET-IPS	IPS-424-00-00	NA	01/22/2003
P326	S5	Work Plan for Determining the Effectiveness of Defueling a Short Cladding Segment from High Burnup In-cell LOCA TestSample ICL#2 in Room-Temperature Nitric Acid Supplemental Instructions for Rod/Specimen A/G547C1A1D, 1"-long fuel sample	Y. Yan	IPS-428-00-00 and IPS-428-00-01	Revs 0 and 1	08/06/2003 and 09/16/2003
P327	S2	Procedure for Thinning Gauge Sections of Tensile Specimens after Tensile Tests Memo to IPS Document File	Hanchung Tsai, ET-IPS	IPS-429-00-00 and IPS-429-00-01	Revs 1 and 2	08/14/2003 and 08/26/2003
P329	S2	Feasibility Study for Defueling Irradiated Cladding Using Non-Volatile Methods Memo to IPS Documentation File	Robert Daum	IPS-432-00-00	NA	12/2/2003
P331	S2	Work Plan for Preparation of Samples for LECO Hydrogen or Oxygen Analysis Memo to distribution	T. Burtseva, ET	IPS-434-00-00	NA	10/16/2003
P336	S2	Operation Procedure for Rodlet Pressurization and Leak Checking - Part 1. Ex-cell Mockup Tests	Tatiana Burtseva	IPS-441-000-000	NA	04/12/2004
P338	S2	LW51 Laser Operating Procedure for Ex-cell Operation in the AGHCF	Z. Xu and H. Tsai	IPS-443-00-00	NA	3/11/2004
P339	S2	Work Plan for Annealing and Radial-Hydride Treatments of Non-Irradiated Zircaloy-4 Memo to Distribution	Robert Daum, ET-IPS	IPS-453-00-00	NA	01/11/2004
P340	S2	IPS-457-00-00 - Memo to Distribution. Subject: Work Plan for Sectioning HBR Rod No. R05 (A/G No. 609) and Preparing SNF Rodlets for NRC and DOE-RW Programs	Robert Daum, ET-IPS	IPS-457-00-00	0	09/08/2005
P341	S5	IPS-468-00-00 - Memo to M. C. Billone transmitting Procedure for the Two-sided In-cell Steam Oxidation Tests on Irradiated Advanced Alloys M5 and ZIRLO Cladding	Y. Yan, IPS	IPS-468-00-00	0	12/01/2005
P342	S2	International Conference on the Physics of Nuclear Science and Technology, Volume 2: Incorporation of Measurement Data from Irradiated Fuel Samples inot the MTG System at FCF	Richard D. McKnight	ANL/RA/CP-95623	NA	10/5-8/1998

P343	S5, S9	Proceedings of the International Conference on the Physicsof Nuclear Science and Technology, Volume 2: Comparison of Measured and Calculated Composition of Irradiated EBR-II Blanket Assemblies	Grimm, Hill, Khalil, McKnight, Stillman, Toppel	NA	NA	10/5-8/1998
P344	S5	Analysis of Spent Nuclear Fuel Sample A/G 574B2 (Limerick Reactor) to Determine Selected Isotopes and Estimate Fuel Burnup	D. G. Graczyk	NA	NA	04/2003
P346	S5, S9	An Underwater Instrument for Breeder Reactor Spent Fuel Assemblies	Lestone, Pecos, Rennie, Sprinkle, Staples, Grimm, Hill, Cherradi, Islam, Koulikov, Starovich	LA-UR-99-2000	NA	05/4-6/1999
P348	S3	Justification for Continued Operation	J. A. Morman	HFS-016-00-00	NA	08/18/2005
P349	S5, S9	ANL Calculational Methodologies for Determining Spent Nuclear Fuel Source Term	R. D. McKnight	ANL/RA/CP-101396	NA	04/06/2000
P350	S2, S5	Application of Control Charts and Isotope Correlations to Spent Fuel measurements at FCF	McKnight, Soltys, Yacout	ANL/RA/CP-99678	NA	10/12/1999
P351	S2, S5	Nuclear Material Estimation and Uncertainties for the Spent Fuel Treatment at FCF	Battisti, Krsul, Mariani, Vaden, Westphal	ANL/RA/CP-99677	NA	10/12/1999
P353	S5	Validation and Application of a Physics Database for Fast Reactor Fuel Cycle Analysis	Khalil, McKnight, Stillman, Toppel	ANL/RA/CP-80815	NA	04/11-15/1994
P354	S5	Measurement of Lanthanum and Technetium in Uranium Fuels by Inductively coupled Plasma Atomic Emission Spectroscopy	Cummings, Carney, Krsul, Crane	ANL/ED/CP-99189	NA	10/13/1999
P355	S5	Spent Fuel Fissile Mass Verification at the ANL-West Radioactive Scrap and Waste Facility	Smith, Mosby, Aumeier, Klann, Hill	NA	NA	2/25/2001
P358	S2	Procedure for Changing the Glove Rings in the Glove Niche: OO No. 42	A. B. Cohen, Manager AGHCF	OO No. 42	NA	03/15/1995
P359	S6	Tracking of Non-Accountable Samples in the AGHCF	T. Bray	OO-86	NA	10/15/2004
P362	S6	Tracking of Defueled Cladding Samples	T. Bray	OO No. 66	NA	06/06/2001
P363	S6	New Movement Slip - Revision 0 and 1	T. Bray	OO-65	0 and 1	10/31/2000 & 03/13/2001
P364	S6	Transfer Slip for SNM and Other Programmatically Valuable Materials in the AGHCF and Addendum 1	T. S. Bray	OO No. 49	Revs 0 and 1	04/18/1996 & 03/14/2001
P367	S2	Radioactive Gas Release Approval Form	Adam Cohen, Regulatory	OO No. 36	NA	06/03/1994

			Compliance Officer, AGHCF			
P369	S2	Chapeter 5, Section 5.1 of the Health Physics Procedures Manual - Unrestricted Release of Materials and Equipment	ANL-E	NA	NA	8/19/2005
P370	S2	Chapter 4, Section 4.4 of the Health Physics Procedures Manual Special Surveys - Leak Check Surveys of Accountable Sealed Sources	ANL	Chapter 4, Sect. 4.4	NA	08/19/2005
P371	S2	Chapter 3, Section 3.1 of the Health Physics Procedures Manual Trash Surveys	ANL	Chapter 3, Sect. 3.1	NA	08/19/2005
P372	S5	Review of Zirconium-Zircaloy Pyrophoricity	Thurman D. Cooper	RHO-RE-ST-31 P	NA	11/1984
P373	S5	Metallographic Analysis of irradiated RERTR-3 Fuel Test Specimens	Meyer, Hofman, Strain, Clark, and Stuart	ANL/NT/CP-103306	NA	10/1-6/2001
P375	S5	Progress of the RERTR Program in 1999	A. Travelli	ANL/TD/CP-100128	NA	01/18/2000
P377	S8	Inventory of Power Plants in the United States as of January 1, 1998	Energy Information Administration	DOE/EIA-0095(98)	NA	12/1998
P378	NA	Argonne National Laboratory-East Building 212 Energy Technology Division Alpha-Gamma Hot Cell Facility Preliminary Decontamination and Decommissioning Plan	T. S. Bray	HFS-003	3	10/08/2003
P379	S3	Design Basis Threat Impact Assessment and Implementation Plan for the Argonne Illinois Site	ANL	NA	NA	12/19/2003
P380	S3	Alpha-Gamma Hot Cell Facilit (AGHCF) Safety Analysis Report	ANL	IPS-221-00-01	Rev. 1	10/2001
P381	S2	AGHCF Criticality Hazards Control Statement Use of a Safe Vac Vacuum Cleaner in Alpha-Gamma Hot Cell Facility Areas 1 and 3, Addendum 1 to IPS-6	Richard Lell	IPS-6-01-10	Rev. 10, Addendum 1	10/23/02
P383	S9, S12	Validation Results Based on the Spent Fuel Demonstration Program at FCF	R. D. McKnight	ANL/RA/CP-101397	NA	04/06/2000
P385	S2	Quality Assurance Plan for the Building 212 Irradiated Materials Laboratory (IML) Memo to Distribution	T. Bray, Manager, IML	IPS-312-00-00 and IPS-312-00-01	Revs. 0 and 1	08/11/1999 AND 08/09/2001
P386	S2	CRIEPI Posttensile SEM Fractography, Supplemental Instruction SI 197 for Rod/Specimen 583D1 (S1T4), 583E1 (S1T5) in accordance with IPS-311-00-00	H. Tsai	SI 197	NA	07/13/2001
P387	S2	Prep of Creep Samples, Supplemental Instruction 340 of Rod/Specimen A/G 611C16, A/G 611C17, A/G 592C in accordance with IPS-393-00-02	H. Tsai	SI 340	NA	02/25/2003

P389	S2	AGHCF Supplemental Instructions for IRIS-11, A/G 558 in accordance with IPS-295-00-00	L. A. Neimark	IPS-295-00-00	NA	12/01/1998
P390	S2	Tensile Testing of NEPO Specimens in K2, Supplemental Instruction 342 of Rod/Specimen 618D, 618E in accordance with IPS-294-00-02	R. Daum	SI 342	NA	3/11/2003
P391	S2	Adeendum to Work Plan for Task 1 SRTC Specimens: IPS-229-00-00, July 3, 1996	L. A. Neimark	IPS-220-03-00	NA	07/17/1996
P392	S2	Procedures for Conducting Tests in the Whole-Pin furnace System (IPS-2-04-00)	L. A. Neimark	IPS-2-04-00 and IPS-2-04-01	Revs. 0 and 1	01/22/1990 and 05/22/1990
P393	S2	Quality Assurance Plan for Irradiation Performance Section Activities	ANL	IPS-1-00-01	Rev. 1	06/1989
P394	S13	Work Plan for the Preparation of Fuel Rods for Return Shipment to Idaho	L. A. Neimark, ET-HFS	HFS-015-00-00	NA	12/08/2004
P395	S2	Work Plan for the Replacement of the Area 3 GM Manipulator Power Cord	K. Stoll, Asst. Manager, HFS	HFS-014-00-00	NA	10/12/2004
P398	S2, S11	Seal (TID) Application and Removal	ANL	AGHCF-OPS-100	Rev. 1	12/10/2002
P399	S2	Cask Handling at the AGHCF	ANL	HFS-OPS-101	Revs. 1 and 2	04/06/2001 and 12/14/2004
P401	S2	Movements and Transfers In or Out of Material Balance Area	ANL	AGHCF-OPS-103	Rev. 0	07/09/2001
P402	S2	Loading and Unloading of Shielded Casks	ANL	AGHCF-OPS-104	Rev. 0	02/15/2001
P403	S2	Movement of Materials Through the Alpha Barrier	ANL	AGHCF-OPS-105	Rev. 0	02/09/2001
P404	S2	Movement of Material In-Cell	ANL	AGHCF-OPS-106	Rev. 0	02/15/2001
P405	S2	Nuclear Materials Management	ANL	AGHCF-OPS-107	Rev. 0	07/16/2001
P406	S2	Nuclear Materials Accountability	ANL	AGHCF-OPS-108	Rev. 0	02/09/2001
P407	S2	Criticality Control	ANL	AGHCF-OPS-109	Rev. 1	04/05/2002
P409	S2	Nuclear Materials Management Safeguards	ANL	AGHCF-OPS-111	Rev. 0	04/06/2001
P411	S2	High Gamma Level Transuranic Material	ANL	AGHCF-OPS-301	Rev. 0	01/31/2001
P412	NA	Remote Handled Transuranic Waste Sorting and Packaging	ANL	AGHCF-OPS-302, NOD-AGHCF-OPS-302	Revs. 0, 2, and 3	07/09/2001 ; 03/29/2005 ; 5/9/2007
P413	S2, S4	30 gallon Remotely Handled Transuranic Waste Drum Assembly	ANL	AGHCF-OPS-303	Rev. 0 and Draft	01/19/2001 and 07/09/2001

P415	S2, S4	RH-TRU 30-gal Waste Drum Outloading	ANL	AGHCF-OPS-305	2	06/07/02
P425	S2	AGHCF Quality Assurance Plan	T. S. Bray	HFS-POLICY-200	Revs. 2 and 3	07/2001 and 07/2003
P426	S2	Problem Resolution System	ANL	HFS-POLICY-201	Rev. 1	11/11/2003
P427	S2	Corrective Action Tracking System	ANL	AGHCF-POLICY-202	0	11/3/2000
P428	S2	Procedure Guidelines	ANL	AGHCF-POLICY-203	Revs. 1 and 2	12/03/01 and 10/27/03
P429	S2	Quality Assurance Levels	ANL	HFS-POLICY-204	Rev. 1	10/27/2003
P430	S2	HFS Document Control System	ANL	HFS-POLICY-205	Revs. 0 and 1	11/3/00 and 10/27/03
P431	S2	Training and Qualification of Personnel	ANL	AGHCF-POLICY-300	Revs. 1 and 2	111/26/01 and 3/25/05
P433	S10	Industrial Hydiene and Environmental Health	ANL	HFS-POLICY-401	Rev. 3	03/29/2005
P437	S2	Operational Responsibilities	ANL	HFS-POLICY-500	Rev. 2	03/29/2005
P446	S2	Movement of Materials Through the Alpha Barrier	ANL	AGHCF-POLICY-605	Rev. 0	02/09/2001
P447	S2	Operations Order	ANL	AGHCF-POLICY-607	Rev. 0	11/10/2000
P448	S2, S8	Configuration Control	ANL	AGHCF-POLICY-610	Rev. 1	12/04/2002
P450	S2	Operations Log Book	ANL	AGHCF-POLICY-612	Rev. 0	11/10/2000
P451	S2	Record Log Books	ANL	AGHCF-POLICY-613	Rev. 0	02/09/2001
P453	S2	AGHCF Seal (TID) Program	ANL	AGHCF-POLICY-617	Rev. 1	12/10/2002
P455	S2	Unreviewed Safety Question	ANL	HFS-POLICY-619	Rev. 3	03/14/2005
P456	S2	Electron Beam Laboratory User's Guide	ANL	AGHCF-EBL-100	Rev. 0	06/11/2001
P457	S2	Oxygen Analyzer Calibration, Area 4	ANL	AGHCF-EBL-101	Rev. 0	06/15/2001
P458	S2	Waste Disposal	ANL	AGHCF-EBL-102	Rev. 0	06/15/2001
P459	S2	Training for Non-irradiated Performance Section, Electron Beam Laboratory, and Scanning Electron Microscope Users	ANL	AGHCF-EBL-103	NA	NA

P461	S2	Safety and Glovebox Procedures	ANL	AGHCF-EBL-401	Rev. 0	08/16/2001
P463	S2	Emergency Response to an In-cell Fire	ANL	HFS-EMER-200	Rev. 1	10/02/2003
P466	S2	Procedure for Positioning the AGHCF Movable Gamma Shield	ANL	HFS-EMER-300	Rev. 1	10/02/2003
P468	S2	Switching the AGHCF Nitrogen Supply from the Main Tank (Tank #30) to an Alternate Supply	ANL	HFS-EMER-400	Rev. 0	09/26/2005
P469	S2	Changing an In-line Filter in a Radioactive Gas Collective System	ANL	AGHCF-MAINT-100	Rev. 0	01/31/2001
P470	S2	Alpha-Gamma Hot Cell Facility Operations Manual. ANL-E Energy Technology, Irradiation Performance Section. Removing Master Manipulator at Work Station 5.	NA	AGHCF-MAINT-200	0	01/31/01
P471	S2	Removal and Installation of Model A Slave Manipulators	ANL	AGHCF-MAINT-201	Rev. 0	01/19/2001
P472	S2	Manipulator Movement, Cleaning and Repair	ANL	AGHCF-MAINT-202	Rev. 1	11/26/2002
P473	S2	Changing Glove Rings in AGHCF Glove Niche	ANL	AGHCF-MAINT-300	Rev. 0	01/31/2001
P474	S2	Semi-annual HFS Facilities Glove and Pouch Inspection	ANL	HFS-MAINT-301	Rev. 1	08/19/2003
P475	S2	Acid-Clean Windows	ANL	HFS-MAINT-501	Rev. 2	08/20/2003
P476	S2	Zinc-Bromide ShieldingWindows Argon Gas Blanket Maintenance	ANL	HFS-MAINT-502	Rev. 1	09/26/2005
P477	S2	Removing Window Glass Type A	ANL	HFS-MAINT-503	Rev. 3	11/20/2003
P478	S2	Preparation of a Type A Tank-in-a-Tank Replacement Window Assembly	ANL	HFS-MAINT-505	Rev. 1	08/20/2003
P479	S2	Removal of Outer Glass From a Type B or C Shielding Window	ANL	AGHCF-MAINT-508	Rev. 0	01/31/2001
P480	S2	Painting a Drained Shielding Window Cavity	ANL	AGHCF-MAINT-509	Rev. 0	12/15/2000
P481	S2	Installation of Coldside Gaskets	ANL	AGHCF-MAINT-510	Rev. 0	12/15/2000
P482	S2	Installation of Outer Glass Type B or C Shielding Window Tank	ANL	AGHCF-MAINT-511	Rev. 0	01/31/2001
P483	S2	Preparing Window Cavity for Modified Window Tank Insert	ANL	HFS-MAINT-512	Rev. 2	08/20/2003
P484	S2	Installing a Type A "Tank-in-a-Tank" Window Assembly	ANL	HFS-MAINT-513	Rev. 3	08/20/2003
P485	S2	Procedure for Installing Lead Shielding Around a Tank Insert in an AGHCF Window Cavity	ANL	HFS-MAINT-514	Rev. 1	08/20/2003

P486	S2	Hydroxylamine Hydrochloride Addition to Zinc Bromide Solution	ANL	HFS-MAINT-515	Rev. 1	03/14/2005
P487	S2	Installation of Lead-Glass Glovebox Window Panes	ANL	HFS-MAINT-516	Rev. 0	09/05/2003
P489	S2	Work Plan for Decontaminating the CTA after the Completion of the ANL/JNC Tensile Testing Memo to IPS Document File	H. Tsai	IPS-313-00-00 and IPS-313-00-01	Revs. 0 and 1	07/06/1999
P490	S2	Work Plan for Diameter Measurements of Irradiated V-alloy Creep Specimens from the HFIR-2J Experiment	H. Tsai	IPS-314-00-00	Rev. 0	07/16/1999
P491	S2	Revised Work Plan for Diameter Measurements of Irradiated V-alloy Creep Specimens from the HFIR RB-12J Experiment	Hanchung Tsai	IPS-314-00-01	Rev. 1	09/13/1999
P492	S2	Procedure for Cutting Uranium Metal or Uranium Alloys on the South Bay Diamond Bandsaw in the South Hood, Room F-206 Memo to IPS Document File	R. V. Strain	IPS-315-00-00	NA	07/20/1999
P493	S8	Specification for Plastic Tunnel Suit, Alpha-Gamma Hot Cell Facility	Terri Bray	IPS-316-00-00	NA	08/12/1999
P494	S2	Procedure for Preparation of Uranium Alloy Consumable electrodes for RERTR Fuel Powder Production Memo to IPS Document File	I. G. Prokofiev	IPS-317-00-00	NA	08/04/1999
P495	S2	Baseline HBR Cladding Microhardness, Supplemental Instruction 318 for Rod/Specimen A/G628 in accordance with IPS-379-00-00	H. Tsai	SI 318	NA	07/23/2002
P496	S2	Work Plan for Cutting ART-A1 Pressurized Creep Specimen with the EDM in Cell 4 of the IML Memo to IPS Document File	Allan Hins	IPS-319-00-00	NA	08/18/1999
P497	S2	Procedure for Tensile Testing SSJ Specimens with the 1122 Instron Machine in the Irradiated Materials Laboratory (IML), and Work Plan for TensileTesting HFIR-11J SSJ Specimens with the 1122 Instron Machine in the Irradiated Materials Laboratory (IML)	Hanchung Tsai	IPS-320-00-00 and IPS-320-00-01	Revs. 0 and 1	09/15/1999 and 01/24/2000
P498	S2	Work Plan for In-cell Oxidation Mockup Tests Memo to IPS Document File	Hanchung Tsai, IPS-ET	IPS-321-00-00	NA	10/20/1999
P499	S5	Plan for Establishing In-cell Capability for Spot-welding Thermocouples to LOCA Test Specimens Memo to H. Tsai, Manager, IPS	L. A. Neimark, ET/IPS	IPS-322-00-00 and IPS-322-01-00	Revs. 0 and 1	10/27/1999 ; 02/03/2000

P500	S5	Plan for Establishing Capability for Spot-welding Thermocouples to LOCA Test Specimens: Addendum No. 2 - Functional Requirements for In-cell Test Assembly Fixture (TAF) Memo to T. S. Bray, Manager, IPS	L. A. Neimark, ET/IPS	IPS-322-02-00	NA	02/14/2001
P501	S2, S8	Review of the Quality Assurance Program Plan for the Advanced Materials Fabrication Facility (a.k.a. Building 212 H-wing High Bay Fab Facility) Memo to Distribution	Hanchung Tsai, Manager IPS, ET	IPS-323-00-00	NA	11/1999
P502	S2	Shutdown Instructions for C3, Supplemental Instruction 324 for Rod/Specimen 591C3 in accordance with IPS-393-00-01	H. Tsai	SI 324	NA	08/22/2002
P503	S2	Work Plan for Microstructural Examination on V-4Cr-4Ti Rods for Making Creep Tube Supplemental Instruction 252 for Rod/Specimen A/G 625A 1 through 14 Memo to IPS Document File	Yong Yan	IPS-325-00-00	NA	11/4/99
P504	S5	Work Plan for Microstructural Examination on the Creep Tubes of V-4Cr-4Ti Memo to IPS Document File	Yong Yan	IPS-325-01-00	NA	11/18/1999
P505	S5	Work Plan for the Heat Treatment and Microstructural Examination on V-4Cr-4Ti Rods for Making Creep Tubing Memo to IPS Document File	Yong Yan	IPS-325-02-00	NA	01/22/2000
P506	S5	Surry Additional H Analyses, Supplemental Instruction 326 for Rod/Specimen Surry Rod H9, A/G 591A2, 591A4 in accordance with IPS-373-00-00 IPS-326-00-00, Procedure for Cutting Uranium Metal or Uranium Alloys on the Cut-off Machine in the Hood, Room H-141	H. Tsai	SI 326 and IPS-326-00-00	NA	09/03/2002 and 08/09/1999
P507	S2	Photography and Met of Weld Samples, Supplemental Instruction 252 for Rod/Specimen A/G 625A 1 through 14 in accordance with IPS-327-00-00	Bob Strain	SI 252	NA	12/13/2001
P508	S2	Work Plan for Cutting Ring Stretch Specimens from Big Rock Point Cladding with the EDM in Cell 4 of the IML Memo to IPS Documentation File	Robert Daum	IPS-327-00-00, -01, -02	Revs. 0, 1, 2	12/7/99; 3/22/00; 3/20/01
P509	S5	Work Plan for the LOCA Mock-up - Phase 1 Memo to NRC Program File	R. V. Strain	IPS-328-00-00	NA	11/23/1999
P510	S5	Work Plan for the Preparation of Unirradiated Al-clad Fuel Specimens for CMT	T. Bray	IPS-329-00-00	NA	12/02/1999

P511	S2	Design Review Update of Load Train Assembly for Ring Stretch Mechanical Property Testing	R. Daum, Iori Prokofiev, ET-IPS	IPS-330-00-00, -01, -02, -03, -04	Revs. 1, 2, 3, and 4	13/3/99; 6/26/01; 12/12/01; 7/3/02; 4/11/03
P512	S2	Hydrogen Analysis of Hydrided Zr-4 Cladding, Supplemental Instruction 85 for Rod/Specimen 581E7 and 581E8 in accordance with IPS-331-00-01	R. Daum	SI 85	NA	10/30/2000
P513	S2	Preparation of TMI-1 RST Specimens, Supplemental Instruction 169 for Rod/Specimen 536B3H TMI-1 Cladding in accordance with IPS-330-00-01	R. Daum	SI 169	NA	05/29/2001
P515	S5	Work Plan for Determing Hydrogen Contents in TMI-1 Cladding Memo to IPS Document File	hanchung, Tsai, IPS-ET	IPS-331-00-00 and IPS-331-00-01	Revs. 0 and 1	10/20/1999 and 02/03/2000
P516	S2	Replacement of the WPF Furnace Memo to IPS Document File	Hanchung Tsai, IPS-ET	IPS-333-00-00	NA	10/20/1999
P517	S6	Functional Requirements for the AGHCF Fissile Inventory Management System (FIMS) 3.0 Including Validation and Verification Requirements Memo to IPS Document File	T. Bray	IPS-334-00-00	NA	01/07/2000
P518	S2	Work Plan for the Steam Oxidation Tests at 1200 degrees on Unirradiated Zry-4 and Irradiated TMI-1 Cladding Memo to NRC Program File Several Supplemental Instructions	Y. Yan	IPS-335-00-00 and IPS-335-01-00	Revs. 0 and 1	02/11/2000
P519	S5	Work Plan for cutting Limerick Rod Sections and Loading into Shipping Tubes Memo to IPS Document File	Hanchung Tsai, IPS-ET	IPS-336-00-00	NA	01/24/2000
P520	S2	Work Plan for the Examination of Fuel Nano-plates from the RERTR-3 Experiment in ATR; and Supplemental Instruction 305 for PIE of RERTR-3 on Rod/Specimen A/G 580AB, and Supplemental Instruction 286 Repolish Sample and Specimen Ring for EMPA	R. V. Strain, ET/IPS	IPS-338-00-00 and SI 305	NA	01/20/2000 and 04/05/2002
P521	S2	Workplan for Assessment of Auger Analyzer: Examinatino of NERI Stainless Steel Samples Memo to Distribution	R. V. Strain	IPS-339-00-00	NA	01/25/2000
P522	S5	Work Plan for Blister Tests of Micro-plates from the RERTR-2 Irradiation Memo to Distribution	R. V. Strain	IPS-341-00-00	NA	02/01/2000
P523	S5	Work Plan for CMT Samples from TMI Fuel Rod Segments Memo to Distribution	R. V. Strain	IPS-342-00-00	NA	01/31/2000

P524	S5	Work Plan for Conducting Charpy and Tensile Tests on Vanadium Alloy Specimens (Heat 832665) after Long-term Exposure in the DIII-D Experimental Tokamak (Experiment W2) Memo to IPS Document File	Hanchung Tsai, IPS-ET	IPS-343-00-00	NA	02/03/2000
P525	S5	Work Plan for Inspection and Storage of CRIEPI Tensile Coupons Memo to IPS Document File	Hanchung Tsai, IPS-ET	IPS-344-00-00	NA	02/07/2000
P526	S2	Procedure for Conducting the Impact Testing with Dynatup Impact Tester Memo to IPS Document file	Yong Yan	IPS-345-00-00	NA	02/11/2000
P527	S2	Testing of Cold-Worked 316SS Specimens Supplemental Instructions 258 for Rod/Specimen 620 (NEPO 316SS Specimens) in accordance with IPS-346-00-00	R. Daum	SI 258	NA	01/03/2001
P528	S5	Work Plan for the LOCA Mock-up - Phase II Supplemental Instruction 289 for Rod/Specimen A/G581C27, 28, and 29	R. V. Strain	IPS-347-00-00	NA	04/11/2000
P529	S5	Procedure for Performing LOCA Integral Tests in Out-of-Cell Mock-up Apparatus (Mock-up - Mark II) and Safety Analysis of the LOCA Criteria Test Mock-up, and Supplemental Instructions 297 for Zry-2, unirradiated	Y. Yan	IPS-348-03-00, IPS-348-00-00, IPS-349-00-00	NA	02/2002; 04/17/2000 ; 09/05/2000
P530	S5	Work Plan for Cleaning Depleted Uranium Rods for Mechanical Treatment Memo to IPS Document file	I. G. Prokofiev	IPS-350-00-00	NA	04/10/2000
P531	S2	Work Plan and Procedure for Cutting Tensile Specimens with the EDM for the CRIEPI Program and Supplemental Instruction for Rod/Specimen ID: 583A	Hanchung Tsai	IPS-351-00-00	NA	04/11/2000
P532	S2	Complete Axial Specimen Preparation for Rod/Specimen ID: 592C2C, 592C14C Surry According to IPS-382-00-00	R. Daum	SI 352	NA	07/31/2003
P533	S2	Oxidation Test for IPS-335-00-00	T. Bray	SI 103	NA	01/09/2001
P534	S2	Work Plan for Laser Weldment Impact Testing and Microstructural Characterization - Phase 1 Memo to IPS Document File	Yong Yan	IPS-353-00-00	NA	04/12/2000
P535	S5	Work Plan for Microstructural Examinations on the Laser Weld V-4Cr-4Ti from heat NIFS-1 and #832665 Memo to IPS Document file	Yong Yan	IPS-353-00-01	NA	03/19/2001
P536	S2	Decontamination and Transfer of A/G 587 Tensile Specimens to Clean Vials Memo to IPS Document File	T. Bray, Manager, AGHCF	IPS-354-00-00	Rev. 0	04/18/2000

P537	S2	Revised Work Plan for Unloading and Transferring Irradiated Stainless Steel Mechanical Test Specimens to Cell 2 of the IML	H. Chung, O Chopra	IPS-355-00-01	NA	05/15/2000
P538	S2	Work Plan for Axial Gamma Scanning of Limerick Rod F9 (A/G 574)	H. Tsai	IPS-356-00-00	NA	05/22/2000
P539	S2	Work Plan for Examination and Testing of Limerick Rod F9, Mid Segment, A/G 574C Memo to IPS Document File	H. Tsai	IPS-357-00-00	NA	06/15/2000
P540	S2	Work Plan for Preparation of Low-Oxygen Vanadium Alloy Test Specimens Memo to IPS Document File	H. Tsai	IPS-358-00-00	NA	06/26/2000
P541	S5	Work Plan for Fabrication of Full-sized Plated using U-10 w/o Mo Powder Memo to IPS Document File	T. C. Wiencek	IPS-359-00-00	NA	08/01/2000
P544	S5	Procedure for Welding End-fittings to tubes using the Astro Arc Welder	R. Daum	IPS-363-00-00; IPS-363-00-01	Rev. 0 and 1	10/17/2001
P545	S2	Work Plan for End-fitting to Cladding Welding for LWR Fuel Rod Segments and Supplemental Instruction 133 Memo to NRC Program file	R. V. Strain	IPS-364-00-00	NA	10/03/2000
P546	S2	Work Plan for Conducting Melt Dioolution Tests on Al-clad Fuels and Supplemental Instruction 184 Memo to SRTC Characterization File	T. S. Bray	IPS-366-00-00	NA	11/7/2000
P547	S2	Work Plan for Calcining Magnesium Trisilicate 9Mg-2Si-3O-8) and Calcium Oxide (CaO) Powders for CMT Memo to IPS Document File	H. Tsai	IPS-367-00-00	NA	10/20/2000
P548	S2	Work Plan for Conducting the Zn-Zircaloy Interaction Tests Memo to IPS Document File	H. Tsai	IPS-368-00-00	NA	11/30/2000
P549	S2	Modifications to the Oxidation Apparatus	Y. Yan	IPS-370-00-00	NA	02/06/2001
P550	S2	Work Plan for Tensile and Impact Testing of 832864 GA Heat of V-4Cr-4Ti Specimens after 1-Yesr DIII-D Exposure; Work Plan for the Initial Characterization and Sectioning of Surry Rod FA-434 (A/G 591); and Supplemental Instruction 349	H. Tsai	IPS-373-00-00 and IPS-374-00-00	NA	03/15/01 and 03/20/01
P552	S2	Oxygen Pickup by LECO Oxygen Determinator for the LOCA Zry-2 Test #6 and Work Plan for Preparing Samples for Oxygen Analyses from Zry Cladding after Steam Oxidation Test at High Temperature	Y. Yan	IPS-377-00-00 and IPS-377-01-00	NA	04/06/2001
P553	S2	Procedure for the Removal, Repair, and Replacement of Valves in the Vacuum System for the ETEC Scanning Electron Microscope	R. V. Strain	IPS-378-00-00	NA	04/13/2001

P554	S2	Work Plan for the Initial Characterization and Sectioning of H. B. Robinson Rod RA1 8235 (A/G 611) and Supplemental Instruction 328	Hanchung Tsai	IPS-379-00-00	NA	05/16/2001
P556	S2	Work Plan for Cutting Axial Tensile Specimens from Surry Cladding with the EDM in Cell 3 of the IML Memo to IPS Document File and Supplemental Instruction 260	R. Daum	IPS-381-00-00	NA	7/10/2001
P557	S2	Load Train Assembly and Testing Procedure for Axial Tensile Testing of Surry Cladding, and Supplemental Instruction 338, Rev. 1 Memo to IPS Document File	Rob Daum, ET-IPS	IPS-382-00-00, IPS-382-00-01	Revs. 0 and 1	11/29/01, 4/11/03
P558	S2	Procedure for Operating Instron Model 8511 Memo to IPS Documentation File	Robert Daum	IPS-383-00-00	NA	09/10/2003
P559	S5	Data Analyses for Oxidation Benchmarking Test OC#7 on Unirradiated Zircaloy 4 Memo to NRC Program	Y. Yan, ET	IPS-384-00-00	NA	07/05/2001
P560	S2	Work Plan for Unloading a Spent IPNS Target into the AGHCF Hot Cell Memo to IPS Document File	Allan Hins	IPS-385-00-00	NA	08/13/2001
P561	S2	Operation of the In-cell LOCA Test Assembly Apparatus (TAA) Memo to Distribution	L. A. Neimark	IPS-386-00-00	NA	08/13/2001
P562	S2	Work Plan for Disassembly of IPNS Spent Target REU-1 in the AGHCF Hot Cell Memo to IPS Document File	Allan Hins	IPS-387-00-00	NA	12/04/2001
P564	S2	Preparation and Examination of Cladding Tensile Specimens IPS Document File	Rob Daum	IPS-390-00-00	NA	09/10/2003
P565	S2	Thermal Creep Specimen Design and Initial Demonstration Memo to Dan McGann, ET	Hanchung, Tsai, ET	IPS-391-00-00	NA	02/28/2001
P566	S2	Work Plan for Characterization of Surry Rod G6 (A/G 592)	Hanchung Tsai, ET-IPS	IPS-392-00-00	NA	09/21/2001
P567	S2	Procedure for Zircaloy Thermal Creep Tests, and Supplemental Instruction 266	Hanchung Tsai, ET-IPS	IPS-393-00-00, -01, -02, -03	Revs. 0, 1, 2, and 3	09/26/01 - 02/25/03
P568	S2	Pre-oxidized Zry for TC Welding Practice, Supplemental Instruction 294 for Rod/Specimen Unirradiated 0.48" Zry cladding in accordance with IPS-395-00-00	Y. Yan	SI 294	NA	03/29/2002
P569	S2	Procedure for Calibration of Pressure Transducers (PTs) in the NRC Thermal Creep Systems Memo to IPS Document File	Hanchung Tsai, ET-IPS	IPS-394-00-00 and IPS-394-00-01	Revs. 0 and 1	10/30/2001 and 11/02/2001

P570	S5	Work Plan for Mockup Testing of the In-cell LOCA Apparatus Memo to NRC Program File	R. V. Strain	IPS-395-00-00	NA	10/25/2001
P571	S2	Procedure for Measuring Diameters and Lengths of Cladding Creep Specimens with the Zmike Laser Profilometer Memo to IPS Document File	Hanchung Tsai and Jakub Dobrzynski	IPS-396-00-00	NA	11/08/2001
P572	S5	Optical Metallography Test Weld, Supplemental Instruction 262 for Rod/Specimen A/G 625D5	Bob Strain	SI 262	NA	01/10/2002
P573	S2	Procedure for the Removal, Repair, and Replacement of Valve V2 in the Vacuum System for the ETEC Scanning Electron Microscope	Darold L. Perry	IPS-399-00-00	NA	11/29/2001
P574	S2	Procedure for the Repair of the Driver Screw Mechanism of AGHC Shield Door Number 2, Supplemental Instruction 354	D. Donahue	IPS-401-00-00 and IPS-401-00-01	Revs. 0 and 1	01/08/02 and 01/11/02
P575	S5	Work Plan for the Examination of Fuel Plates from the RERTR-4 Experiment in ATR, Revision 1	R. V. Strain	IPS-400-01-00	NA	02/22/2002
P576	S2	Work Plan and Procedure for Cutting Tensile Specimens with the EDM for the FY02 NEPO 3.13 Program and Supplemental Instruction 274	R. Daum	IPS-402-00-00	NA	01/24/2002
P577	S2	Work Plan for Cladding Annealing Tests for Dry Cask Storage and Supplemental Instruction 291	H. Tsai	IPS-404-00-00	NA	02/01/2002
P578	S2	General Work Plan for Preparing Segments of Fuel Cladding for Programmatic Investigations and Supplemental Instruction 303	R. Daum	IPS-405-00-00	NA	02/28/2002
P579	S2	Procedure for Inserting a High Pressure Line into the AGHC for the LOCA Apparatus at work Station 6 Memo to NRC Program File	H. Tsai and R. V. Strain	IPS-406-00-00	NA	04/01/2002
P580	S2	In-cell LOCA Integral Test with unirradiated Zry-2, Supplemental Instructions 357 for Rod/Specimen 12" long unirradiated Zry-2, A/G 581C41 in accordance with IPS-409-01-03	Y. Yan	SI 357	NA	09/03/2003
P581	S2	Standard Operating Procedure - Quality Assurance, Calibration and Counting Protocols for Gamma Spectra of Samples	Vivian S. Sullivan, Analytical Chemistry Laboratory, ANL	SOP: ACL-070	Rev. 01	03/25/2003
P582	S2	Met. Of Loi 9-11 after Oxidation Test at 1100C Supplemental Instructions 321 for Rod/Specimen Limerick, A/G574C1B, 574C1G in accordance with IPS-340-00-00	Y. Yan	SI 321	NA	07/30/2002

P600	S2	Standard Operating Procedure: Preparation of Samples for Gamma Spectrometry Analysis	W. Elane Streets	SOP: ACL-072	Rev. 2	03/25/2003
P601	S2	Standard Operating Procedure: Gross Alpha and Beta Radioactivity	Richard B. Holtzman and W. Elane Streets	SOP: ACL-095	Rev. 4	03/31/2003
P602	S5	Analysis of Three Mile Island and Quad Cities Spent Nuclear Fuel Samples	Stephen F. Wolf, Delbert L. Bowers, and James C. Cunnane	NA	NA	04/28/1999
P604	S2	Criticality Hazards Control Statement, Alpha-Gamma Hot Cell Facility, Special Facility FF12, and Addendum 1, Use of a Safe Vac Vacuum Cleaner in Alpha-Gamma Hot Cell Facility Areas 1 and 3	James A. Morman	IPS-6-00-09; IPS-6-00-10; IPS-6-01-10	Revs. 9 and 10	03/08/90; 07/01
P605	S2	Technical Safety Requirements for the Alpha-Gamma Hot Cell Facility, Energy Technology Division, Building 212	Terri Bray	IPS-221-01-00; AGHCF-POLICY-616	Rev. 0	10/2001
P607	S5	Initial Assessment of Radiation Behavior of Very-High-Density Low-Enriched-Uranium Fuels	G. L. Hofman, M. K. Meyer, J. L. Snelgrove, M. L. Dietz, r. V. Strain, and K. H. Kim	ANL/TD/CP-100148	NA	1999
P610	S2, S5	Baseline HBR Cladding Microhardness; Program: NRC hi BU DCS	H. Tsai	SI 318	NA	07/23/02
P611	S3	Waste Handling Procedures Manual - Appendix I Radioactive Waste Management Basis	ANL	RWMB-01	Rev. 1	April 6, 2004
P612	S6	ILTSF Drum Retrieval Completion Report	Fairfield Service Group for ICP	ICP/EXT-05-00886, Project No. 23048	Rev. 0	January 2006
P617	S3	Criticality Hazards Control Statement for Special Facility MF200-KW	W.D. Jackson	DOC-10146	NA	10/11/1978
P620	S2	Posttest Examination Plan for the L6 Experiment	W.F. Murphy	M4000-0012-SA-00	Rev. 0	1/5/1981
P621	S2	Posttest Examination Plan for the L7 Experiment	L.A. Neimark	M3203-008-SA-00	Rev. 0	2/19/1979
P801	S5, S9	Oxidation of Spent Fuel Between 250° and 360°C ANL ID 38909	R. E. Einziger; R. V. Strain	RP2062-10-1; TV-48296A	NA	01/1984
P802	S5, S9	Extended Burnup Demonstration, Reactor Fuel Program, Pre-Irradiation Characterization and Summary of Pre-Program Poolside Examinations, Big Rock Point Extended Burnup Fuel ANL ID 32218	C. A. Exarhos; L. F. Van Swam; F. P. Wahlquist	XN-NF-80-40; UC-78; DOE/ET/34006-3	NA	12/1981
P803	S5, S9	Extended Burnup Demonstration, Reactor Fuel Program, Poolside Fuel Examination, Big Rock Point Extended Burnup Fuel ANL ID 32205	C. A. Exarhos; L. F. Van Swam; G. A. Sofer	XN-NF-81-62; UC-78; DOE/ET-34006-10	NA	12/1983

P804	S5, S9	Summary Report on the HFED Miniplate Irradiations for the RERTR Program ANL ID 41175	R. L. Senn	ORNL-6539	NA	04/1989
P805	S5, S9	Summary Report on the HFED Miniplate Irradiations for the RERTR Program ANL ID 7137	R. L. Senn	ORNL-6539	NA	04/1989
P806	S5, S9	Evaluation of Existing Technology Base for Candidate Fuels for the HWR-NPR ANL ID 15063	J. L. Snelgrove; G. L. Hofman; R. L. Frontroth; W. R. McDonnell; H. B. Peacock; R. F. Whitacre; G. L. Copeland	ANL/NPR-93/002; UC-940	NA	02/1993
P807	S5, S9	Proceedings of the International Meeting on Reduced Enrichment for Research and Test Reactors, 24-27 October, 1983, Tokai, Japan ANL ID 41177	Keichiro Tsuchihashi	Jaeri-M 84-073	NA	05/1984
P808	S5, S9	Memo from Garkisch to Kazuya Yamamoto transmitting the SPA-1A Data Report. Data Report, SPA-1A Test Irradiation in EBR-II ANL ID 2857	H. D. Garkisch, K. Yamamoto	NDP-94-028 Doc ID: WCAP-14154, WAES-TR-94-001	NA	09/1994
P809	S5, S9	Review of Behavior of Mixed-Oxide Fuel Elements in Extended Overpower Transient Tests in EBR-II ANL ID 41182	H. Tsai; L. A. Neimark; s. Nagai; N. Nakae	ANL/ET/CP 83008; Conf-950426--5	NA	10/1994
P810	S5, S9	Memo from H. D. Garkisch to Seiichiro Maeda transmitting SPA-2 Data Report Data Report SPA-2 Test Assembly Irradiation in EBR-II ANL ID 41077	H. D. Garkisch, S. Maeda, G. W. Kuhns	Rpt: WCAP-14184, WAES-TR-95-001; NDP-95-032	NA	09/1995
P811	S2, S5, S9	IPS-166-00-00, Work Plan for the Examination of Tritium Breeding Ceramic materials from the FUBR Experiment in EBR-II (S/A X415A) ANL ID 41181	L. A. Neimark	IPS-166-00-00	NA	05/18/1995
P812	S5, S9	Fusion Materials, Semiannual Progress Report for Period Ending June 30, 1999	Unknown	DOE/ER-0313/26	NA	06/30/1999
P813	S2, S5	IPS-282-00-00, Work Plan for Conducting Melt Dilution Tests on Al-clad Fuels ANL ID 27329	A. B. Cohen	IPS-282-00-00	NA	05/18/1998
P814	S5	Paper: Postirradiation Examination of High-Density Alloy Dispersion Fuels ANL ID 29329	S. L. Hayes; M. K. Meyer; G. L. Hofman; R. V. Strain	ANL ID 29329	NA	10/01/1998
P815	S5	Paper: Initial Assessment of Radiation Behavior of Very-High-Density Low-Enriched-Uranium Fuels ANL ID 29330	G. L .Hofman, M. K. Meyer, J. L. Snelgrove, M. L. Dietz, R. V. Strain, K. H. Kim	ANL ID 29330	NA	10/1999
P816	S2, S5	IPS-269-04-01, Metallography on an Additional RERTR-1 Microplate, A/G 549V ANL ID 1210	R. V. Strain	IPS-269-04-01	NA	09/25/1998

P817	S2, S5	Miscellaneous IPS Work Instructions: IPS-292-00-00 through IPS-292-09-00	R. V. Strain	IPS-292-00-00 thru IPS-292-09-00	NA	08/98 - 11/99
P818	S2	IPS-292-02-00, Continuation of Metallography on RERTR-2 Microplates Transmitted by Memo from R. V. Strain to S. L. Hayes dated 10/31/98 ANL ID 6823	R. V. Strain	IPS-292-02-00	NA	11/10/98
P819	S2	IPS-306-00-00, Work Plan for the Characterization of N-Reactor Fuel Specimens (A/G 562) ANL ID 27297	T. Bray	IPS-306-00-00	NA	3/9/1999
P820	S2	IPS-329-00-00, Work Plan for the Preparation of Unirradiated Al-clad Fuel Specimens for CMT ANL ID 3986	T. S. Bray	IPS-329-00-00	NA	12/2/1999
P821	S5, S9	Metallographic Examination of Damaged N Reactor Spent Nuclear Fuel Element SFEC5,4378 ANL ID 41179	S. C. Marschman, T. D. Pyecha, J. Abrefah	PNNL-11438; UC-602	NA	08/1997
P822	S2	IPS-338-00-00, Work Plan for the Examination of Fuel Nano-Plates from the RERTR-3 Experiment in ATR ANL ID 6811	R. V. Strain	IPS-338-00-00	NA	01/20/2000
P823	S2	Work Plan for Preparing the Surry Rod Sections for Shipment ANL DOC ID 18073	Hanchung Tsai	IPS-368-00-00	NA	11/27/00
P824	S5	Examination of Spent PWR Fuel Rods After 15 Years in Dry Storage ANL ID 29316	R. E. Einziger, H. Tsai, M. C. Billone, B. A. Hilton	NUREG/CR-6831 ANL-03/17	NA	09/2003
P825	S2	Work Plan for the Initial Characterization and Sectioning of Surry Rod FA-434 (A/G 591) ANL DOC ID 12374	Hanchung Tsai	IPS-373-00-00	NA	03/20/2001
P826	S2	Revised Work Plan for the Examination of Fuel Plates from the RERTR-5 Experiment in ATR ANL DOC ID 27225	R. V. Strain	IPS-375-01-00	1	04/12/2001
P827	S5	Recent Observations at the Postirradiation Examination of Low-Enriched U-Mo Miniplates Irradiated to High Burnup ANL DOC ID 29331	G. L. Hofman; Y. S. Kim; M. R. Finaly; J. L. Snelgrove; S. L. Hayes; M. K. Meyer; and C. R. Clark	ANL ID 29331	NA	10/5/2003
P828	S5	Design, Operation, and Peerformance Data for High Burnup PWR Fuel from the H. B. Robinson Plant for Use in the NRC Experimental Program at ANL ANL DOC ID 41174	E. J. Ruzauskas; K. N. Fardell	EPRI 1001558	0	04/2001
P829	S2	Revised Work Plan for the Examination of Fuel Plates from the RERTR-4 Experiment in ATR, Revision 1 ANL DOC ID 27220	R. V. Strain	IPS-400-01-00	NA	NA

P830	S5	Irradiation and Evaluation of Mixed Oxide Fuel Performance at the Big Rock Point Reactor AND DOC ID 13901	C. E. Johnson; R. R. Heinrich; L. A. Neimark; J. E. Sanecki; C. E. Crouthamel; M. H. Campbell	ANL ID 13901	NA	11/1987
P831	S5	Characterization of Irradiated Fuel From the Big Rock Point Reactor ANL DOC ID 13903	C. E. Crouthamel; M. H. Campbell	ANL ID 13093	NA	12/1982
U005	S6, S8	Data and Process Knowledge Assessment for Remote-Handled Transuranic Waste Stored at the Radioactive Waste Management Complex-Preliminary Draft	C. R. Tyler	NA	NA	9/1/1994
U006	N/A	Summary of Purchasing Requisitions Received from T. Bray: Heavy Metals Usage Identified by IT That May Be in the RH-TRU Waste Stream	N/A	N/A	NA	9/6/2001
U015	S4	RH-TRU 1995, Book 5, Drums 798 to 809.	N/A	NA	NA	1/1/1995
U017	S4	RH-TRU 1994, Book 8, Drums 778 to 797	N/A	NA	NA	NA
U018	S4	RH-TRU 1993, Book 7, Drums 748 to 777	N/A	NA	NA	NA
U019	S4	RH-TRU 1991-1992, Book 6, Drums 728 to 737	N/A	NA	NA	NA
U021	S4	RH-TRU 1990, Book 4, Drums 687 to 727	N/A	NA	NA	NA
U022	S4	RH-TRU 1985-1987, Book 3, Drums 617 to 686	N/A	NA	NA	NA
U027	S9	Report of Analytical Results	N/A	CMT-84 (10-84)	NA	8/1/1990
U036	S9	Acceptable Knowledge for ANL RH-TRU Waste	Klann, R.T. and K. N. Grimm and B. A. Brush	NA	NA	NA
U041	S4	Videotape Logs	Cheryl L. Schulz	NA	NA	9/15/01
U042	S4	RH-TRU 1976 to 1982, Book 1	N/A	NA	NA	NA
U043	S4	RH-TRU 1982 to 1985, Book 2	N/A	NA	NA	NA
U057	S2	General Data and Sectioning Information from AG Book for AG# 427B, F, G, H, J, K	Yung Y. Liu	NA	NA	NA
U060	S2	General Data and Sectioning Information from AG Book for AG# 429A, B, C, D	N/A	NA	NA	NA
U065	S2	Hand written Notes: One titled "Decon & Repair Procedures for Cleaning and Repairing a Manipulator"	N/A	NA	NA	3/24/87
U072	S10	Material Safety Data Sheets (MSDS)--various metal and chemical compounds	N/A	NA	NA	NA
U075	S6	LANMAS database	N/A	NA	NA	05/31/2001
U076	S6, S10	AGHCF Fissile Inventory Management System Database	N/A	NA	NA	7/16/2001

U085	S2	Procedure for Determining Fuel Pellet Density Using a Mercury Prinometer (handwritten)	N/A	NA	NA	NA
U302	S6	Fissile Inventory Management System User Manual (Excerpt)	NA	NA	NA	Unknown
U304	S9	Robinson Report	NA	NA	NA	Unknown
U307	S6	Report 105 - Custodian Batch Balance (Pure)	NA	Report 105	NA	12/01/2004
U315	S6	Reportable Mass Information	Unknown	NA	NA	~5/1989
U316	S6	Materials List	Unknown	NA	NA	Unknown
U317	S4, S11	Material Control Ledger	Various	NA	NA	Unknown
U325	S11	AGHCF Seal Logbook	Various	NA	NA	1992 - 2001
U326	S9	Report of Analytical Results (AGHCF Smear Data)	Terri Bray	NA	NA	12/7/2005
U327	S9	Preliminary Report of Analysis of Smear Data from Alpha Gamma Hot Cell Facility	Vivian Sullivan	06-0053	NA	~12/8/2005
U332	NA	Waste Requisitions - WMO-195, Radioactive and Mixed Waste	Various	ANL	NA	Various
U801	S5, S9	Disposal Requisitions	NA	ANL ID 46488	NA	Various
U802	S5, S9	SPM Logbook information for A/G 249 ANL ID 46232	NA	ANL ID 46232	NA	Various
U803	S5, S9	RERTR Miniplate Data Sheets ANL ID 328	R. F. Domagala	ANL ID 328	NA	03/1998
U805	S5, S9	SPM Logbook data for A/G 356 ANL ID 46339	NA	ANL ID 46339	NA	Various
U806	S5, S9	Documentation Providing Status of ANL Compatibility Plates ANL ID 327	NA	ANL ID 327	NA	Various
U807	S5, S11	Document providing links between AGSC can numbers, A/G numbers, and element numbers ANL ID 37788	NA	ANL ID 37788	NA	11/18/1994
U808	S11	Special Materials Information System Principal User Batch Balance Sheet (Report 105) ANL ID 27344	NA	ANL ID 45659	NA	09/05/1990
U809	S5, S9	Memo from L. A. Neimark to Walter Gray re: Fissile Contents of RERTR and SRL Specimens for Leaching Studies IPS-247-00-01, Work Plan for the Preparation of Al-clad Fuel Specimens for Pacific Northwest National Laboratory (PNNL) ANL ID 27344	NA	IPS-247-00-01	NA	05/1997; 04/1997
U810	S5, S9	Memo and Draft Report from R. V. Strain to M. M. Goldberg: Draft Report: Initial Results of Electron Microprobe Examination of a Section from Mixed-oxide Fuel Pin UW02010 ANL ID 3987	R. V. Strain	ANL ID 3987	NA	05/20/1999

U811	S5, S9	Special Materials (SPM) Logbook Data for A/G 558 ANL ID 46539	NA	ANL ID 46539	NA	NA
U812	S5, S9	Tables and Core Date for the ORR ANL ID 41197	NA	ANL ID 41197	NA	Unknown
U813	S5, S9	Appendix A, Core Configuration, Fuel Element Locations, and BOC 235U Fuel Element Masses Appendix F, Evaluation of Fuel Element Powers, U235 Masses, and Burnups of the Gamma-Scanning of Full-Sized Fuel Elements ANL ID 41198	NA	ANL ID 41198	NA	Unknown
U814	S5, S9	Lists of RERTR Samples Currently in AGHCF ANL ID 43971	NA	ANL ID 43971	NA	06/11/1992
U815	S5, S9	Documentation from AGHCF SPM Logbook for A/G 497 ANL ID 41183	NA	ANL ID 41183	NA	Various
U816	S5, S9	Proceedings of the Technical Review Meeting of DOE/PNC Operational Reliability Testing (ORT) program in EBR-II ANL ID 2076	John Lambert	ANL ID 2076	NA	NA
U817	S5, S9	Special Materials Logbook information for A/G 497 ANL ID 46480	NA	ANL ID 46480	NA	Various
U818	S5, S9	Record of Meeting: Final Technical Review of PNC/DOE Operational Reliability Testing Program in EBR-II ANL ID 39017	NA	ANL ID 39017	NA	03/1996
U819	S5, S9	Paper: Characterization of Mixed-Oxide Fuel Pins UW02010 and UW08036, DOE Spent Nuclear Fuels Program ANL ID 8745	NA	ANL ID 8745	NA	Unknown
U820	S2, S5, S9	Miscellaneous Gamma Scans and Work Plan: IPS-172-00-00, Work Plan for the Examination of Actinide-Burning Pin G562 (A/G 505) at the Alpha Gamma Hot Cell Facility ANL ID 39380	NA	IPS-172-00-00 ANL ID 39380	NA	Various
U822	S5	Final Report: Procurement and Characterization of Fuel Rod Segments from Quad Cities-2 Fuel Rods VW00101, ZB00113, AND ZS00102 ANL ID 7748	NA	ANL ID 7748	NA	Unknown
U823	S5	YMP Draft Annual Report, FY 1998 ANL ID 42099	NA	ANL ID 42099	NA	11/19/1998
U824	S5	As-Built Data Package, RERTR Microplate Irradiation in the Advanced Test Reactor (RERTR-1 and RERTR-2)	S. L. Hayes, C. L. Trybus, and M. K. Meyer	ANL ID 1212	NA	08/04/1997
U825	S5, S9	Special Materials Logbook information for A/G 460 ANL ID 46443	NA	ANL ID 46443	NA	Various
U826	S11	AGHCF Sectioning Slips Nos. 223 - 354 dating from 1/25/1999 through 3/5/2001 ANL ID 5249	Various	ANL ID 5249	NA	1/25/99 thru 3/5/2001

U830	S5	RERTR-3 Postirradiation Examination Plan at the Alpha-Gamma Hot Cell Facility; transmitted by memo from S. L. Hayes to R. V. Strain ANL ID 6808	S. L. Hayes and M. K. Meyer	ANL ID 6808	NA	01/13/2000
U832	S2	Miscellaneous AGHCF Supplemental Instructions	Various	SI 311; SI 308; SI 305; SI 293; SI 250; ETC.	NA	Various
U833	S5, S9	Excerpted pages from Report: Design, Operation, and Performance Data for High Burnup PWR Fuel from the H. B. robinson Plant for Use in the NRC Experimental Program at Argonne National Laboratory ANL DOC ID 8824	E. J. Ruzauskas; K. N. Fardell	1001558; ANL ID 8824	NA	05/2001
U835	S13	Special Materials (SPM) Logbook Information for A/G 608 ANL DOC ID 46588	NA	ANL ID 46588	NA	NA
U842	S5, S9	Fuel Pin Composition Calc.	Jene Vance	INL-RH-01	0	05/08/2006
U843	S5, S9	Scaling Factor Development	Jim Holderness	INL-RH-02	0	06/05/2006
U844	S5, S9	INL Cs-137 Dose-to-Curie Correlation	Jim Holderness	INL-RH-03	0	05/08/2006
U845	S5, S9	MCNP Sensitivity Studies	Jim Holderness	INL-RH-04	0	05/08/2006
U846	S5,S9	INL Cs-137 Dose-to-Curie Correlation Uncertainty	Jim Holderness	INL-RH-05	0	05/08/2006
U848	S5, S9	Uncertainty Analysis for Drums	Jim Holderness	INL-RH-07	0	06/05/2006
U849	S5, S9	Determination of Isotopes to be Reported Per WIPP WAC	Jene Vance	INL-RH-08	0	06/05/2006
U850	S5, S9	INL Shielded and Unshielded Dose-to-Curie Correlations	Jim Holderness	INL-RH-09	0	05/08/2006
U853	S5, S9	Disposition of Identified Items	Jene Vance	INL-RH-12	0	06/05/2006
U854	S5, S9	Modification of ORIGEN Input Files for Specific Pins	Jim Holderness	INL-RH-13	0	05/08/2006
U855	S5, S9	Co-60 Dose Rate Contribution	Jim Holderness	INL-RH-14	0	05/08/2006
U856	S5, S9	Derivation of Burnup and Composition for Thorium Pins	J. Vance	INL-RH-15	0	05/08/2006
U857	S5, S9	Scaling Factor Sensitivity Analysis	Jim Holderness	INL-RH-16	0	06/05/2006
U858	S5, S9	Demonstration of Commonality of INL and LANL Experimenters	Jene Vance	INL-RH-17	0	7/11/2006
U859	S5, S9	Pu and U Isotope Relationships in Fuel	Jene Vance	LANL-RH-03	0	2/22/2006
U860	S5, S9	Mass Spectroscopy Results Input Check	Jene Vance	LANL-RH-05	0	2/22/2006
U861	S5, S9	ORIGEN2.2 Code Verification Check	Jene Vance	LANL-RH-09	0	02/22/2006
U862	S5, S9	Fission Product Contribution to Total Dose Rate	Jene Vance	LANL-RH-10	0	2/22/2006
U863	S5, S9	Evaluation of Cs-137 Migration in Fuel Pin	J. Vance	LANL-RH-12	0	2/22/2006
U864	S5, S9	ORIGEN2.2 One Step Burnup Evaluation	J. Vance	LANL-RH-13	0	2/22/2006
U865	S2	ORIGEN 2.2 Input Generation	Jene Vance	LANL-RH-14	Draft	Unknown
U866	S5, S9	ORIGEN 2.2 Data Extraction	Jim Holderness	LANL-RH-15	0	02/22/2006
U867	S9	Mass Spectroscopy Comparison to ORIGEN	Jene Vance	LANL-RH-16	0	02/22/2006

U869	S5, S9	Fast Reactor Cross Section Library Sensitivity Study	Jim Holderness	LANL-RH-29	0	05/08/2006
U870	S5, S9	Evaluation of the Effects of Reactor Operating History	Jim Holderness	LANL-RH-30	0	05/08/2006
U872	S5, S9	Experimental Fuel Pins Irradiated in EBR-II Trhough December 8, 1980 ANL ID 35616	F. R. Shober, W. A. Briggs, H. M. Armstrong, J. N. Casale	TC-1117-3	NA	09/1981
U873	S5, S8	Argonne National Laboratory EBR-II Project, Run 89, Report of EBR-II Operations, June 15, 1977 through August 8, 1977 ANL ID 3137	D. J. Fluke	ANL ID 3137	NA	08/1977
U874	S5, S8	Performance of Commercially-Produced Mixed-Oxide Fuels in EBR-II (P-15 Test) ANL ID 33414	J. W. Hales, C. W. Hoth	HEDL TME 80-41; UC-79b	NA	08/1980
U875	S5, S8, S9	Engineering and Safety Analysis for AIR1 (R1) Fuel Rods	Atomics International	DP071270-001	B	04/05/1976
U876	S3, S8	Performance Evaluation of the WBA-20 Radial Blanket Irradiation Test ANL ID 2006	Umesh P. Nayak, Timothy S. Roth, Carl E. Schenone	WARD-RB-94000-4	NA	02/1981
U877	S5, S8, S9	Proposal to Irradiate Unencapsulated Fuel Pins in the EBR-88: Subassemblies PNL-6, PNL-7, and PNL-8	E. O Ballard and L. A. Pember	BNWL-1103	1	06/6/1969
U878	S8	EBR-II Quality Assurance Requirements; As-Built Description, Certification, and Data Transmittal Checklist for EBR-II Experiments	J. Barner	463-PP-E-44	2	12/1/1975
U879	S5, S8	Advanced Carbide/Nitride Fuels Program Irradiation Experiments ANL ID 39535	NA	ANL-AFP-25	NA	08/1976
U880	S5	Irradiation Behavior of the WBA-21 Oxide Blanket Test ANL ID 8482	Umesh P. Nayak, Thomas P. Soffa	WARD-RB-94000-5	NA	11/1982
U881	S5	The K6 Test: Helium-Bonded Uranium-Plutonium Carbide Fuel Pins Irradiated to 12-at.% Burnup in EBR-II ANL ID 9605	Trent W. Latimer, Roy L. Petty	LA-8688	NA	06/1981
U882	S5, S9	Fuel Information Input Check	Jene Vance	ANL-RH-01	1	09/13/2006
U883	S5, S9	Fuel Pin Composition Calculation	J. Vance	ANLE-RH-02	0, Change 1	9/13/2006
U884	S5, S9	Modification of ORIGEN Input Files for Specific Pins	Jim Holderness	ANLE-RH-03	0	06/22/2006
U885	S5, S9	Scaling Factor Development	Jim Holderness	ANLE-RH-04	0	06/22/2006
U886	S2	DTC and Related Calcs for Drum Characterization	Jim Holderness	ANLE-RH-05	Draft	UNK
U887	S5, S9	Uncertainty Analysis for Drums	Jim Holderness	ANLE-RH-06	0	06/22/06

U888	S5, S9	Determination of Isotopes to be Reported per WIPP WAC	Jene Vance	ANLE-RH-07	1	09/13/2006 and 10/16/2006
U892	S5, S9	Analysis of Cladding Co-60 Activity Level	Jim Holderness	LANL-RH-19	0	2/22/2006
U893	S5, S9	Activation Product Contribution to Total Dose Rate	Jene Vance	LANL-RH-27	0	05/08/2006

Alphanumeric Designations

C Correspondence
D Documents
DR Discrepancy Resolution
M Miscellaneous
P Procedures and Published Documents
U Unpublished Documents

AK Numbers

S1 Process Design Documents
S2 Standard Operating Procedure
S3 Safety Analysis Reports
S4 Waste Packaging Logs
S5 Test plans/research project reports
S6 Site databases
S7 Information from site personnel
S8 Standard industry documents
S9 Previous analytical data
S10 Material safety data sheets
S11 Laboratory Notebooks
S12 Comparable or surrogate sampling and analysis data
S13 Other

Update for WIPP Operating Record (Change Notice #1)
Remote Handled Heterogeneous Debris from the Argonne National Laboratory (AERHDM)

Please add the following information to the WIPP Operating Record for Waste Stream Profile Form (WSPF) AERHDM. This waste stream is Remote Handled Heterogeneous Debris from the Argonne National Laboratory and was approved by DOE/CBFO on May 22, 2008.

This WSPF is being revised. The WSPF components are bolded. The updates are:

1. **WSPF, Date of audit approval by New Mexico environmental Department (NMED)**

   Update the audit approval date(s) to include 7/31/08, 10/31/08, and 11/12/09.

2. **WSPF, Title, version number, and date of documents used for WAP Certification**

   Update the following procedures:

   CCP-PO-001, CCP Transuranic Waste Characterization Quality Assurance Project Plan, Revision 18, June 30, 2010

   CCP-PO-002, CCP Transuranic Waste Certification Plan, Revision 24, June 30, 2010

3. **WSPF, Waste Stream Information, Number of Canisters**

   Revise the number of canisters from 48 to 92.

   Revise the footnote associated with the number of canisters as follows: This waste stream consists of 44 30-gallon drums, with a projection of approximately 180 30-gallon and 50 55-gallon drums. Three 30-gallon or 55-gallon drums will be packaged into 1 canister.

4. **WSPF, Waste Stream Information, Applicable TRUCON Content Numbers**

   Update the list of applicable TRUCON Content Numbers to include AE 322.

   The revised section will identify the following TRUCON Content Numbers: AE 321, AE 322 and AE 325.

5. **WSPF, Required Program Information, Required Waste Stream Information, and Supplemental Documentation**

   Update reference CCP-AK-ANLE-500, Rev. 3, May 8, 2008 to CCP-AK-ANLE-500, Rev. 6, September 21, 2010.

6. **Summation of Aspects of AK Summary Report: AERHDM, Overview, Last Paragraph**

   Update reference CCP-AK-ANLE-500, Rev. 3, May 8, 2008 to CCP-AK-ANLE-500, Rev. 6, September 21, 2010.

7. **Summation of Aspects of AK Summary Report: AERHDM, Waste Stream Identification Summary, Waste Stream Volume**

   Revise the number of projected canisters from 33 to 77.

AK3

QMIS 8.0.10 - MSSQL

Q&MIS Edit Document Review Request Traceability Utility Help

Document Entry

Document Number: CCP-AK-ANLE-500 Document Status: CURRENT

Revision: 11 Document Type: RHP

1.General | 2.Property | 3.Note | 4.Checklist | 5.Approval | 6.X_Ref | 7.Distribution | 8.Review | 9.History

Level	Employee No.	Job Code	Notify Only	Fixed Approval
1	BICKERS	00671	☑	☐
1	JOOI	0000000000	☐	☑
1	LEDFORW	0000000000	☐	☑
1	NELSONL	00671	☐	☑
1	SCHAFES	00671	☐	☑
2	PANCAKD	00671	☐	☑
4	BILLETM	00671	☑	☐
4	STALLIA	00671	☑	☐

IRENE JOO

Approval Process

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Approval Status

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By PAYANES, JOSE

On 07/02/13 16:10:49

Note

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Document Number: CCP-AK-ANLE-500 Document Status: CURRENT

Revision: 11 Document Type: RHP

1.General | 2.Property | 3.Note | 4.Checklist | 5.Approval | 6.X_Ref | 7.Distribution | 8.Review | 9.History

Level	Employee No.	Job Code	Notify Only	Fixed Approval
1	BICKERS	00671	☑	☐
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1	NELSONL	00671	☐	☑
1	SCHAFES	00671	☐	☑
2	PANCAKD	00671	☐	☑
4	BILLETM	00671	☑	☐
4	STALLIA	00671	☑	☐

WAYNE LEDFORD

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Approval Process

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Approval Status

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Document Entry

Document Number: CCP-AK-ANLE-500 Document Status: CURRENT

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Level	Employee No.	Job Code	Notify Only	Fixed Approval
1	BICKERS	00671	☑	☐
1	JOOI	0000000000	☐	☑
1	LEDFORW	0000000000	☐	☑
1	NELSONL	00671	☐	☑
1	SCHAFES	00671	☐	☑
2	PANCAKD	00671	☐	☑
4	BILLETM	00671	☑	☐
4	STALLIA	00671	☑	☐

LAURA NELSON

Approval Process

ISSUED

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Approval Status

APPROVED ☐ Conditional Approval

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Document Entry

Document Number: CCP-AK-ANLE-500 Document Status: CURRENT

Revision: 11 Document Type: RHP

1.General | 2.Property | 3.Note | 4.Checklist | 5.Approval | 6.X_Ref | 7.Distribution | 8.Review | 9.History

Level	Employee No.	Job Code	Notify Only	Fixed Approval
1	BICKERS	00671	☑	☐
1	JOOI	0000000000	☐	☑
1	LEDFORW	0000000000	☐	☑
1	NELSONL	00671	☐	☑
1	SCHAFES	00671	☐	☑
2	PANCAKD	00671	☐	☑
4	BILLETM	00671	☑	☐
4	STALLIA	00671	☑	☐

STEVE SCHAFER

Approval Process

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Approval Status

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Document Entry

Document Number: CCP-AK-ANLE-500 Document Status: CURRENT

Revision: 11 Document Type: RHP

1.General | 2.Property | 3.Note | 4.Checklist | 5.Approval | 6.X_Ref | 7.Distribution | 8.Review | 9.History

Level	Employee No.	Job Code	Notify Only	Fixed Approval
1	BICKERS	00671	☑	☐
1	JOOI	0000000000	☐	☑
1	LEDFORW	0000000000	☐	☑
1	NELSONL	00671	☐	☑
1	SCHAFES	00671	☐	☑
2	PANCAKD	00671	☐	☑
4	BILLETM	00671	☑	☐
4	STALLIA	00671	☑	☐

DAN PANCAKE

Approval Process

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AK4

MEMORANDUM

To: Irene Quintana, CCP Project Manager

From: J. Vance **Reviewed by:** J. Holderness

Date: November 16, 2011

Subject: **Comparison of Fuel Rod Length Measurements from AK Records and From VE Records For K-Wing FEW**

1.0 Introduction

A portion of the AERHDM debris waste stream generated in the K-Wing Hot Cells in Building 205 includes discrete pieces of fuel rods left over from fuel examination activities. Because this waste consists of discrete pieces of fuel specimens left over from the research activities, the radiological characterization of this waste will be accomplished by; (1) measuring the length of the longer (>1") pieces of fuel that are in a rod configuration during the VE and drum loading process, (2) by using the length measurements supplied in the AK record or (3) by using the historical weights of the pieces not in a rod geometry. In the VE and drum loading process, fuel rod pieces shorter than 1" were not measured because of the limitation of the measuring device and because of the assumption of a measurement accuracy of ± 0.5" for the uncertainty analysis. There was also one piece of fuel rod two inches long in drum RW18881 that was overlooked and not measured in the VE and loading process. Finally, there was one drum, RW18876, which was loaded with fuel rod pieces prior to the final decision to use rod length measurements for the radiological characterization of the drum of waste. All of the fuel rods that were not measured in the VE and drum loading process were measured and recorded in the AK records.

In accordance with the Certification Plan (Reference 1), the length measurements made by CCP in the VE and drum loading process were compared to the length measurements provided in the AK record to confirm the AK length measurement data. Per the Certification Plan this memo is provided to document the results of the comparison.

2.0 Summary of Measurements

A total of 10 length measurements were made in the VE and drum loading process that are available for comparison to the length measurements from the AK record. Table 2-1 summarizes results of the length measurements for the 10 pieces of fuel rods, along with the fuel ID and the drum containing the fuel rods.

Table 2-1 Summary of Length Measurements

Drum Number	Fuel ID	AK Length Measurement (inches)	VE Length Measurement (inches)	Difference (inches)
RW18877	ATM-106	8	8	0.00
RW18877	ATM-106	8	8	0.00
RW18877	ATM-106	8	8	0.00
RW18877	ATM-106	8	8	0.00
RW18879	ATM-103	2.75	2.75	0.00
RW18880	ATM-106	6	6	0.00
RW18904	ATM-103	3.75	3.75	0.00
RW18904	ATM-103	3.3125	3.375	0.0625
RW18904	ATM-103	3.5	3.5	0.00
RW18904	ATM-103	2.235	2.25	0.015

It can be seen in the above table that within the accuracy of the measuring technique there were only two out of the total of ten fuel rods measured that differed. Both of the reported differences were less than 1/16", which is well within the ± ½" assumed for the uncertainty in the length measurements for the uncertainty analysis. Based on this comparison it is concluded that the length measurements provided in the AK record for the K-Wing fuel rods loaded into the eight drums are acceptably reliable and accurate for use in the characterization of the FEW waste drums.

3.0 References

1.0 CCP-AK-ANLE-502, CCP RH TRU Waste Certification Plan for 40 CFR 194 Compliance and Confirmation Test Plan for ANL RH Waste Stream: AERHDM, Washing TRU Solutions, Carlsbad, New Mexico

Attachment 3 - Acceptable Knowledge Source Document Summary

Waste Stream Number(s): AERHDM, ID-ANLE-S5000

Site(s): Argonne Generated RH TRU Waste	Source Document Tracking Number: C066
Acceptable Knowledge Documentation Type: ☑ TRU Waste Management Program Information ☑ Waste Stream-Specific Information ☑ Supporting Information	Category: ☑ C - Correspondence ☐ D - Discrepancy Resolution ☐ P - Published Documents ☐ U - Unpublished Documents

Title of Source Document: Record of Communication with Bill Kettman and Dennis Donahue, AGHCF re: AGHCF Operations and Waste Packaging

Source Document Reference Information (author(s), document and revision number, date, publisher): J. Whitworth, M. Wyco, n/a, n/a, 8/7/2001

AK # [a]	Source Doc. Page # [b]	AK Information Summary
PR4, PR7, PR8, WS4, WS7, WS8, WS11, WS12, S7, S16	1-3	Record of an interview between J. Whitworth and M. Wyco and Bill Kettman and Dennis Donahue, both of whom were technicians in the AGHCF. Whitworth and Wyco were trying to tie down chemicals that might be in the RH-TRU waste. Specifically, they were asked about 1) hydrochloric, sulfuric, hydrofluoric, chromic, and oxalic acids, and silver nitrate; 2) Organic solvents, e.g., methanol/hydrochloric acid mix, carbon tetrachloride. Ethanol, toluene, heptane, acetone, and ether, perchloroethylene; 3) oils, e.g., hyprezlubricant, 4) mercury; 5) lead; 6) cadmium; 7) chromium; 8) silver; 9) caustics; 10) ignitables; 11) tritium, 12) SS low/Gain sheet (Form SPM23); 13) training and gas generation testing. Keywords: Hydrochloric, sulfuric, hydrofluoric, chromic, and oxalic acids, and silver nitrate;organic solvents, methanol/hydrochloric acid mix, carbon tetrachloride, ethanol, toluene, heptane, acetone, and ether, perchloroethylene, oils, hyprezlubricant, mercury, lead, cadmium, chromium, silver, caustics, ignitables, tritium, SS low/Gain sheet (Form SPM23), training, gas generation testing, interview, Kettman, Donahue, LILY, LILAC, PCBs, ballasts, beryllium

Source Document Data Limitations (if any):

1. Generators could not provide specific time periods during which particular chemicals were used.

Acceptable Knowlege Expert:

Lisa Price Watson, Lisa Price-Watson Date: 11/7/06

Print /Sign

[a] Obtain from Acceptable Knowledge Documentation Checklist
[b] For microfilm or microfiche, identify box, tape, reel number and location.

C066

Record of Communication

Waste Stream Name: INEEL RH TRU Waste from ANL-E AGHCF		
Interviewer: J. Whitworth, M. Wyco	Date: August 7, 2001	Time: 1:30 - 3:30 pm
Interviewees: Bill Kettman, Dennis Donahue	Group/Organization: AGHCF Job Title: formerly Senior Technician, Chief Technician, Facility Supervisor; currently retired, working part-time as technicians	Phone: E-mail:
Subject: AGHCF Operations and Waste Packaging		

Summary: Mr. Kettman and Mr. Donahue were both technicians in the AGHCF from 1962 onward. Mr. Donahue acted as the Facility Supervisor for some time under Mr. Larry Neimark. Both remember that they began "hot" work in the AGHCF in about 1965. They recall that RH-TRU waste used to be shipped out in cardboard containers at one time. They also noted that CH waste and RH waste is packaged at the same location – the only difference between the two types of waste is the final can dose rate.

1. What chemicals were used in the AGHCF that may have gotten into the RH-TRU waste?

Etchants – included hydrochloric, sulfuric, hydrofluoric, chromic, and oxalic acids, as well as silver nitrate. These acids/oxidizers would not be present in waste as liquids because they were either neutralized with sodium carbonate or evaporated. Waste packaging procedures listed what could and could not be placed in RH-TRU waste cans.
Organic solvents – used a methanol/hydrochloric acid mix at one time. Carbon tetrachloride (CCl_4) was used for density measurements, but they have stopped using it and now use water instead. CCl_4 was also used for cleaning metallography mounts through the early 1970s. Ethanol was used inside the Hot Cell often for washing specimens. Toluene was used to clean grease off of samples, but they stopped using it sometime during the last ten years. Heptane, acetone, and ether (ethyl) were also used for degreasing samples. Perchloroethylene was used to clean manipulator arms in an ultrasonic bath. This liquid would not be present in waste because it was evaporated, but they stopped using it about five years ago. Any of these chemicals may be present on rags used to wipe surfaces or clean tabletops, on dust mops, or as residue in other "noncombustible" trash.
Oils – Hyprez lubricant was used. All oils were solidified before they were put in waste, and only small (milliliter-volume) quantities were solidified.
Mercury – was present in thermometers in the 1970s. Mercury vapor lights would have been disposed in RH-TRU waste.
Lead – although some lead bricks might be in waste containers, this would be unusual. Leaded batteries were usually reclaimed and should not be in waste. However, there would be some lead in solder, motors, flashlight batteries, and in small leaded weights from manipulator arms (these were approximately ¾" by 1" in size).
Cadmium – was used for neutron shielding in storage holes, but probably would be only in low-level waste, not in TRU waste. Cadmium shielding would be five-foot long. No Cd batteries are expected other than possibly occasional flashlight batteries.
Chromium was present in chromic acid etchant.
Silver – present in silver nitrate etchant, silver epoxy compound used to mount specimens due to its ability to conduct electricity.
Could not identify any sources of other metals such as selenium. Samples containing beryllium were reclaimed.
Caustics – Sodium hydroxide was used for neutralizing acids. Ammonia was reacted with lithium.
Ignitables – sodium/potassium reactor coolant was sometimes present in the AGHCF, but this material was reacted prior to disposal. Some lithium was present, including lithium coolant and possibly in cladding. Lithium was reacted with ammonia prior to disposal.

ORIGINAL

What sources of PCBs may be or may have been present in the AGHCF?

Light ballasts do exist, but are all located outside of the AGHCF. No electrical equipment that could contain PCBs is located inside of the Hot Cell. A pressure relief reservoir in the facility exhaust system contains a light oil that has never been changed out (and thus would never have gotten into the waste). The oil is probably vacuum pump oil. In summary, they could not think of any potential sources of PCBs in TRU waste.

2. What was the defense relationship of programs sending specimens to the AGHCF for examination?

The interviewees referred this question to Mr. Larry Niemark, stating that he might remember details of funding and program goals. They did remeber the sodium loop program as being part of TREAT, with structural examinations performed as part of the work package. They also recalled that Robinson fuels were from a commercial reactor.

3. How were radiological calculations performed?

In the 1970s, they determined the amounts of Pu-239 and U-235 in the waste based on batch information. Amounts for Cs-137 only started being recorded in 1984. Wilt Jackson started performing calculations to quantify Pu-239 and U-235 in the mid-1970s. Generally, they refer questions about this topic to Mr. Fred Pausche, who is still employed at the AGHCF on a part-time basis. Mr. Pausche kept the records related to quantities of SNM. However, they stated that the approach used for low Pu-239 fuels and highly-enriched Uranium (HEU) fuels was the same and was based on batch analysis information. Special Materials (SM) personnel who may have been involved in the calculations included Mr. Frogge, Chester Rutkowski, and John McDay (the current SM person, wouldn't know about historical methods).

They did analyze some structural materials that came with fuel samples. For example, samples from the TR program had lots of associated stainless steel. As a result, activation products are sometimes associated w fuel specimens and may be in the waste.

4. How was waste packaged?

Packaging has essentially been the same since "Day 1," except for vents and requirements related to gaskets (they had to follow EG&G gasket requirements at one point). There were two can configurations in drums – one has two seven-gallon cans, and the other has one ten-gallon can and one five-gallon can. In each case, the cans are placed in a cardboard carton. Inner cans were never sealed -- each had two holes drilled in its side in order to accommodate a carrying wire, as well as lid gaskets removed.

Some waste was repackaged in 1983 due to rusting of external containers that had been buried. Approxima 20 cans were repackaged.

5. Was the waste-generating process for waste from the K-Cells in Building 200 different from the AGHCF waste?

AGHCF used the K cells for JD Robinson (commercial) and other fuel specimens because the AGHCF was Only AGHCF materials would have been in the TRU waste cells during that time period. The inner containm of the K1 cell was dismantled in about 1982. The K Cells were used from about 1980-84.

6. Tritium

There should be some tritium in RH-TRU waste from the LILY and LILAC programs, but also due to contamination of incoming fuels from dirty shipping containers.

7. How to read the SS Loss/Gain Sheet (Form SPM23)

The interviewees referred this question to Larry Neimark, stating that only he and Wilt Jackson knew the details regarding the completion of these sheets. SM personnel completed the inbound information on these sheets for "everything incoming that was nuclear." SM got the inbound radiological composition information from the shipper. The AGHCF provided the outbound information. AGHCF had to get permission from DOE to send scrap out of the AGHCF.

8. Other – Training and Gas Generation Testing

The interviewees did not have to attend RCRA training, but were trained on how to complete the Waste Disposal Forms. Mr. Kettman remembers this being some time in the 90's. They did perform some hydrogen gas generation testing, but not for the subject waste stream (1976-1995 AGHCF RH-TRU waste).

Data Limitations:

1. Interviewees were not comfortable/did not feel sufficiently knowledgeable to answer questions regarding radiological characterization of waste drums or defense relationships of various programs.
2. Memories regarding events that occurred over ten years ago should be confirmed by other sources, if possible.
3. In many cases, could not provide time periods during which particular chemicals were used.

Attachment 2 - CCP Records Transmittal/Receiving Form

CCP Central Records/Records Custodian, 4021 National Parks Highway - MS: GSA 203, Carlsbad, New Mexico 88220

Telephone Number: 505-234-7523, 505-234-7233, 505-234-7617
Fax Number: 505-234-7014

☒ Original Record
☐ Fax Record
☐ Electronic Record

Attn:	Records Custodian	From:	Kevin Peters
Ship to:	CCP Central Records/ CCP Records Custodian	Site:	Argonne National Laboratory-East RH-TRU Waste
	4021 National Parks Highway - MS GSA 203	Company:	Technical Specialists, LLC
	Carlsbad, NM 88220	Telephone Number:	303-980-0543
		Date Sent:	3-24-06
Telephone Number:	505-234-7523		

Document Number	Title/Description	Record Date	Total Pages
C066	Attachment 3 - Acceptable Knowledge Source Document Summary for CCP-AK-INL-500 and CCP-AK-ANLE-500	3/22/2006	1
	Record of Communication with Bill Kettman and Dennis Donahue, AGHCF re: AGHCF Operations and Waste Packaging	8/7/2001	3
	N/A		

Comments
None

Acceptance/Rejection Signature and Date

Records Accepted ☒ Christal Ingram (Signature) Christal Ingram (Printed Name) 3-28-06 (Date)

Records Rejected ☐ _____ (Signature) _____ (Printed Name) _____ (Date)

Reason for Rejection: _____

Re-submittal: _____ (Signature) _____ (Printed Name) _____ (Date)

P.01

TRANSACTION REPORT

MAR-28-2006 TUE 01:23 PM

FOR: CCP RECORDS 15052347014

SEND

DATE	START	RECEIVER	TX TIME	PAGES	TYPE	NOTE	M#	DP
MAR-28	01:23 PM	LANL _ CBAD	17"	1	FAX TX	OK	770	

TOTAL : 17S PAGES: 1

Controlled Copy

Attachment 2 - CCP Records Transmittal/Receiving Form

CCP Central Records/Records Custodian, 4021 National Parks Highway - MS: GSA 203, Carlsbad, New Mexico 88220

Telephone Number: 505-234-7523, 505-234-7233, 505-234-7617
Fax Number: 505-234-7014

- [x] Original Record
- [ ] Fax Record
- [ ] Electronic Record

Attn:	Records Custodian	From:	Kevin Peters
Ship to:	CCP Central Records/ CCP Records Custodian	Site:	Argonne National Laboratory-East RH-TRU Waste
	4021 National Parks Highway - MS GSA 203	Company:	Technical Specialists, LLC
	Carlsbad, NM 88220	Telephone Number:	303-980-0543
		Date Sent:	3-24-06
Telephone Number:	505-234-7523		

Document Number	Title/Description	Record Date	Total Pages
C066	Attachment 3 - Acceptable Knowledge Source Document Summary for CCP-AK-INL-500 and CCP-AK-ANLE-500	3/22/2006	1
	Record of Communication with Bill Kettman and Dennis Donahue, AGHCF re: AGHCF Operations and Waste Packaging	8/7/2001	3
	N/A		

DIVIDER

PAGE

Attachment 3 - Acceptable Knowledge Source Document Summary

Waste Stream Number(s): AERHDM, ID-ANLE-S5000

Site(s): Idaho National Laboratory	Source Document Tracking Number: C333
Acceptable Knowledge Documentation Type: ☑ TRU Waste Management Program Information ☑ Waste Stream-Specific Information ☑ Supplemental Information	Category: ☑ C - Correspondence ☐ D - Discrepancy Resolution ☐ P - Published Documents ☐ U - Unpublished Documents

Title of Source Document: Memo to CCP Central Records: Assessmentof Waste material Parameters (WMPs) for Waste Stream AERHDM

Source Document Reference Information (author(s), document and revision number, date, publisher): D. B. Becker, NA, NA, 01/2006, NA

AK # [a]	Source Doc. Page # [b]	AK Information Summary
PR4, PR6, PR7, WS1, WS2, WS3, WS6, WS8, WS9, S4, S9	Page 1	To determine the WMPs, waste can inventory records were used for 45 thirty-gallon drums packaged from 1995 through 2002 (Reference U332). The waste can inventory records provide a waste item description and corresponding volume percentage for waste packaged in 7.5 gallon cans (two of the 30-gallon drums provided waste item weights and weight percentages instead of volume percentages). Waste items were categorized into one or more of the following WMPs: iron metals, aluminum metals, other metals, other inorganics, cellulosics, rubber, plastics, and organic matrix. Each 30-gallon drum contains two 7.5 gallons cans, so an average volume percentage was then calculated for each WMP for the 30-gallon drum. Densities for each WMP were used to calculate the weight percentage of each WMP for each 30-gallon drum. The weight of each WMP for each drum was then calculated based on the 30-gallon drum gross weight and the following tare weight: 36.25 lbs for a 30-gallon drum, 6.5 lbs for a 7.5 gallon can, 16.75 lbs of plastic packaging, and 3 lbs of fiber packaging. Finally, an overall WMP weight percentage was calculated for the 45 drums. The results are as follows: Waste Material Parameter --- Overall weight % for 45 drums --- Weight % range for any given drum iron metals - 25.28% - 0 – 81.49% Aluminum metals --- 12.09% --- 0 – 71.47% Other metals --- 11.18% --- 0 – 66.00% Other inorganics --- 15.87% --- 0 – 45.37% Cellulosics --- 20.27% --- 0 – 100% Rubber --- 5.48% --- 0 – 57.94% Plastics --- 9.84% --- 0 – 58.21% Organic matrix --- 0% --- 0% Assumptions for waste item categorization: --- Silicon carbide grinding papers – 50% other inorganic, 50% cellulosics --- Power cords – conservatively assigned to 100% rubber unless percentage of metal was

Attachment 3 - Acceptable Knowledge Source Document Summary (continued)

Site(s): Idaho National Laboratory			Source Document Tracking Number: C333
AK # [a]	Source Doc. Page # [b]	AK Information Summary	
		specified --- Bottles w/ absorbent – assigned to 100% other inorganic unless percentage of plastic was specified --- HEPA filters w/ wood frames – 100% cellulosics Densities for each WMP were taken from CCP-AK-SRS-5 source document D010.	

Source Document Data Limitations (if any):

1. Assessment addresses only information available for 45 drums assumed to be represtative of the waste stream as a whole and for drums to be generated in the future.
2. Assumed that waste materials will be comparable for wastes sent to INL (ID-ANLE-S5000).

Acceptable Knowlege Expert:

D. B. Becker for K. Peters / DBBecker Date: 3/22/2006
Print /Sign

[a] Obtain from Acceptable Knowledge Documentation Checklist
[b] For microfilm or microfiche, identify box, tape, reel number and location.

C 333

Memo to CCP Central Records: Assessment of Waste Material Parameters (WMPs) for Waste Stream AERHDM

To determine the WMPs, waste can inventory records were used for 45 thirty-gallon drums packaged from 1995 through 2002 (Reference U332). The waste can inventory records provide a waste item description and corresponding volume percentage for waste packaged in 7.5 gallon cans (two of the 30-gallon drums provided waste item weights and weight percentages instead of volume percentages). Waste items were categorized into one or more of the following WMPs: iron metals, aluminum metals, other metals, other inorganics, cellulosics, rubber, plastics, and organic matrix. Each 30-gallon drum contains two 7.5 gallons cans, so an average volume percentage was then calculated for each WMP for the 30-gallon drum.

Densities for each WMP were used to calculate the weight percentage of each WMP for each 30-gallon drum. The weight of each WMP for each drum was then calculated based on the 30-gallon drum gross weight and the following tare weight: 37.00 lbs for a 30-gallon drum, 6.25 lbs for a 7.5 gallon can, 16.4 lbs of plastic packaging, and 3.1 lbs of cardboard packaging. Finally, an overall WMP weight percentage was calculated for the 45 drums. The results are as follows:

Waste Material Parameter	Overall weight % for 45 drums	Weight % range for any given drum
Iron metals	25.28%	0 – 81.49%
Aluminum metals	12.09%	0 – 71.47%
Other metals	11.18%	0 – 66.00%
Other inorganics	15.87%	0 – 45.37%
Cellulosics	20.27%	0 – 100%
Rubber	5.48%	0 – 57.94%
Plastics	9.84%	0 – 58.21%
Organic matrix	0%	0%

Assumptions for waste item categorization:

- Silicon carbide grinding papers – 50% other inorganic, 50% cellulosics
- Power cords – conservatively assigned to 100% rubber unless percentage of metal was specified
- Bottles w/ absorbent – assigned to 100% other inorganic unless percentage of plastic was specified
- HEPA filters w/ wood frames – 100% cellulosics

Densities for each WMP were taken from CCP-AK-SRS-5 source document D010.

	Weight Percent									Drum gross weight (lbs)	Drum tare weight (lbs)	Waste Weight (lbs)								
Drum	Iron metals	Aluminum	Other metals	Other Inorganic	Cellulosics	Rubber	Plastics	Organic Matrix				Iron metals	Aluminum	Other metals	Other Inorganic	Cellulosics	Rubber	Plastics	Organic Matrix	
700	0.00%	0.00%	0.00%	38.23%	19.89%	30.10%	10.79%	0.00%		312	69	0.00	0.00	0.00	16.87	3.46	12.84	4.64	0.00	
812	0.00%	0.00%	5.97%	23.10%	60.46%	0.00%	10.46%	0.00%		106	69	0.00	0.00	2.16	7.84	21.79	0.00	4.85	0.00	
813	0.00%	0.00%	9.38%	46.37%	34.58%	1.96%	8.69%	0.00%		115	69	0.00	0.00	4.31	20.67	15.41	0.00	4.12	0.00	
814	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%		106	69	0.00	0.00	0.00	0.00	36.00	0.00	0.00	0.00	
815	0.00%	0.00%	0.00%	10.98%	60.31%	16.28%	12.43%	0.00%		100	69	0.00	0.00	0.00	3.40	18.98	5.04	2.02	0.00	
816	0.00%	0.00%	0.00%	25.54%	67.89%	2.22%	4.35%	0.00%		90	69	0.00	0.00	0.00	5.36	12.60	0.53	0.10	0.00	
817	0.00%	0.00%	0.00%	5.78%	46.97%	5.77%	41.48%	0.00%		85	69	0.00	0.00	0.00	1.30	11.05	1.46	11.18	0.00	
818	0.00%	0.00%	12.47%	3.89%	71.85%	2.89%	8.30%	0.00%		84	69	0.00	0.00	0.54	1.02	16.37	0.67	6.39	0.00	
819	0.00%	0.00%	0.00%	16.81%	52.90%	0.00%	30.29%	0.00%		105	69	0.00	0.00	0.00	5.83	14.34	0.00	8.93	0.00	
820	0.00%	0.00%	0.00%	0.00%	87.50%	0.00%	12.50%	0.00%		96	69	0.00	0.00	0.00	0.00	22.77	0.00	3.23	0.00	
821	0.00%	0.00%	0.00%	18.60%	56.60%	7.86%	17.00%	0.00%		100	69	0.00	0.00	0.00	6.70	17.36	2.45	6.43	0.00	
822	0.00%	0.00%	0.00%	6.74%	34.34%	16.30%	38.62%	0.00%		110	69	0.00	0.00	0.00	2.78	14.33	7.86	15.98	0.00	
823	0.00%	0.00%	0.00%	24.87%	14.91%	19.69%	41.53%	0.00%		100	69	0.00	0.00	0.00	7.73	4.46	6.09	12.73	0.00	
824	0.00%	0.00%	0.00%	18.57%	46.10%	7.36%	28.00%	0.00%		100	69	0.00	0.00	0.00	5.98	13.28	2.45	8.62	0.00	
825	0.00%	0.00%	0.00%	6.31%	19.83%	0.00%	71.86%	0.00%		95	69	0.00	0.00	17.18	1.89	4.22	0.00	2.98	0.00	
826	0.00%	0.00%	10.86%	26.66%	33.16%	11.46%	18.86%	0.00%		100	69	0.00	0.00	3.21	8.55	10.28	3.67	6.11	0.00	
827	21.57%	71.43%	6.97%	7.30%	0.00%	0.00%	0.00%	0.00%		140	69	0.00	50.74	5.16	5.10	0.00	0.00	0.00	0.00	
828	0.00%	0.00%	0.00%	22.01%	32.17%	2.58%	43.24%	0.00%		90	69	0.00	0.00	0.00	0.66	5.76	0.64	9.08	0.00	
829	38.39%	21.96%	20.64%	15.19%	0.00%	0.00%	0.00%	0.00%		156	69	32.97	14.51	19.50	10.03	0.00	0.00	0.00	0.00	
830	73.81%	91.29%	7.66%	3.23%	0.00%	0.00%	0.00%	0.00%		130	69	58.93	32.38	4.68	4.97	0.00	0.00	0.00	0.00	
831	46.68%	19.46%	16.82%	15.92%	0.00%	0.00%	0.00%	0.00%		145	69	34.72	14.61	14.98	12.10	0.00	0.00	0.00	0.00	
832	58.86%	24.32%	5.80%	9.69%	0.00%	0.00%	0.00%	0.00%		135	69	39.50	16.00	3.89	6.56	0.00	0.00	0.00	0.00	
833	16.44%	27.28%	34.00%	22.27%	0.00%	0.00%	0.00%	0.00%		140	69	11.87	19.38	24.16	15.81	0.00	0.00	0.00	0.00	
834	9.46%	23.54%	59.78%	6.24%	0.00%	0.00%	0.00%	0.00%		165	69	9.08	22.60	56.41	7.91	0.00	0.00	0.00	0.00	
835	0.00%	0.00%	10.47%	30.83%	34.22%	2.17%	21.41%	0.00%		94	69	0.00	0.00	2.65	7.71	6.88	0.54	7.46	0.00	
836	0.00%	0.00%	0.00%	0.00%	68.12%	17.38%	14.50%	0.00%		100	69	0.00	0.00	0.00	0.00	21.12	5.38	4.50	0.00	
837	0.00%	0.00%	11.57%	17.04%	27.87%	24.02%	20.09%	0.00%		100	69	0.00	0.00	3.85	6.28	9.48	7.46	6.23	0.00	
838	81.40%	3.00%	16.51%	0.00%	0.00%	0.00%	0.00%	0.00%		130	69	49.71	4.83	0.00	0.00	0.00	0.00	0.00	0.00	
839	67.34%	8.96%	2.90%	20.75%	0.00%	0.00%	0.00%	0.00%		146	69	63.18	6.82	2.97	18.78	0.00	0.00	0.00	0.00	
840	0.00%	0.00%	0.00%	35.78%	44.53%	0.00%	19.69%	0.00%		96	69	0.00	0.00	0.00	8.30	11.38	0.00	5.12	0.00	
841	0.00%	0.00%	10.94%	18.41%	22.91%	26.07%	22.75%	0.00%		105	69	0.00	0.00	3.94	4.83	6.75	8.99	8.00	0.00	
842	0.00%	0.00%	0.00%	11.08%	59.72%	10.93%	18.28%	0.00%		90	69	0.00	0.00	0.00	2.33	12.94	2.29	3.84	0.00	
843	0.00%	0.00%	0.00%	13.39%	52.21%	21.14%	13.26%	0.00%		95	69	0.00	0.00	0.00	3.46	12.98	8.60	3.46	0.00	
844	14.14%	0.00%	0.00%	32.86%	30.86%	2.03%	20.33%	0.00%		95	69	3.66	0.00	0.00	8.64	7.87	0.63	15.29	0.00	
845	0.00%	0.00%	0.00%	28.25%	55.61%	8.98%	20.17%	0.00%		95	69	0.00	0.00	0.00	8.57	9.98	2.69	17.58	0.00	
846	43.84%	31.02%	0.00%	25.34%	0.00%	0.00%	0.00%	0.00%		120	69	32.38	15.82	0.00	12.92	0.00	0.00	0.00	0.00	
847	88.10%	0.82%	10.81%	19.41%	0.00%	0.00%	0.00%	0.00%		145	69	58.84	0.82	8.06	14.75	0.00	0.00	0.00	0.00	
848	57.63%	6.87%	17.10%	19.19%	0.00%	0.00%	0.00%	0.00%		140	69	41.08	4.97	12.14	13.69	0.00	0.00	0.00	0.00	
849	72.31%	14.28%	0.00%	12.83%	0.00%	0.56%	0.00%	0.00%		115	69	33.28	6.57	0.00	5.90	0.00	0.26	0.00	0.00	
852	0.00%	0.00%	0.00%	29.93%	20.89%	0.00%	49.38%	0.00%		85	69	0.00	0.00	0.00	4.78	3.31	0.00	7.90	0.00	
853	52.83%	14.06%	15.19%	17.90%	0.00%	0.00%	0.00%	0.00%		130	69	52.23	6.59	9.27	10.02	0.00	0.00	0.00	0.00	
854	0.00%	0.00%	0.00%	0.00%	24.39%	17.40%	58.21%	0.00%		95	69	0.00	0.00	0.00	0.00	5.34	4.65	13.14	0.00	
855	0.00%	0.00%	0.00%	25.63%	65.81%	0.00%	8.46%	0.00%		90	69	0.00	0.00	0.00	5.38	13.84	0.00	1.78	0.00	
810	0.84%	3.06%	0.00%	5.15%	26.21%	57.94%	7.80%	0.00%		106	69.12	0.30	1.10	0.00	1.85	9.06	20.80	2.80	0.00	
811	74.16%	12.41%	2.48%	10.66%	0.29%	0.00%	0.00%	0.00%		140	71.5	50.80	8.50	1.70	7.30	0.20	0.00	0.00	0.00	
MAX	81.40%	71.47%	96.00%	45.37%	100.00%	57.94%	58.21%	0.00%		Average Drum Gross Weight										
MIN	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%		111.34										

Total	479.88	923.47	212.29	301.23	384.79	103.94	186.82	0.00	2606.40
%	18.24%	12.08%	11.18%	15.87%	20.27%	5.48%	9.84%	0.00%	
Inorganic	54.41%								
Organic	45.59%								

RW ID	Drum ID	Drum weig	Can ID	Comb	Description	Percentage	Waste Material Parameters							
							Iron metals	Aluminum	Other metals	Other inorganic	Cellulosics	Rubber	Plastics	Organic Matrix
76642	810	105	283	c	7.2 lbs cotton rags	59.5 weight					59.5			
	810		283		2.8 lbs polyethelene, pvc, tygon plastic	23.1 weight							23.1	
	810		283		1.8 lbs silicon carbide grinding papers	14.9 weight				7.45	7.45			
	810		283		0.3 lbs manipulator hands & fingers	2.5 weight	2.5							
	810		282	c	20.8 lbs neoprene rubber gloves & o-ring retainers	87.4 weight						87.4		
	810		282		1.9 lbs silicon carbide grinding papers	8.0 weight				4	4			
	810		282		1.1 lbs Al crushed sphincter cans & manipulator fingers	4.6 weight		4.6						
76646	811	140	284	n	13.3 lbs iron & steel components	50.2 weight	50.2							
	811		284		1.7 lbs tin cans	6.4 weight			6.4					
	811		284		8.5 lbs Al cans & manipulator hands	32.0 weight		32						
	811		284		2.8 lbs glass bottles	10.6 weight				10.6				
	811		284		0.2 lbs cotton rags	0.8 weight					0.8			
	811		285	n	23.5 lbs iron & steel components, large items	56.0 weight	56							
	811		285		4.5 lbs glass bottles	10.7 weight				10.7				
	811		285		14.0 lbs iron, steel, glass, small items	33.3 weight	33.3							
76647	812	105	242	c	silicon carbide grinding papers	40				20	20			
	812		242		plastic / push-thru's / small containers / tops	30							30	
	812		242		electrical cords (1/2 plastic, 1/2 metal)	5			2.5				2.5	
	812		242		mop head	25					25			
	812		247	c	HEPA filters (7) - crushed w/ wood frame	100					100			
76648	813	115	244	c	oil dri material in plastic bottles, no caps - pelletized clay (	70				52.5			17.5	
	813		244		old met mount - bakelite	5			5					
	813		244		rubber glove	5						5		
	813		244		plastic push thrus	10							10	
	813		244		silicon carbide grinding papers	10				5	5			
	813		248	c	HEPA filters (8) - crushed w/ wood frame	100					100			
76649	814	105	250	c	HEPA filters (8) - crushed w/ wood frame	100					100			
	814		249	c	HEPA filters (8) - crushed w/ wood frame	100					100			
76650	815	100	254	c	pvc plastic pouches	50							50	
	815		254		rubber o-rings & power cords, can opener	30						30		
	815		254		silicon carbide grinding papers	20				10	10			
	815		251	c	HEPA filters (8) - crushed w/ wood frame	100					100			
76651	816	90	265	c	silicon carbide grinding papers	50				25	25			
	816		265		rags	25					25			
	816		265		dust mop head	5					5			
	816		265		plastic bag sheeting	15							15	
	816		265		plastic bottles push thrus	5							5	
	816		261	c	cotton rags	80					80			
	816		261		plastic sheet -- bags	10							10	
	816		261		rubber cotton gloves, rubber o-rings	5						5		

	816		261	plastic bottles push thrus	5							5
76652	817	95	263 c	rags	80					80		
	817		263	grinding paper	10				5	5		
	817		263	plastic push thru pouch, rubber gloves, o-ring	10							10
	817		262 c	plastic pouch	80							80
	817		262	rubber glove	10						10	
	817		262	rags	10					10		
77211	835	94	298 c	plastic bags/sheeting, pouch material	20							20
	835		298	polish cloth	5					5		
	835		298	plastic bottles push thrus	15							15
	835		298	rags, tubing, glove	15					15		
	835		298	paper / kleenex	30					30		
	835		298	pelletized clay	15				15			
	835		303 c	silicon carbide grinding papers	40				20	20		
	835		303	cotton mop	25					25		
	835		303	plastic sheets and containers	25							25
	835		303	rubber glove	5						5	
	835		303	floor sweeps	5			5				
77212	836	100	305 c	dust mop head	40					40		
	836		305	rags	40					40		
	836		305	plastic container	10							10
	836		305	rubber hose and wire, misc debris from table top	10						10	
	836		304 c	cotton dust mop heads	40					40		
	836		304	wire, rubber gloves, pouch material	20						20	
	836		304	plastic bottles, pelletized clay, push thrus	20							20
	836		304	kleenex, silicon carbide paper, leather shoe	20					20		
77213	837	100	299 c	silicon carbide grinding papers	35				17.5	17.5		
	837		299	paper - kleenex	10					10		
	837		299	plastic containers and sheeting	40							40
	837		299	cotton rags	10					10		
	837		299	sweeps from floor	5			5				
	837		301 c	cotton mops	30					30		
	837		301	rubber track and gloves	35						35	
	837		301	plastic sheets	10							10
	837		301	insulated electrical cords	15						15	
77214	838	130	300 n	iron and steel jigs and fixture parts	75	75						
	838		300	copper piping	20			20				
	838		300	aluminum	5		5					
	838		306 n	steel cut up tube containers	60	60						
	838		306	copper cut up tube containers	20			20				
	838		306	iron and steel misc jigs, fixtures, tools	10	10						
	838		306	aluminum cans and small tubes	10		10					
77215	839	145	302 n	broken glassware	50				50			
	839		302	steel tools - misc. jigs and fixtures	45	45						

	839		302	sweeps from floor	5			5				
	839		307 n	broken glassware	35				35			
	839		307	iron and steel tools, jigs and fixtures	35	35						
	839		307	aluminum cans, tubing	30		30					
78101	818	95	266 c	wire	5			5				
	818		266	plastic bags	15							15
	818		266	rags	75					75		
	818		266	plastic bottle (25%), oil dri (75%)	5				3.75			1.25
	818		259 c	cotton rags	60					60		
	818		259	cotton dust mop heads	30					30		
	818		259	plastics sheeting	5							5
	818		259	rubber gloves	5						5	
78102	819	100	270 c	plastic bag	25							25
	819		270	rags	20					20		
	819		270	plastic bottles	15							15
	819		270	kleenex	30					30		
	819		270	nylon polish cloths	10					10		
	819		268 c	rag	40					40		
	819		268	plastic bags - pouch material	20							20
	819		268	nylon cloth	10					10		
	819		268	grinding paper	15				7.5	7.5		
	819		268	oil dri containers	10				10			
	819		268	plastic bottles	5							5
78103	820	95	271 c	HEPA filters - crushed, filter material paper, particle boar	100					100		
	820		272 c	plastic vial	20							20
	820		272	rags	75					75		
	820		272	o-rings, plastics bads, oil dri, misc sweeps, non fuel met r	5							5
78104	821	100	276 c	plastic bags, bottles, push thrus	30							30
	821		276	paper towels, kleenex	10					10		
	821		276	rags	25					25		
	821		276	silicon carbide grinding papers	35				17.5	17.5		
	821		275 c	rubber gloves	15						15	
	821		275	rags	75					75		
	821		275	plastic push thru	10							10
78105	822	110	278 c	power cord for gm manipulator (10% metal, 90% plastic)	60				6			54
	822		278	cotton rags	30					30		
	822		278	paper	5					5		
	822		278	rubber gloves	5						5	
	822		277 c	rubber gloves	30						30	
	822		277	paper towels	5					5		
	822		277	plastic	30							30
	822		277	rags	15					15		
	822		277	cotton mop heads	20					20		

78106	823	100	279 c	silicon carbide grinding papers	50					25	25		
	823		279	plastic bags and containers	40								40
	823		279	rubber glove and o-rings	5							5	
	823		279	paper - kleenex	5						5		
	823		280 c	plastic pouches	60								60
	823		280	rubber gloves and electrical cords	35							35	
	823		280	paper	5						5		
78107	824	100	286 c	rags	10						10		
	824		286	silicon carbide grinding papers	15					7.5	7.5		
	824		286	plastic bottles, vials	55								55
	824		286	plastic bottle with pelletized clay	5								5
	824		286	rubber gum, rubber hose	10							10	
	824		286	misc. vials, glass caps and sweeps	5					5			
	824		288 c	rags	80						80		
	824		288	silicon carbide grinding papers	10					5	5		
	824		288	rubber gloves, plastic bottles and bags	10							5	5
78108	825	95	290 c	pouch material	10								10
	825		290	wire	50				50				
	825		290	plastic vials	10								10
	825		290	grinding paper	25					12.5	12.5		
	825		290	caps, some metal brass	5				5				
	825		292 c	paper kleenex, cardboard	55						55		
	825		292	polish cloth	10						10		
	825		292	plastic bags	20								20
	825		292	plastic bottles	15								15
78109	826	100	291 c	cardboard	15						15		
	826		291	grinding paper	50					25	25		
	826		291	plastic	20								20
	826		291	kleenex	10						10		
	826		291	rags, o-ring	5						5		
	826		293 c	rags	30						30		
	826		293	wire	5				5				
	826		293	silicon carbide grinding papers	10					5	5		
	826		293	rubber glove	30							30	
	826		293	o-rings, plastic pouch material, plastic bags, bottles, tube	25								25
78110	827	140	255 n	aluminum cans, tubes	80		80						
	827		255	steel tapes and hardware	10	10							
	827		255	glass 1 oz. Bottles	10					10			
	827		252 n	Al tubing	80		80						
	827		252	broken glassware	10					10			
	827		252	copper tubing	10				10				
78111	828	90	297 c	grinding paper	30					15	15		
	828		297	plastic, pouch material	30								30
	828		297	rags, polish cloth	15						15		
	828		297	plastic bottles, empty met mounts	20								20

	828		297	pelletized clay	5				5			
	828		294 c	rags	10					10		
	828		294	kleenex	30					30		
	828		294	rubber	5						5	
	828		294	paper	4					4		
	828		294	plastic	50							50
	828		294	cork	1				1			
78112	829	135	257 n	steel blower and misc. hardware	35	35						
	829		257	aluminum tubes, plates	40		40					
	829		257	copper tubes	20			20				
	829		257	broken glassware	5				5			
	829		260 n	glass from lights	50				50			
	829		260	Al tubing	25		25					
	829		260	misc. metal and tapes	25			25				
78113	830	130	256 n	aluminum cans, covers, tubes	80		80					
	830		256	steel pipe, tapes, tools	15	15						
	830		256	glassware	5				5			
	830		258 n	aluminum crushed cans, covers, tubes	75		75					
	830		258	steel mircometer, cables, hardware	10	10						
	830		258	tin cans	10			10				
	830		258	glassware	5				5			
78114	831	145	273 n	tape ss from manipulators	10	10						
	831		273	Al crushed cans	20		20					
	831		273	cut up tubes	20			20				
	831		273	broken glassware	40				40			
	831		273	misc. metals	10			10				
	831		269 n	glassware	20				20			
	831		269	steel - Al tubes and ss piping	80	40	40					
78115	832	135	274 n	tape ss from manipulators	15	15						
	832		274	broken glassware	30				30			
	832		274	Al - steel tubes - cans	40	20	20					
	832		274	unistrut	5	5						
	832		274	hunk of steel	10	10						
	832		281 n	aluminum pcs from mettler balance	60		60					
	832		281	glassware	10				10			
	832		281	stainless steel parts from mettler balance	20	20						
	832		281	copper tubing	10			10				
78116	833	140	296 n	Al cans, manipulator parts	70		70					
	833		296	glass, cut off silicon carbide blade	30				30			
	833		295 n	bottles, glass	40				40			
	833		295	ss tapes for manipulator	15	15						
	833		295	misc. metal	10			10				
	833		295	cans	30			30				
	833		295	tubes	5			5				

78117	834	165	287 n	structural materials, ss flats, samples tubes and rounds	75			75				
	834		287	Al tubes open ends	10		10					
	834		287	tin cans	15			15				
	834		289 n	steel	10	10						
	834		289	Al tubes and misc. hardware	60		60					
	834		289	glass	30				30			
81784	852	85	342 c	plastic sheets	10							10
	852		342	plastic containers	40							40
	852		342	cotton rags	30					30		
	852		342	fibre board backing, paper, grinding paper	20				10	10		
	852		341 c	polyethelene plastic sheets, bags, containers	70							70
	852		341	paper and cardboard	10					10		
	852		341	soda lime pellets (absorbant)	20				20			
81785	853	130	339 n	broken glassware	45				45			
	853		339	iron and steel tools, jigs and fixtures	35	35						
	853		339	aluminum tubing	20		20					
	853		335 n	iron and steel tools, jigs and fixtures	25	25						
	853		335	copper containers	25			25				
	853		335	aluminum bars and containers	25		25					
	853		335	broken glassware	25				25			
81786	854	95	340 c	polyethelene plastic sheets, containers	30							30
	854		340	rubber gloves and o-rings	30						30	
	854		340	cotton rags	40					40		
	854		337 c	polyethelene containers	60							60
	854		337	polyethelene plastic bags	20							20
	854		337	paper debris	10					10		
	854		337	small plastic containers and bottle caps	10							10
81787	855	90	338 c	cotton rags	30					30		
	855		338	cutting blades, silicon carbide grinding papers	30				15	15		
	855		338	polyethelene sheets, bags, containers	20							20
	855		338	polishing cloths	10					10		
	855		338	paper - kleenex, small box	10					10		
	855		333 c	fibreglass pre filters	10				10			
	855		333	HEPA filter paper	40					40		
	855		333	HEPA filter wooden frames	50					50		
81790	840	95	318 c	silicon carbide grinding papers	25				12.5	12.5		
	840		318	cotton rags	25					25		
	840		318	paper, kleenex	25					25		
	840		318	plastics, tubing, sheets, containers	25							25
	840		312 c	silicon carbide grinding papers	50				25	25		
	840		312	cotton rags	25					25		
	840		312	plastic sheets and containers	25							25

81791	842	90	316 c	cotton rags and dust mops	70					70		
	842		316	rubber glovebox gloves	20						20	
	842		316	plastic bags and containers	10							10
	842		314 c	plastic bags and containers	30							30
	842		314	paper - kleenex	30					30		
	842		314	rags and 2 mop heads	25					25		
	842		314	polishing cloths	5					5		
	842		314	pelletized clay	10				10			
81792	843	95	330 c	rubber glovebox gloves	40						40	
	843		330	cotton rags	55					55		
	843		330	silicon carbide grinding papers	5				2.5	2.5		
	843		331 c	cotton rags, polishing cloths	30					30		
	843		331	paper, cardboard, kleenex	20					20		
	843		331	silicon carbide grinding papers	20				10	10		
	843		331	plastic bags, sheeting, containers	30							30
81793	844	95	317 c	cotton rags	30					30		
	844		317	grinding paper	50				25	25		
	844		317	plastic	10							10
	844		317	rubber gloves	5						5	
	844		317	tape	5	5						
	844		321 c	plastics, tubing, sheets, containers	50							50
	844		321	cotton rags	10					10		
	844		321	paper, kleenex	20					20		
	844		321	silicon carbide grinding papers	10				5	5		
	844		321	pelletized clay	10				10			
81794	845	95	308 c	silicon carbide grinding papers	10				5	5		
	845		308	rubberized cutting blades	10						10	
	845		308	cotton rags	30					30		
	845		308	plastic sheets and containers	30							30
	845		308	pelletized clay	20				20			
	845		326 c	plastic	40							40
	845		326	rags	40					40		
	845		326	paper	10					10		
	845		326	glovebox gloves	10						10	
81795	846	120	320 n	aluminum cans and broken manipulator hands	40		40					
	846		320	iron and steel misc. containers and parts	30	30						
	846		320	broken glassware	30				30			
	846		327 n	aluminum cans	30		30					
	846		327	broken glassware	50				50			
	846		327	steel	10	10						
	846		327	aluminum	10		10					
81796	847	145	311 n	steel jigs, fixtures, tubing, tools	50	50						
	847		311	broken glassware	50				50			
	847		319 n	iron and steel jigs and fixture parts	40	40						

	847		319	assorted hand tools	20			20			
	847		319	aluminum tubes	3		3				
	847		319	inconnel tubes	2				2		
	847		319	broken glassware	35				35		
81797	848	140	310 n	iron and steel jigs, fixtures, tubing, tools	40	40					
	848		310	broken glassware	40				40		
	848		310	aluminum cans and tubing	20		20				
	848		322 n	broken glassware	20				20		
	848		322	firebricks - broken	15				15		
	848		322	iron and steel jigs and fixture parts	30	30					
	848		322	dry pump motor	30			30			
	848		322	inconnel specimens	5				5		
81798	849	115	324 n	broken glassware	30				30		
	849		324	iron and steel pcs.	10	10					
	849		324	manipulator tapes	40	40					
	849		324	aluminum cans	20		20				
	849		323 n	aluminum clam shell furnace	30		30				
	849		323	firebrick clam shell furnace	20				20		
	849		323	stainless steel inner parts	40	40					
	849		323	power cords attached	5						5
	849		323	broken glassware	5				5		
81799	841	105	309 c	rubber gloves from glove repair area	40						40
	841		309	paper, kleenex	20					20	
	841		309	plastic containers and sheeting	30						30
	841		309	table sweeps	5			5			
	841		309	rubberized power cord	5						5
	841		325 c	cotton rags	30					30	
	841		325	pelletized clay	20				20		
	841		325	power cords	10						10
	841		325	tygon tubing	5						5
	841		325	paper boxes	10					10	
	841		325	micarta disk	20						20
	841		325	plastic sheets, containers	5						5
STRU950790	790	112	148 c	rubber resin broken cutting blades	30						30
	790		148	broken silicon carbide cutting blades	20				20		
	790		148	pelletized clay absorbent w/ 0.2 liter neutralized etchant	20				20		
	790		148	polyethelene plastic bottles	10						10
	790		148	kleenex - paper	20					20	
	790		187 c	rubber gloves	40						40
	790		187	polyethelene containers	20						20
	790		187	paper - cardboard	20					20	
	790		187	silicon carbide grinding papers	10				5	5	
	790		187	cotton rags	5					5	
	790		187	nylon polish cloths	5					5	

Drum ID	Data	Total	Average Vol%	Density (lb/gal)	Vol%*Density	Parameter	Drum
790	Sum of Iron metals		0	64.09	0.00	Iron metals	790
	Sum of Aluminum		0	22.78	0.00	Aluminum	790
	Sum of Other metals		0	44.23	0.00	Other metals	790
	Sum of Other inorganic	45.00	22.5	18.61	418.73	Other inorganic	790
	Sum of Cellulosics	55.00	27.5	7.72	212.29	Cellulosics	790
	Sum of Rubber	70.00	35	9.18	321.30	Rubber	790
	Sum of Plastics	30.00	15	7.68	115.17	Plastics	790
	Sum of Organic Matrix		0	9.10	0.00	Organic Matrix	790
	Count of Combustible/NC	2					
812	Sum of Iron metals		0	64.09	0.00	Iron metals	812
	Sum of Aluminum		0	22.78	0.00	Aluminum	812
	Sum of Other metals	2.50	1.25	44.23	55.29	Other metals	812
	Sum of Other inorganic	20.00	10	18.61	186.10	Other inorganic	812
	Sum of Cellulosics	145.00	72.5	7.72	559.66	Cellulosics	812
	Sum of Rubber		0	9.18	0.00	Rubber	812
	Sum of Plastics	32.50	16.25	7.68	124.76	Plastics	812
	Sum of Organic Matrix		0	9.10	0.00	Organic Matrix	812
	Count of Combustible/NC	2					
813	Sum of Iron metals		0	64.09	0.00	Iron metals	813
	Sum of Aluminum		0	22.78	0.00	Aluminum	813
	Sum of Other metals	5.00	2.5	44.23	110.58	Other metals	813
	Sum of Other inorganic	57.50	28.75	18.61	535.04	Other inorganic	813
	Sum of Cellulosics	105.00	52.5	7.72	405.27	Cellulosics	813
	Sum of Rubber	5.00	2.5	9.18	22.95	Rubber	813
	Sum of Plastics	27.50	13.75	7.68	105.57	Plastics	813
	Sum of Organic Matrix		0	9.10	0.00	Organic Matrix	813
	Count of Combustible/NC	2					
814	Sum of Iron metals		0	64.09	0.00	Iron metals	814
	Sum of Aluminum		0	22.78	0.00	Aluminum	814
	Sum of Other metals		0	44.23	0.00	Other metals	814
	Sum of Other inorganic		0	18.61	0.00	Other inorganic	814
	Sum of Cellulosics	200.00	100	7.72	771.95	Cellulosics	814
	Sum of Rubber		0	9.18	0.00	Rubber	814
	Sum of Plastics		0	7.68	0.00	Plastics	814
	Sum of Organic Matrix		0	9.10	0.00	Organic Matrix	814
	Count of Combustible/NC	2					
815	Sum of Iron metals		0	64.09	0.00	Iron metals	815
	Sum of Aluminum		0	22.78	0.00	Aluminum	815
	Sum of Other metals		0	44.23	0.00	Other metals	815
	Sum of Other inorganic	10.00	5	18.61	93.05	Other inorganic	815
	Sum of Cellulosics	110.00	55	7.72	424.57	Cellulosics	815
	Sum of Rubber	30.00	15	9.18	137.70	Rubber	815
	Sum of Plastics	50.00	25	7.68	191.94	Plastics	815
	Sum of Organic Matrix		0	9.10	0.00	Organic Matrix	815
	Count of Combustible/NC	2					
816	Sum of Iron metals		0	64.09	0.00	Iron metals	816
	Sum of Aluminum		0	22.78	0.00	Aluminum	816
	Sum of Other metals		0	44.23	0.00	Other metals	816
	Sum of Other inorganic	25.00	12.5	18.61	232.63	Other inorganic	816
	Sum of Cellulosics	135.00	67.5	7.72	521.07	Cellulosics	816
	Sum of Rubber	5.00	2.5	9.18	22.95	Rubber	816
	Sum of Plastics	35.00	17.5	7.68	134.36	Plastics	816
	Sum of Organic Matrix		0	9.10	0.00	Organic Matrix	816
	Count of Combustible/NC	2					
817	Sum of Iron metals		0	64.09	0.00	Iron metals	817
	Sum of Aluminum		0	22.78	0.00	Aluminum	817
	Sum of Other metals		0	44.23	0.00	Other metals	817
	Sum of Other inorganic	5.00	2.5	18.61	46.53	Other inorganic	817

817	Sum of Cellulosics	95.00	47.5	7.72	366.68	Cellulosics	817
	Sum of Rubber	10.00	5	9.18	45.90	Rubber	817
	Sum of Plastics	90.00	45	7.68	345.50	Plastics	817
	Sum of Organic Matrix		0	9.10	0.00	Organic Matrix	817
	Count of Combustible/NC	2					
818	Sum of Iron metals		0	64.09	0.00	Iron metals	818
	Sum of Aluminum		0	22.78	0.00	Aluminum	818
	Sum of Other metals	5.00	2.5	44.23	110.58	Other metals	818
	Sum of Other inorganic	3.75	1.875	18.61	34.89	Other inorganic	818
	Sum of Cellulosics	165.00	82.5	7.72	636.86	Cellulosics	818
	Sum of Rubber	5.00	2.5	9.18	22.95	Rubber	818
	Sum of Plastics	21.25	10.625	7.68	81.58	Plastics	818
	Sum of Organic Matrix		0	9.10	0.00	Organic Matrix	818
	Count of Combustible/NC	2					
819	Sum of Iron metals		0	64.09	0.00	Iron metals	819
	Sum of Aluminum		0	22.78	0.00	Aluminum	819
	Sum of Other metals		0	44.23	0.00	Other metals	819
	Sum of Other inorganic	17.50	8.75	18.61	162.84	Other inorganic	819
	Sum of Cellulosics	117.50	58.75	7.72	453.52	Cellulosics	819
	Sum of Rubber		0	9.18	0.00	Rubber	819
	Sum of Plastics	65.00	32.5	7.68	249.53	Plastics	819
	Sum of Organic Matrix		0	9.10	0.00	Organic Matrix	819
	Count of Combustible/NC	2					
820	Sum of Iron metals		0	64.09	0.00	Iron metals	820
	Sum of Aluminum		0	22.78	0.00	Aluminum	820
	Sum of Other metals		0	44.23	0.00	Other metals	820
	Sum of Other inorganic		0	18.61	0.00	Other inorganic	820
	Sum of Cellulosics	175.00	87.5	7.72	675.46	Cellulosics	820
	Sum of Rubber		0	9.18	0.00	Rubber	820
	Sum of Plastics	25.00	12.5	7.68	95.97	Plastics	820
	Sum of Organic Matrix		0	9.10	0.00	Organic Matrix	820
	Count of Combustible/NC	2					
821	Sum of Iron metals		0	64.09	0.00	Iron metals	821
	Sum of Aluminum		0	22.78	0.00	Aluminum	821
	Sum of Other metals		0	44.23	0.00	Other metals	821
	Sum of Other inorganic	17.50	8.75	18.61	162.84	Other inorganic	821
	Sum of Cellulosics	127.50	63.75	7.72	492.12	Cellulosics	821
	Sum of Rubber	15.00	7.5	9.18	68.85	Rubber	821
	Sum of Plastics	40.00	20	7.68	153.56	Plastics	821
	Sum of Organic Matrix		0	9.10	0.00	Organic Matrix	821
	Count of Combustible/NC	2					
822	Sum of Iron metals		0	64.09	0.00	Iron metals	822
	Sum of Aluminum		0	22.78	0.00	Aluminum	822
	Sum of Other metals		0	44.23	0.00	Other metals	822
	Sum of Other inorganic	6.00	3	18.61	55.83	Other inorganic	822
	Sum of Cellulosics	75.00	37.5	7.72	289.48	Cellulosics	822
	Sum of Rubber	35.00	17.5	9.18	160.65	Rubber	822
	Sum of Plastics	84.00	42	7.68	322.47	Plastics	822
	Sum of Organic Matrix		0	9.10	0.00	Organic Matrix	822
	Count of Combustible/NC	2					
823	Sum of Iron metals		0	64.09	0.00	Iron metals	823
	Sum of Aluminum		0	22.78	0.00	Aluminum	823
	Sum of Other metals		0	44.23	0.00	Other metals	823
	Sum of Other inorganic	25.00	12.5	18.61	232.63	Other inorganic	823
	Sum of Cellulosics	35.00	17.5	7.72	135.09	Cellulosics	823
	Sum of Rubber	40.00	20	9.18	183.60	Rubber	823
	Sum of Plastics	100.00	50	7.68	383.89	Plastics	823
	Sum of Organic Matrix		0	9.10	0.00	Organic Matrix	823
	Count of Combustible/NC	2					

824	Sum of Iron metals		0	64.09	0.00	Iron metals	824
	Sum of Aluminum		0	22.78	0.00	Aluminum	824
	Sum of Other metals		0	44.23	0.00	Other metals	824
	Sum of Other inorganic	17.50	8.75	18.61	162.84	Other inorganic	824
	Sum of Cellulosics	102.50	51.25	7.72	395.62	Cellulosics	824
	Sum of Rubber	15.00	7.5	9.18	68.85	Rubber	824
	Sum of Plastics	65.00	32.5	7.68	249.53	Plastics	824
	Sum of Organic Matrix		0	9.10	0.00	Organic Matrix	824
	Count of Combustible/NC	2					
825	Sum of Iron metals		0	64.09	0.00	Iron metals	825
	Sum of Aluminum		0	22.78	0.00	Aluminum	825
	Sum of Other metals	55.00	27.5	44.23	1216.34	Other metals	825
	Sum of Other inorganic	12.50	6.25	18.61	116.31	Other inorganic	825
	Sum of Cellulosics	77.50	38.75	7.72	299.13	Cellulosics	825
	Sum of Rubber		0	9.18	0.00	Rubber	825
	Sum of Plastics	55.00	27.5	7.68	211.14	Plastics	825
	Sum of Organic Matrix		0	9.10	0.00	Organic Matrix	825
	Count of Combustible/NC	2					
826	Sum of Iron metals		0	64.09	0.00	Iron metals	826
	Sum of Aluminum		0	22.78	0.00	Aluminum	826
	Sum of Other metals	5.00	2.5	44.23	110.58	Other metals	826
	Sum of Other inorganic	30.00	15	18.61	279.15	Other inorganic	826
	Sum of Cellulosics	90.00	45	7.72	347.38	Cellulosics	826
	Sum of Rubber	30.00	15	9.18	137.70	Rubber	826
	Sum of Plastics	45.00	22.5	7.68	172.75	Plastics	826
	Sum of Organic Matrix		0	9.10	0.00	Organic Matrix	826
	Count of Combustible/NC	2					
827	Sum of Iron metals	10.00	5	64.09	320.46	Iron metals	827
	Sum of Aluminum	160.00	80	22.78	1822.63	Aluminum	827
	Sum of Other metals	10.00	5	44.23	221.15	Other metals	827
	Sum of Other inorganic	20.00	10	18.61	186.10	Other inorganic	827
	Sum of Cellulosics		0	7.72	0.00	Cellulosics	827
	Sum of Rubber		0	9.18	0.00	Rubber	827
	Sum of Plastics		0	7.68	0.00	Plastics	827
	Sum of Organic Matrix		0	9.10	0.00	Organic Matrix	827
	Count of Combustible/NC	2					
828	Sum of Iron metals		0	64.09	0.00	Iron metals	828
	Sum of Aluminum		0	22.78	0.00	Aluminum	828
	Sum of Other metals		0	44.23	0.00	Other metals	828
	Sum of Other inorganic	21.00	10.5	18.61	195.41	Other inorganic	828
	Sum of Cellulosics	74.00	37	7.72	285.62	Cellulosics	828
	Sum of Rubber	5.00	2.5	9.18	22.95	Rubber	828
	Sum of Plastics	100.00	50	7.68	383.89	Plastics	828
	Sum of Organic Matrix		0	9.10	0.00	Organic Matrix	828
	Count of Combustible/NC	2					
829	Sum of Iron metals	35.00	17.5	64.09	1121.62	Iron metals	829
	Sum of Aluminum	65.00	32.5	22.78	740.44	Aluminum	829
	Sum of Other metals	45.00	22.5	44.23	995.19	Other metals	829
	Sum of Other inorganic	55.00	27.5	18.61	511.78	Other inorganic	829
	Sum of Cellulosics		0	7.72	0.00	Cellulosics	829
	Sum of Rubber		0	9.18	0.00	Rubber	829
	Sum of Plastics		0	7.68	0.00	Plastics	829
	Sum of Organic Matrix		0	9.10	0.00	Organic Matrix	829
	Count of Combustible/NC	2					
830	Sum of Iron metals	25.00	12.5	64.09	801.16	Iron metals	830
	Sum of Aluminum	155.00	77.5	22.78	1765.68	Aluminum	830
	Sum of Other metals	10.00	5	44.23	221.15	Other metals	830
	Sum of Other inorganic	10.00	5	18.61	93.05	Other inorganic	830
	Sum of Cellulosics		0	7.72	0.00	Cellulosics	830

830	Sum of Rubber		0	9.18	0.00	Rubber	830
	Sum of Plastics		0	7.68	0.00	Plastics	830
	Sum of Organic Matrix		0	9.10	0.00	Organic Matrix	830
	Count of Combustible/NC	2					
831	Sum of Iron metals	50.00	25	64.09	1602.31	Iron metals	831
	Sum of Aluminum	60.00	30	22.78	683.49	Aluminum	831
	Sum of Other metals	30.00	15	44.23	663.46	Other metals	831
	Sum of Other inorganic	60.00	30	18.61	558.31	Other inorganic	831
	Sum of Cellulosics		0	7.72	0.00	Cellulosics	831
	Sum of Rubber		0	9.18	0.00	Rubber	831
	Sum of Plastics		0	7.68	0.00	Plastics	831
	Sum of Organic Matrix		0	9.10	0.00	Organic Matrix	831
	Count of Combustible/NC	2					
832	Sum of Iron metals	70.00	35	64.09	2243.24	Iron metals	832
	Sum of Aluminum	80.00	40	22.78	911.32	Aluminum	832
	Sum of Other metals	10.00	5	44.23	221.15	Other metals	832
	Sum of Other inorganic	40.00	20	18.61	372.20	Other inorganic	832
	Sum of Cellulosics		0	7.72	0.00	Cellulosics	832
	Sum of Rubber		0	9.18	0.00	Rubber	832
	Sum of Plastics		0	7.68	0.00	Plastics	832
	Sum of Organic Matrix		0	9.10	0.00	Organic Matrix	832
	Count of Combustible/NC	2					
833	Sum of Iron metals	15.00	7.5	64.09	480.69	Iron metals	833
	Sum of Aluminum	70.00	35	22.78	797.40	Aluminum	833
	Sum of Other metals	45.00	22.5	44.23	995.19	Other metals	833
	Sum of Other inorganic	70.00	35	18.61	651.36	Other inorganic	833
	Sum of Cellulosics		0	7.72	0.00	Cellulosics	833
	Sum of Rubber		0	9.18	0.00	Rubber	833
	Sum of Plastics		0	7.68	0.00	Plastics	833
	Sum of Organic Matrix		0	9.10	0.00	Organic Matrix	833
	Count of Combustible/NC	2					
834	Sum of Iron metals	10.00	5	64.09	320.46	Iron metals	834
	Sum of Aluminum	70.00	35	22.78	797.40	Aluminum	834
	Sum of Other metals	90.00	45	44.23	1990.38	Other metals	834
	Sum of Other inorganic	30.00	15	18.61	279.15	Other inorganic	834
	Sum of Cellulosics		0	7.72	0.00	Cellulosics	834
	Sum of Rubber		0	9.18	0.00	Rubber	834
	Sum of Plastics		0	7.68	0.00	Plastics	834
	Sum of Organic Matrix		0	9.10	0.00	Organic Matrix	834
	Count of Combustible/NC	2					
835	Sum of Iron metals		0	64.09	0.00	Iron metals	835
	Sum of Aluminum		0	22.78	0.00	Aluminum	835
	Sum of Other metals	5.00	2.5	44.23	110.58	Other metals	835
	Sum of Other inorganic	35.00	17.5	18.61	325.68	Other inorganic	835
	Sum of Cellulosics	95.00	47.5	7.72	366.68	Cellulosics	835
	Sum of Rubber	5.00	2.5	9.18	22.95	Rubber	835
	Sum of Plastics	60.00	30	7.68	230.33	Plastics	835
	Sum of Organic Matrix		0	9.10	0.00	Organic Matrix	835
	Count of Combustible/NC	2					
836	Sum of Iron metals		0	64.09	0.00	Iron metals	836
	Sum of Aluminum		0	22.78	0.00	Aluminum	836
	Sum of Other metals		0	44.23	0.00	Other metals	836
	Sum of Other inorganic		0	18.61	0.00	Other inorganic	836
	Sum of Cellulosics	140.00	70	7.72	540.36	Cellulosics	836
	Sum of Rubber	30.00	15	9.18	137.70	Rubber	836
	Sum of Plastics	30.00	15	7.68	115.17	Plastics	836
	Sum of Organic Matrix		0	9.10	0.00	Organic Matrix	836
	Count of Combustible/NC	2					
837	Sum of Iron metals		0	64.09	0.00	Iron metals	837

837	Sum of Aluminum		0	22.78	0.00	Aluminum	837
	Sum of Other metals	5.00	2.5	44.23	110.58	Other metals	837
	Sum of Other inorganic	17.50	8.75	18.61	162.84	Other inorganic	837
	Sum of Cellulosics	67.50	33.75	7.72	260.53	Cellulosics	837
	Sum of Rubber	50.00	25	9.18	229.50	Rubber	837
	Sum of Plastics	50.00	25	7.68	191.94	Plastics	837
	Sum of Organic Matrix		0	9.10	0.00	Organic Matrix	837
	Count of Combustible/NC	2					
838	Sum of Iron metals	145.00	72.5	64.09	4646.71	Iron metals	838
	Sum of Aluminum	15.00	7.5	22.78	170.87	Aluminum	838
	Sum of Other metals	40.00	20	44.23	884.61	Other metals	838
	Sum of Other inorganic		0	18.61	0.00	Other inorganic	838
	Sum of Cellulosics		0	7.72	0.00	Cellulosics	838
	Sum of Rubber		0	9.18	0.00	Rubber	838
	Sum of Plastics		0	7.68	0.00	Plastics	838
	Sum of Organic Matrix		0	9.10	0.00	Organic Matrix	838
	Count of Combustible/NC	2					
839	Sum of Iron metals	80.00	40	64.09	2563.70	Iron metals	839
	Sum of Aluminum	30.00	15	22.78	341.74	Aluminum	839
	Sum of Other metals	5.00	2.5	44.23	110.58	Other metals	839
	Sum of Other inorganic	85.00	42.5	18.61	790.93	Other inorganic	839
	Sum of Cellulosics		0	7.72	0.00	Cellulosics	839
	Sum of Rubber		0	9.18	0.00	Rubber	839
	Sum of Plastics		0	7.68	0.00	Plastics	839
	Sum of Organic Matrix		0	9.10	0.00	Organic Matrix	839
	Count of Combustible/NC	2					
840	Sum of Iron metals		0	64.09	0.00	Iron metals	840
	Sum of Aluminum		0	22.78	0.00	Aluminum	840
	Sum of Other metals		0	44.23	0.00	Other metals	840
	Sum of Other inorganic	37.50	18.75	18.61	348.94	Other inorganic	840
	Sum of Cellulosics	112.50	56.25	7.72	434.22	Cellulosics	840
	Sum of Rubber		0	9.18	0.00	Rubber	840
	Sum of Plastics	50.00	25	7.68	191.94	Plastics	840
	Sum of Organic Matrix		0	9.10	0.00	Organic Matrix	840
	Count of Combustible/NC	2					
841	Sum of Iron metals		0	64.09	0.00	Iron metals	841
	Sum of Aluminum		0	22.78	0.00	Aluminum	841
	Sum of Other metals	5.00	2.5	44.23	110.58	Other metals	841
	Sum of Other inorganic	20.00	10	18.61	186.10	Other inorganic	841
	Sum of Cellulosics	60.00	30	7.72	231.58	Cellulosics	841
	Sum of Rubber	55.00	27.5	9.18	252.45	Rubber	841
	Sum of Plastics	60.00	30	7.68	230.33	Plastics	841
	Sum of Organic Matrix		0	9.10	0.00	Organic Matrix	841
	Count of Combustible/NC	2					
842	Sum of Iron metals		0	64.09	0.00	Iron metals	842
	Sum of Aluminum		0	22.78	0.00	Aluminum	842
	Sum of Other metals		0	44.23	0.00	Other metals	842
	Sum of Other inorganic	10.00	5	18.61	93.05	Other inorganic	842
	Sum of Cellulosics	130.00	65	7.72	501.77	Cellulosics	842
	Sum of Rubber	20.00	10	9.18	91.80	Rubber	842
	Sum of Plastics	40.00	20	7.68	153.56	Plastics	842
	Sum of Organic Matrix		0	9.10	0.00	Organic Matrix	842
	Count of Combustible/NC	2					
843	Sum of Iron metals		0	64.09	0.00	Iron metals	843
	Sum of Aluminum		0	22.78	0.00	Aluminum	843
	Sum of Other metals		0	44.23	0.00	Other metals	843
	Sum of Other inorganic	12.50	6.25	18.61	116.31	Other inorganic	843
	Sum of Cellulosics	117.50	58.75	7.72	453.52	Cellulosics	843
	Sum of Rubber	40.00	20	9.18	183.60	Rubber	843

843	Sum of Plastics	30.00	15	7.68	115.17	Plastics	843
	Sum of Organic Matrix		0	9.10	0.00	Organic Matrix	843
	Count of Combustible/NC	2					
844	Sum of Iron metals	5.00	2.5	64.09	160.23	Iron metals	844
	Sum of Aluminum		0	22.78	0.00	Aluminum	844
	Sum of Other metals		0	44.23	0.00	Other metals	844
	Sum of Other inorganic	40.00	20	18.61	372.20	Other inorganic	844
	Sum of Cellulosics	90.00	45	7.72	347.38	Cellulosics	844
	Sum of Rubber	5.00	2.5	9.18	22.95	Rubber	844
	Sum of Plastics	60.00	30	7.68	230.33	Plastics	844
	Sum of Organic Matrix		0	9.10	0.00	Organic Matrix	844
	Count of Combustible/NC	2					
845	Sum of Iron metals		0	64.09	0.00	Iron metals	845
	Sum of Aluminum		0	22.78	0.00	Aluminum	845
	Sum of Other metals		0	44.23	0.00	Other metals	845
	Sum of Other inorganic	25.00	12.5	18.61	232.63	Other inorganic	845
	Sum of Cellulosics	85.00	42.5	7.72	328.08	Cellulosics	845
	Sum of Rubber	20.00	10	9.18	91.80	Rubber	845
	Sum of Plastics	70.00	35	7.68	268.72	Plastics	845
	Sum of Organic Matrix		0	9.10	0.00	Organic Matrix	845
	Count of Combustible/NC	2					
846	Sum of Iron metals	40.00	20	64.09	1281.85	Iron metals	846
	Sum of Aluminum	80.00	40	22.78	911.32	Aluminum	846
	Sum of Other metals		0	44.23	0.00	Other metals	846
	Sum of Other inorganic	80.00	40	18.61	744.41	Other inorganic	846
	Sum of Cellulosics		0	7.72	0.00	Cellulosics	846
	Sum of Rubber		0	9.18	0.00	Rubber	846
	Sum of Plastics		0	7.68	0.00	Plastics	846
	Sum of Organic Matrix		0	9.10	0.00	Organic Matrix	846
	Count of Combustible/NC	2					
847	Sum of Iron metals	90.00	45	64.09	2884.17	Iron metals	847
	Sum of Aluminum	3.00	1.5	22.78	34.17	Aluminum	847
	Sum of Other metals	20.00	10	44.23	442.31	Other metals	847
	Sum of Other inorganic	87.00	43.5	18.61	809.54	Other inorganic	847
	Sum of Cellulosics		0	7.72	0.00	Cellulosics	847
	Sum of Rubber		0	9.18	0.00	Rubber	847
	Sum of Plastics		0	7.68	0.00	Plastics	847
	Sum of Organic Matrix		0	9.10	0.00	Organic Matrix	847
	Count of Combustible/NC	2					
848	Sum of Iron metals	70.00	35	64.09	2243.24	Iron metals	848
	Sum of Aluminum	20.00	10	22.78	227.83	Aluminum	848
	Sum of Other metals	30.00	15	44.23	663.46	Other metals	848
	Sum of Other inorganic	80.00	40	18.61	744.41	Other inorganic	848
	Sum of Cellulosics		0	7.72	0.00	Cellulosics	848
	Sum of Rubber		0	9.18	0.00	Rubber	848
	Sum of Plastics		0	7.68	0.00	Plastics	848
	Sum of Organic Matrix		0	9.10	0.00	Organic Matrix	848
	Count of Combustible/NC	2					
849	Sum of Iron metals	90.00	45	64.09	2884.17	Iron metals	849
	Sum of Aluminum	50.00	25	22.78	569.57	Aluminum	849
	Sum of Other metals		0	44.23	0.00	Other metals	849
	Sum of Other inorganic	55.00	27.5	18.61	511.78	Other inorganic	849
	Sum of Cellulosics		0	7.72	0.00	Cellulosics	849
	Sum of Rubber	5.00	2.5	9.18	22.95	Rubber	849
	Sum of Plastics		0	7.68	0.00	Plastics	849
	Sum of Organic Matrix		0	9.10	0.00	Organic Matrix	849
	Count of Combustible/NC	2					
852	Sum of Iron metals		0	64.09	0.00	Iron metals	852
	Sum of Aluminum		0	22.78	0.00	Aluminum	852

852	Sum of Other metals		0	44.23	0.00	Other metals	852
	Sum of Other inorganic	30.00	15	18.61	279.15	Other inorganic	852
	Sum of Cellulosics	50.00	25	7.72	192.99	Cellulosics	852
	Sum of Rubber		0	9.18	0.00	Rubber	852
	Sum of Plastics	120.00	60	7.68	460.67	Plastics	852
	Sum of Organic Matrix		0	9.10	0.00	Organic Matrix	852
	Count of Combustible/NC	2					
853	Sum of Iron metals	60.00	30	64.09	1922.78	Iron metals	853
	Sum of Aluminum	45.00	22.5	22.78	512.62	Aluminum	853
	Sum of Other metals	25.00	12.5	44.23	552.88	Other metals	853
	Sum of Other inorganic	70.00	35	18.61	651.36	Other inorganic	853
	Sum of Cellulosics		0	7.72	0.00	Cellulosics	853
	Sum of Rubber		0	9.18	0.00	Rubber	853
	Sum of Plastics		0	7.68	0.00	Plastics	853
	Sum of Organic Matrix		0	9.10	0.00	Organic Matrix	853
	Count of Combustible/NC	2					
854	Sum of Iron metals		0	64.09	0.00	Iron metals	854
	Sum of Aluminum		0	22.78	0.00	Aluminum	854
	Sum of Other metals		0	44.23	0.00	Other metals	854
	Sum of Other inorganic		0	18.61	0.00	Other inorganic	854
	Sum of Cellulosics	50.00	25	7.72	192.99	Cellulosics	854
	Sum of Rubber	30.00	15	9.18	137.70	Rubber	854
	Sum of Plastics	120.00	60	7.68	460.67	Plastics	854
	Sum of Organic Matrix		0	9.10	0.00	Organic Matrix	854
	Count of Combustible/NC	2					
855	Sum of Iron metals		0	64.09	0.00	Iron metals	855
	Sum of Aluminum		0	22.78	0.00	Aluminum	855
	Sum of Other metals		0	44.23	0.00	Other metals	855
	Sum of Other inorganic	25.00	12.5	18.61	232.63	Other inorganic	855
	Sum of Cellulosics	155.00	77.5	7.72	598.26	Cellulosics	855
	Sum of Rubber		0	9.18	0.00	Rubber	855
	Sum of Plastics	20.00	10	7.68	76.78	Plastics	855
	Sum of Organic Matrix		0	9.10	0.00	Organic Matrix	855
	Count of Combustible/NC	2					

Sum of Vol%*Density	Parameter								
Drum	Iron metals	Aluminum	Other metals	Other inorganic	Cellulosics	Rubber	Plastics	Organic Matrix	Grand Total
790	0.00	0.00	0.00	418.73	212.29	321.30	115.17	0.00	1067.48
812	0.00	0.00	55.29	186.10	559.66	0.00	124.76	0.00	925.82
813	0.00	0.00	110.58	535.04	405.27	22.95	105.57	0.00	1179.41
814	0.00	0.00	0.00	0.00	771.95	0.00	0.00	0.00	771.95
815	0.00	0.00	0.00	93.05	424.57	137.70	191.94	0.00	847.27
816	0.00	0.00	0.00	232.63	521.07	22.95	134.36	0.00	911.00
817	0.00	0.00	0.00	46.53	366.68	45.90	345.50	0.00	804.60
818	0.00	0.00	110.58	34.89	636.86	22.95	81.58	0.00	886.85
819	0.00	0.00	0.00	162.84	453.52	0.00	249.53	0.00	865.89
820	0.00	0.00	0.00	0.00	675.46	0.00	95.97	0.00	771.43
821	0.00	0.00	0.00	162.84	492.12	68.85	153.56	0.00	877.36
822	0.00	0.00	0.00	55.83	289.48	160.65	322.47	0.00	828.43
823	0.00	0.00	0.00	232.63	135.09	183.60	383.89	0.00	935.21
824	0.00	0.00	0.00	162.84	395.62	68.85	249.53	0.00	876.84
825	0.00	0.00	1216.34	116.31	299.13	0.00	211.14	0.00	1842.92
826	0.00	0.00	110.58	279.15	347.38	137.70	172.75	0.00	1047.56
827	320.46	1822.63	221.15	186.10	0.00	0.00	0.00	0.00	2550.35
828	0.00	0.00	0.00	195.41	285.62	22.95	383.89	0.00	887.87
829	1121.62	740.44	995.19	511.78	0.00	0.00	0.00	0.00	3369.03
830	801.16	1765.68	221.15	93.05	0.00	0.00	0.00	0.00	2881.04
831	1602.31	683.49	663.46	558.31	0.00	0.00	0.00	0.00	3507.57
832	2243.24	911.32	221.15	372.20	0.00	0.00	0.00	0.00	3747.91
833	480.69	797.40	995.19	651.36	0.00	0.00	0.00	0.00	2924.64
834	320.46	797.40	1990.38	279.15	0.00	0.00	0.00	0.00	3387.39
835	0.00	0.00	110.58	325.68	366.68	22.95	230.33	0.00	1056.21
836	0.00	0.00	0.00	0.00	540.36	137.70	115.17	0.00	793.23
837	0.00	0.00	110.58	162.84	260.53	229.50	191.94	0.00	955.39
838	4646.71	170.87	884.61	0.00	0.00	0.00	0.00	0.00	5702.20
839	2563.70	341.74	110.58	790.93	0.00	0.00	0.00	0.00	3806.96
840	0.00	0.00	0.00	348.94	434.22	0.00	191.94	0.00	975.11
841	0.00	0.00	110.58	186.10	231.58	252.45	230.33	0.00	1011.04
842	0.00	0.00	0.00	93.05	501.77	91.80	153.56	0.00	840.17
843	0.00	0.00	0.00	116.31	453.52	183.60	115.17	0.00	868.60
844	160.23	0.00	0.00	372.20	347.38	22.95	230.33	0.00	1133.10
845	0.00	0.00	0.00	232.63	328.08	91.80	268.72	0.00	921.23
846	1281.85	911.32	0.00	744.41	0.00	0.00	0.00	0.00	2937.58
847	2884.17	34.17	442.31	809.54	0.00	0.00	0.00	0.00	4170.19
848	2243.24	227.83	663.46	744.41	0.00	0.00	0.00	0.00	3878.94
849	2884.17	569.57	0.00	511.78	0.00	22.95	0.00	0.00	3988.47
852	0.00	0.00	0.00	279.15	192.99	0.00	460.67	0.00	932.81
853	1922.78	512.62	552.88	651.36	0.00	0.00	0.00	0.00	3639.63

854	0.00	0.00	0.00	0.00	192.99	137.70	460.67	0.00	791.35
855	0.00	0.00	0.00	232.63	598.26	0.00	76.78	0.00	907.67

Attachment 2 - CCP Records Transmittal/Receiving Form

CCP Central Records/Records Custodian, 4021 National Parks Highway - MS: GSA 203, Carlsbad, New Mexico 88220

Telephone Number: 505-234-7523, 505-234-7233, 505-234-7617
Fax Number: 505-234-7014

☒ Original Record
☐ Fax Record
☐ Electronic Record

Attn:	Records Custodian	From:	Kevin Peters
Ship to:	CCP Central Records/ CCP Records Custodian	Site:	Argonne National Laboratory-East RH-TRU Waste
	4021 National Parks Highway - MS GSA 203	Company:	Technical Specialists, LLC
	Carlsbad, NM 88220	Telephone Number:	303-980-0543
		Date Sent:	3-24-06
Telephone Number:	505-234-7523		

Document Number	Title/Description	Record Date	Total Pages
C333	Attachment 3 - Acceptable Knowledge Source Document Summary for CCP-AK-INL-500 and CCP-AK-ANLE-500	3/22/2006	2
	Memo to CCP Central Records: Assessmentof Waste material Parameters (WMPs) for Waste Stream AERHDM	1/1/2006	19 DMC 3-23-06
	N/A		

Comments
None

Acceptance/Rejection Signature and Date

Records Accepted ☒ Christal Ingram (Signature) Christal Ingram (Printed Name) 3-31-06 (Date)

Records Rejected ☐ _____ Signature _____ Printed Name _____ Date

Reason for Rejection: _____

Re-submittal: _____ Signature _____ Printed Name _____ Date

P.01

TRANSACTION REPORT

APR-05-2006 WED 09:30 AM

FOR: CCP RECORDS 15052347014

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Attachment 2 - CCP Records Transmittal/Receiving Form

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From: Kevin Peters

Site: Argonne National Laboratory-East RH-TRU Waste

Company: Technical Specialists, LLC

Telephone Number: 303-980-0543

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Document Number	Title/Description	Record Date	Total Pages
C333	Attachment 3 - Acceptable Knowledge Source Document Summary for CCP-AK-INL-500 and CCP-AK-ANLE-500	3/22/2006	2
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Attachment 3 - Acceptable Knowledge Source Document Summary

Waste Stream Number(s): AERHDM, ID-ANLE-S5000

Site(s): Argonne Generated RH TRU Waste	**Source Document Tracking Number:** C351
Acceptable Knowledge Documentation Type: ☐ TRU Waste Management Program Information ☑ Waste Stream-Specific Information ☐ Supporting Information	**Category:** ☑ C - Correspondence ☐ D - Discrepancy Resolution ☐ P - Published Documents ☐ U - Unpublished Documents

Title of Source Document: Letter to W. E. Bergholz, DOE-Idaho Operations Office, Argonne National Laboratory-East (ANL-E) Remote Handled (RH) Transuranic Waste Stored at the Radioactive Waste Management Complex (RWMC)

Source Document Reference Information (author(s), document and revision number, date, publisher): r. c. Wumderlich, DOE-Chicago Operations Office, AAO.030320.0201, NA, 03/20/2003, NA

AK # [a]	Source Doc. Page # [b]	AK Information Summary
WS3, WS8, WS9, WS12	Throughout	This letter presents the following information: Based on a March 2003 report certifying a non-hazardous waste determination submitted by the DOE Chicago Operations Office to the Idaho Operations Office, the containers in waste stream have been and will continue to be managed as Resource Conservation and Recovery Act (RCRA) non-hazardous waste while at INL. This report concluded that there was no substantive basis for assigning RCRA HWNs to the RH-TRU wastes generated by ANL-E stored at INL.

Source Document Data Limitations (if any):

1. While ANL-E maintains that the RH TRU waste sent to INL is non-RCRA, the report lacks traceable and complete evidence to support all of the assertions.

Acceptable Knowlege Expert:

Lisa Price Watson / Lisa Price Watson Date: 11/9/06

Print /Sign

[a] Obtain from Acceptable Knowledge Documentation Checklist
[b] For microfilm or microfiche, identify box, tape, reel number and location.

ORIGINAL

C351

Department of Energy
Argonne Area Office
9800 South Cass Avenue
Argonne, Illinois 60439

AAO.030320.0201

MAR 20 2003

Warren E. Bergholz, Manager
Idaho Operations Office

SUBJECT: ARGONNE NATIONAL LABORATORY-EAST (ANL-E) REMOTE HANDLED (RH) TRANSURANIC (TRU) WASTE STORED AT THE RADIOACTIVE WASTE MANAGEMENT COMPLEX (RWMC)

Enclosed is the Summary of Process Knowledge for RH Transuranic Waste generated at ANL-E and currently stored at the RWMC on the Idaho National Engineering and Environmental Laboratory (INEEL) site. This document was prepared by Argonne National Laboratory in close cooperation with the Argonne Area Office. I concur in the information and conclusions in this document.

The Summary was prepared to address questions raised by INEEL during their preparations for eventual disposal of this waste stream, currently in storage at the Intermediate-Level Transuranic Storage Facility (ILTSF), and to facilitate discussions with Idaho Department of Environmental Quality (IDEQ) regarding the process knowledge for this waste stream. INEEL had raised a concern that the waste previously certified and accepted as nonhazardous might in fact be mixed waste based on preparation of an Acceptable Knowledge Report in support of shipment of waste to the Waste Isolation Pilot Plant (WIPP). The Summary clarifies these concerns and corrects misunderstandings. The Summary concludes that, based on the information examined and discussions held with current and past ANL employees, there is no substantive basis for assigning RCRA waste codes to the RH-TRU nor is there sufficient basis to change the original hazardous waste determinations. Moreover, as a result of the reviewing records and undertaking new inquiries as part of preparing the Summary, the Acceptable Knowledge Report will be revised to reflect the information provided in the Summary.

If you have any questions concerning this Summary please call me at (630) 252-2366 or have a member of your staff contact Angela Harvey at (630) 252-2698.

Robert C. Wunderlich
Area Manager

Enclosure:
As Stated

cc: E. Ziemanski, DOE-ID, w/encl.
B. Bowhan, DOE-ID, w/encl.
M. Gunn, DOE-CH/OM, w/encl.

A component of the Chicago Operations Office

Summary of Process Knowledge for Remote-Handled Transuranic Waste Generated at Argonne National Laboratory and Stored at the Idaho National Engineering and Environmental Laboratory

Prepared by

Argonne National Laboratory for DOE-Chicago Operations Office

March 2003

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*AGHCF, Alpha-Gamma Hot Cell Facility

1. INTRODUCTION

Argonne National Laboratory (ANL) prepared this summary for the DOE Chicago Operations Office after extensive communication between ANL and the Idaho National Engineering and Environmental Laboratory[1] (INEEL). The scope of the summary is limited to remote-handled transuranic (RH-TRU) waste that (a) was generated at

[1] In this summary, both INEEL and the predecessor organization, the Idaho National Engineering Laboratory, are described as "INEEL."

Argonne National Laboratory East (ANL-E), and (b) is now stored as non-hazardous waste at the INEEL Radioactive Waste Management Complex (RWMC).

Within the next two to five years it is anticipated that DOE will authorize disposal of RH-TRU waste at the Waste Isolation Pilot Plant (WIPP) in New Mexico. RH-TRU wastes shipped to WIPP will need to meet the yet to be finalized WIPP waste acceptance criteria. Drums of RH-TRU waste generated by DOE contractors contain highly radioactive wastes, making physical examination of the contents extremely difficult. DOE initiated an "acceptable knowledge" pilot project to determine whether the available process knowledge supports a determination that the waste would meet the anticipated WIPP waste acceptance criteria. During 2001 and 2002, the pilot project addressed 620 drums of RH-TRU waste generated at ANL-E and now in storage at INEEL's RWMC.

The 620 drums of RH-TRU waste within the scope of this summary were packaged at ANL-E during the period 1971 to 1995, and shipped to the RWMC during the period 1976 to 1995. As indicated by these dates, some of the drums were packaged and shipped to the RWMC before RCRA was applicable to radioactive waste. Of the 620 drums, 608 were generated at the Alpha-Gamma Hot Cell Facility (AGHCF), and 12 were generated at one or more other ANL-E facilities. During the period between 1985 and 1995 ANL and INEEL personnel generated documents indicating that the waste management practices at the AGHCF conformed to the then-applicable INEEL acceptance criteria for RH-TRU waste.

The acceptable knowledge pilot project included (a) examination of more than 2000 records generated at ANL-E and INEEL, (b) interviews of knowledgeable present and former ANL-E personnel, and (c) interactive communication within ANL and between ANL and INEEL regarding the significance of the available information. The records included general descriptions of the waste stream, operating procedures for the AGHCF, container-specific descriptions of the waste, previous evaluations of the waste characteristics, and site-level waste management protocols and requirements.

The available information regarding the 608 drums of waste generated at the AGHCF is more extensive than the available information on the 12 drums generated at other ANL-E facilities. Section 2 summarizes the composition of the AGHCF waste, as well as the AGHCF protocols and procedures that minimized the potential for generation of RCRA hazardous RH-TRU waste. Section 3 illustrates the AGHCF process knowledge that supports ANL conclusions for materials of particular interest (e.g., organic liquids, and corrosive acids). Section 4 addresses the 12 drums of RH-TRU waste that were generated at other ANL-E facilities.

Based on the information examined, ANL believes that there is no substantive basis for assigning RCRA waste codes to the RH-TRU.

2. AGHCF WORK PROCESSES AND WASTE MANAGEMENT

During the relevant 24-year waste generation period, the AGHCF was used primarily for destructive and nondestructive examination of irradiated fuel elements, structural materials from research and commercial nuclear reactors, and irradiated test materials associated with nuclear technology research. Examination included measurement of physical and chemical characteristics of the cladding and fuel. A substantial fraction of the measurements required remote preparation of small sections of fuel elements by cutting with a powered saw, followed by grinding and polishing.

Waste generated at the AGHCF was either contact-handled TRU (CH-TRU) or RH-TRU depending on the radiation level. In addition to the research-related activities, ongoing maintenance, repair, and replacement of radiologically contaminated in-cell equipment and devices contributed to generation of "combustible" and "non-combustible" RH-TRU waste. "Combustible" waste included mixed debris typically composed of plastic, rubber, wood, paper, and cloth. The scope of this summary is limited to the RH-TRU waste.

The RH-TRU drums packaged at the AGHCF contain heterogeneous mixed debris generated by a research and development organization, rather than a production process. The content of the mixed debris is highly variable from drum-to-drum. Of the 608 drums generated at the AGHCF and now at INEEL's RWMC, the contents of 346 are characterized as "combustible" and of 262 are characterized as "non-combustible." Of these 608 drums, the documented content of 466 specific drums is limited to either "combustible" or "non-combustible," with no other item-specific information other than generic descriptions of the types of wastes items generated at the facility.

Radiological constituents for both "combustible" and "non-combustible" waste streams are identical, and include primarily fissile materials, tritium, and mixed fission products consisting of the following radioisotopes: plutonium (Pu)-239, Pu-240, Pu-241, uranium (U)-235, tritium (H-3), and cesium (Cs)-137, along with numerous smaller quantities of short- and long-lived fission products and transuranic elements. Each 30-gallon carbon steel drum contains two 7-gallon covered metal cans. The cans are contained within two concentric, heat-sealed plastic bags. When the bags were sealed the atmosphere in the cans and bags was > 99% nitrogen. The average and maximum weights of the drums are 107 and 200 pounds, respectively. The typical (median) radiation dose rate on contact with the outside of the drum is about 15 R/hr, and the maximum is 30 R/hr. The waste drums were securely sealed (with filtered vents to allow pressure equalization) because the radiological constituents pose a significant health and environmental hazard.

At INEEL's RWMC, the drums are stored in 20- to 30-ft deep carbon steel pipes (with a removable concrete shielding plug and cover) grouted to a concrete pad for which the upper surface is slightly above ground level.

The following requirements[2] were applied when packaging all of the RH-TRU waste generated at the AGHCF and shipped to INEEL:

- Sludges and free liquids were prohibited from waste cans.
- Compressed gases were prohibited from waste cans. Valves on gas cylinders were removed, and aerosol cans were punctured prior to introduction into waste cans.
- Before disposal, powders/fines that exceeded 1% or 15% of the waste volume (if less than 10 microns, or less than 200 microns, respectively) were immobilized in a solid matrix to decrease the potential for post-packaging reactions.
- Rags/tissues that had contacted liquids were allowed to dry in a loose open configuration on a worktable (in the constantly flowing atmosphere of dry nitrogen) for periods of weeks to months prior to transfer to a waste can.
- Prior to disposal, all of several types of acidic solutions used to etch, electro polish, or clean materials were sequentially neutralized, absorbed on pelletized clay, and evaporated to dryness under heat.
- Residual liquid in any vessel was always allowed to evaporate to dryness before the vessel was transferred to a waste container.
- Pyrophoric materials were all rendered safe prior to disposal by mixing with concrete or similar material. As part of the process for preparation of certain types of materials for analysis, sodium and sodium-potassium alloy were rendered safe by controlled reaction with ethanol or butanol. The resulting product was adsorbed on pelletized clay and evaporated to dryness prior to disposal.
- Personnel who generated and packaged the waste were formally trained and qualified with regard to each of the requirements, and were familiar with the materials for ease of recognition. In later years, waste packaging was documented via audio-visual tape recordings.

Comprehensive evaluation of the available information raised no concerns about the potential presence in the waste cans of incompatible materials that could react during storage or initiate release of the radioactive constituents.

Beginning in approximately 1985, ANL changed the RH-TRU waste characterization system to include more detailed descriptions of waste items other than only "combustible" and "noncombustible" (for example, pelletized clay, rags, gloves, grinding paper, broken glass, aluminum tubing, discarded manual and power tools). Such documentation was generated for 142 of the 608 drums generated at the AGHCF, along with the categorization as either "combustible" or "non-combustible" waste.

[2] These or equivalent requirements had already been established by the ANL-E waste management organization by 1972. The specific requirements presented in this summary were (a) formally drafted as an AGHCF procedure in 1975, (b) formally adopted as an AGHCF procedure in 1976, including approval by the contemporary ANL-E waste management organization, and (c) subsequently the basis for acceptance of RH-TRU waste by the RWMC.

A series of at least six documents generated by both ANL and INEEL during the period 1985 to 1995 indicated that the characteristics of the RH-TRU waste generated at the AGHCF were consistent with the then-applicable INEEL waste acceptance criteria for RH-TRU. These documents included reports by INEEL personnel who had visited ANL-E to observe and evaluate ANL-E waste handling procedures and practices.

The extensive information analysis performed by ANL during 2001 and 2002 did not result in discovery of any basis for contradicting the conclusions documented between 1985 and 1995.

3. AGHCF MATERIAL-SPECIFIC PROCESS KNOWLEDGE

During the pilot acceptable knowledge process conducted in 2001 and 2002, ANL and INEEL personnel examined numerous records and acquired anecdotal information about work processes and waste management practices/procedures associated with the AGHCF. The purpose of Section 3 is to illustrate the process knowledge that supports the ANL hazardous waste determination conclusions.

3.1 Organic Liquids

Small quantities of various organic liquids were used in the hot cell. The volume of organic liquids in the hot cell complex (nine work stations) was small because nuclear criticality safety requirements limited the total volume of hydrogen-containing liquids (including water) to 3 liters. Some of these organic liquids, such as xylene, acetone, n-butyl alcohol, methanol, and isobutanol, are RCRCA ignitable. Others, such as 1,2-dichloroethane, 1,1,1-trichloroethane, tetrachloroethylene, and 1,1-dichloroethylene, isobutanol, toluene, and carbon tetrachloride, are RCRA toxic. We examined how the liquids were used, how they were dispositioned, and the waste management standards (see Section 2 above) that were routinely applied. Based on the available information, we have no basis for concluding that any of the 608 drums generated at the AGHCF are hazardous wastes. The following paragraphs describe the bases for our conclusions that organic liquid do not render the wastes F-code listed, U-code listed, ignitable, or toxic hazardous wastes.

None of the radioactive waste would have been F-listed on the basis of three operational practices. First, the waste packaging procedures prohibited the presence of any free liquids. Second, with one exception (metallurgical mounts addressed in the next paragraph), items cleaned with organic liquids in ultrasonic baths[3] were allowed to dry by complete evaporation, not by wiping with a cloth or tissue. Third, when rags or cloths were used for cleaning items with F-listed toxic organic liquids, the rag or cloth was first moistened with the liquid, then used to wipe the item to be cleaned, and then the cloth/tissue allowed to dry completely before disposal. The U. S Environmental Protection Agency's position until January 1991 was that rags used in this manner do not retain the F-code listing of the cleaning solvent.

[3] The ultrasonic baths remain in the hot cell and were not included in the RH-TRU shipped to INEEL.

We have some indication that, prior to the early 1990's, polished metallurgical mounts were cleaned by sonication in toluene, and that residual toluene (<0 .2 mL) remaining on the <1.5-sq. inch nonporous polished surfaces was removed by blotting on a tissue. However, we have no record that any tissues generated by this process prior to the early 1990's are in any of the drums of RH-TRU at INEEL.

Wastes would not have been U-code listed because only small quantities of U-listed liquids were introduced into the cell as required for immediate use; therefore, they became in-use process material when introduced into the cell. All stock supplies were outside the hot cell. Furthermore, we have no evidence that any of the RH-TRU drums contain spill residues of U-listed liquids.

Clay pellets were the only solid materials (other than rags and tissues) used to absorb organic liquids. Absorption of organic liquids onto clay pellets was limited to the liquid reaction products of ethanol or 1-butanol with alkali metals (to passivate the metals prior to disposal). The alcohols were evaporated to dryness prior to disposal of the clay pellets. Because ethanol and butanol are not RCRA toxic, the materials on which they were absorbed would not be RCRC toxic. No RCRA toxic organic liquids were absorbed onto clay pellets.

3.2 Acidic Liquids

Some materials characterization techniques used in the AGHCF required preparation of small volumes (typically 100 mL) of aqueous acidic solutions to etch samples prior to microscopic examination. Facility specific procedures required that formally qualified personnel neutralize all spent and excess acidic solutions with either sodium hydroxide or sodium carbonate, absorb the neutralized product onto clay pellets, and subsequently evaporate the clay pellets to dryness with heating. Consistent implementation of this requirement for disposal of acidic solutions was corroborated via interviews with current and former hot cell supervisors and operators.

We conclude that there is no evidence that the RH-TRU waste exhibits the corrosivity characteristic (D002).

3.3 Reactive Materials

Technical knowledge of the properties of the pyrophoric metals that were present in the AGHCF (e.g., uranium, transuranic metals, and zircalloy) supports the conclusion that the surface of fines/powders generated by cutting and grinding would have been readily oxidized by reaction with even the low level (< 0.2 %) oxygen in the cell, thus rendering them stable during prolonged storage. Furthermore, as described in Section 2 above, the facility-specific waste management process required that significant quantities of all fines/powders be immobilized in a solid matrix to decrease the potential for post-packaging reactions, and to prevent dispersal of the fines in the event of container failure.

As part of the process for preparing certain types of materials for analysis, sodium and sodium-potassium alloy were rendered safe by controlled reaction with either ethanol or 1-butanol. The resulting product was mixed with pelletized clay, and the mixture was evaporated to dryness prior to disposal. No elemental forms of alkali metals, including the metallic sodium in sodium-containing fuel elements, entered the RH-TRU waste stream.

We conclude that there is no evidence that the RH-TRU waste contains reactive materials.

3.4 Toxic Metals

Small amounts of some of the D-listed metals were used in the AGHCF. We therefore examined facility procedures and other records, and gathered anecdotal information about how the metal-containing materials were used and subsequently dispositioned.

3.4.1 Silver- and chromium-containing etching solutions

Two acidic metal-etching or electro-polishing solutions that were *occasionally* used in the hot cell contained procedurally defined concentrations of either chromium trioxide or silver nitrate. (Most of the acidic etchants did not contain toxic metals.) As described under "Acidic Solutions" above, an AGHCF procedure required that qualified personnel neutralize all acidic solutions with either sodium hydroxide or sodium carbonate, adsorb the neutralized product onto clay pellets, and subsequently evaporate the clay pellets to dryness with heating. When appropriate because of the level of radionuclides, dry clay pellets in a covered can were placed in RH-TRU waste cans. The volume of clay in a typical batch was 1-2 liters. Consistent implementation of this requirement for disposition of acidic solutions was corroborated via interviews with current and former hot cell supervisors and operators.

The amount of chromium or silver in a single seven-gallon waste would most likely be limited to that contained in a single 100-mL batch of solution. Conservatively assuming *complete* solubility of the clay-associated metals in a hypothetical TCLP test, a seven-gallon waste can containing *two* 100-mL batches of *each* of the two etchants adsorbed on clay pellets would have chromium and silver concentrations less than the respective TCLP thresholds.

4.4.2 Metallurgical mounts

Facility personnel used a paste-like, non-polymerized silver-containing epoxy component (approximately 0.15 cm^3 paste, 5-10 mg silver in a proprietary pigment, for each sample) to prepare numerous metallurgical mounts for photographic visualization of polished and etched surfaces of metallic samples (< 0.5 cm^3). Prior to disposal of the solid cylindrical plastic metallurgical mount (3 cm diameter, 0.6 cm long, 4-5 cm^3), facility personnel remotely used a power saw to transversely cut the cylinder through the plane in which the largest volume of silver-containing paste was contained in a central axial bore of the

plastic assembly, thus allowing subsequent use of a tool to extrude the metallic sample (either for retention or disposal in another waste stream). Some indeterminate, but most likely substantial, fraction of the silver-containing paste (a) was dispersed by the cutting process, and (b) adhered to the extrusion tool, the sample, and the two discarded sections of the plastic cylinder. Of the 142 drums for which narrative descriptors of the constituents are available, only three indicate the presence of "metallurgical mounts" (along with rags, grinding papers, plastics, and paper), and two indicate the presence of "mounting materials," along with mixed debris. (Metallurgical mounts could also be in drums for which the presence of "plastics" was documented.) Within the limitations of the available information, and by application of reasonable approximations for (a) the fraction of the silver-containing paste remaining on the discarded, sawn plastic cylinders, (b) the solubility of a proprietary silver pigment in aqueous solution, and (c) the weight of waste in a drum, we estimate that a single discarded mount would result in a TCLP silver concentration of 0.001 mg/L. This estimated value is orders of magnitude less than the limit of 5.0 mg/L TCLP limit for silver. Therefore, it is most likely that none of the RH-TRU waste exhibits the D011 characteristic.

A cerrobase alloy that is 44.5 percent lead was occasionally used as an alternative to silver epoxy to prepare metallurgical mounts. Based on the size, weight, and density of the metallurgical mounts, and the weight of wastes in a drum, we estimate that a single discarded mount would result in a TCLP lead concentration of 0.1 mg/L. Because this is less than the TCLP limit of 5.0 mg/L for lead, it is most likely that none of the RH-TRU waste exhibits the D008 characteristic.

3.4.3 Lead

Lead scrap, lead-containing bases from sodium vapor lamps, lead counter weights, and electrical equipment that could contain lead solder were disposed from the AGHCF. However, except for several written records describing disposal of electrical motors, and one audio-video record of disposal of 10 inches of solder, the presence of none of these is specifically documented in the drum-specific records for the RH-TRU waste. Calculations indicate that the amount of lead in the solder was insufficient to render the waste hazardous (D008). The approximately 3 g of lead in the solder would cause a 70-kg drum to have a TCLP extract lead concentration of about 2 mg /l. This is less than the TCLP limit of 5.0 mg/l. Sodium vapor lamps were most likely changed individually on an as-needed basis. Our analysis of lamps with lead contents similar to sodium vapor lamps indicates that the amount of lead in a single lamp base is insufficient to render a drum hazardous waste. A 0.5-lb bulb containing 12 g of lead would cause a 150 lb drum to have a TCLP extract lead concentration of less than 1.7 mg/l. This is less than the TCLP limit of 5.0 mg/l.

Our estimates of the undocumented amounts of lead likely to be present in the RH-TRU waste from any of several postulated scenarios, together with the relatively low surface to mass ratio of any lead-containing items (e.g., an intact lead-containing lamp base or a lead manipulator counter weight), provides no evidence that the heterogeneous mixed debris RH-TRU waste exhibits the D-008 characteristic.

3.4.4 Mercury

Broken mercury-containing thermometers (before conversion to use of thermocouples) *could* have been generated in the hot cell. However, no records describe the transfer of mercury from broken/discarded thermometers or discarded mercury-containing switches to the RH-TRU waste stream. It is unlikely that any broken thermometers containing residual mercury would have been included in any of the RH-TRU drums, because free liquids were prohibited from the RH-TRU waste stream.

The RH-TRU waste stream may have contained crushed mercury vapor lamps. Much of the mercury in the lamps likely evaporated in the AGHCF. Our evaluation of the amount of mercury in the lamps, and a conservative assumption of the number of lamps in a drum, indicates that the worst-case concentration of mercury in a TCLP extract would be about 0.02 mg/l, well below the TCLP limit of 0.2 mg/l. We found no evidence indicating that the RH-TRU waste exhibits the D009 characteristic.

3.4.5 HEPA filters

Primary HEPA filters could contain metals above TCLP concentrations. The single ANL-E document (prepared in 1988) indicating that primary HEPA filters were one of the multiple waste items generated at the of AGHCF, was *not* prepared as an inventory of materials packaged for shipment to INEEL. None the numerous waste can inventories indicate the presence of HEPA filters. Two former AGHCF managers were interviewed about the disposition of primary HEPA filters, and both said that no primary HEPA filters were sent to INEEL during the life of the facility. Furthermore, ANL-E has drum-by-drum records demonstrating that primary HEPA filters generated since at least as early as 1984 to 1995 remain under the control of the ANL-E waste management organization. In 1996 ANL packaged 40 primary HEPA filters, which remain at ANL-E. Based on the known filter replacement rate, these 40 filters would represent approximately 30 years of hot cell operations, which correlates to the operation of the AGHCF from its commissioning in the mid-1960's. Therefore, to the best of our knowledge the RH-TRU waste at INEEL does not include any primary HEPA filters from the AGHCF.

Other HEPA filters from the AGHCF (that is, HEPA filters that were not primary HEPA filters) were managed as low-level radioactive wastes and therefore were not shipped to INEEL as RH-TRU wastes.

4. RH-TRU WASTES GENERATED AT OTHER ANL-E FACILITIES

The remaining 12 drums were generated elsewhere at ANL-E, and were packaged by knowledgeable, formally trained personnel in the ANL-E waste management organization in accordance with then-applicable acceptance criteria for RH-TRU waste destined for shipment to the RWMC. At INEEL's RWMC, these drums are also stored in 20- to 30-ft deep carbon steel pipes (with a removable concrete shielding plug and cover) grouted to a concrete pad for which the upper surface is slightly above ground level.

Formalized, written descriptions of the ANL-E waste management program in 1986 indicate that the AGHCF was the only ANL-E organization (other than the site's waste management organization, WMO) authorized to package RH-TRU waste. At least as early as 1971, WMO established criteria for packaging RH-TRU generated at various ANL facilities for transfer to the RWMC. We have no reason to believe that the WMO acceptance criteria were less stringent than those that WMO subsequently approved for the AGHCF in 1975 (see criteria in Section 2 above). The WMO packaging criteria as described in 1971 required immobilization of significant quantities of powders and prohibited the presence of (a) free liquids, (b) corrosive materials, (c) pyrophoric materials, (d) explosives and compressed gases, (e) organic materials that could generate hydrogen gas through radiolysis, and (f) chemical waste not a co-contaminant of the transuranics. Therefore, we have no basis for concluding that the 12 drums of RH-TRU waste generated at ANL-E facilities other than the AGHCF are RCRA hazardous.

5. CONCLUSION

Based on the information examined, ANL believes that there is no substantive basis for assigning RCRA waste codes to the RH-TRU wastes generated and ANL-E and stored at INEEL.

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C351	Attachment 3 – Acceptable Knowledge Source Document Summary for CCP-AK-INL-500 with the following attached source document:	11/09/2006	1
	Letter to W. E. Bergholz, DOE-Idaho Operations Office, Argonne National Laboratory-East (ANL-E) Remote Handled (RH) Transuranic Waste Stored at the Radioactive Waste Management Complex (RWMC)	03/20/2003	11
	NA		

Comments

None.

Acceptance/Rejection Signature and Date

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Document Number	Title / Description	Record Date	Total Pages
C351	Attachment 3 – Acceptable Knowledge Source Document Summary for CCP-AK-INL-500 with the following attached source document:	11/09/2006	1
	Letter to W. E. Bergholz, DOE-Idaho Operations Office, Argonne National Laboratory-East (ANL-E) Remote Handled (RH) Transuranic Waste Stored at the Radioactive Waste Management Complex (RWMC)	03/20/2003	11
	NA		

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Attachment 3 - Acceptable Knowledge Source Document Summary

Waste Stream Number(s): AERHDM, ID-ANLE-S5000	
Site(s): Argonne Generated RH TRU Waste	Source Document Tracking Number: C2010
Acceptable Knowledge Documentation Type: TRU Waste Management Program Information ✔ Waste Stream-Specific Information Supporting Information	Category: C - Correspondence D - Discrepancy Resolution ✔ P - Published Documents U - Unpublished Documents
Title of Source Document: Evaluation of the Physical Waste Composition for K-Wing Waste in Waste Stream AERHDM.	
Source Document Reference Information (author(s), document and revision number, date, publisher): Christopher Chancellor, NA, NA, 9/24/2009, LANL-CO	

AK # [a]	Source Doc. Page # [b]	AK Information Summary
WS6, WS9	throughout	The purpose of this memorandum is to address issues relating to the CCP assessment of the physical composition of the waste in the hot cells generated at the K-Wing to be included in waste stream AERHDM. This memo will be included with Attachment 6 (Waste Form, Waste Material Parameters, Prohibited Items, and Packaging) to further support the physical waste description of waste stream AERHDM. As described in CCP-AK-ANLE-500, RH waste stream AERHDM will consist of heterogeneous debris waste generated by both the Alpha Gamma Hot Cell Facility (AGHCF) and the K-Wing hot cells. To determine the physical composition of the waste expected to be contained in the waste generated from the K-Wing, the AK documentation relating to the historic operations conducted in the K-Wing was reviewed, in addition to a walk-through of the facility by this AKE. Based on this evaluation it was determined that waste to be generated from the K-Wing will consist of predominantly organic and inorganic debris waste materials similar in composition to the waste generated at the AGHCF to be included into RH debris waste stream AERHDM. This memo documents the estimation of the Waste Material Parameter (WMP) fractions for the K-Wing contribution to Waste Stream AERHDM at the Argonne National Laboratory. The WMPs for the waste stream were estimated by observation of the debris material that could be observed through the hot cell viewing windows compared to WMP estimates for similar debris waste located at the Alpha Gamma Hot Cell Facility (AGHCF). There was no physical waste inventory information available to establish an estimate; therefore, a preliminary estimate was developed and may be adjusted once waste packaging begins and data is available. Waste items were categorized into one or more of the following WMPs: iron based metals/alloys, aluminum based metals/alloys, other metals, other inorganic materials, cellulosics, rubber, and plastics (waste materials). The WMP weights were estimated based on observation and previous experience with other hot cell waste.

Attachment 3 - Acceptable Knowledge Source Document Summary (continued)

Site(s): Argonne Generated RH TRU Waste	Source Document Tracking Number: C2010
Source Document Data Limitations (if any): 1. None.	
Acceptable Knowlege Expert: Christopher Chancellor / Date: 09/24/2009 Print /Sign	
[a] Obtain from Acceptable Knowledge Documentation Checklist [b] For microfilm or microfiche, identify box, tape, reel number and location.	

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MEMORANDUM

To: Irene Quintana, CCP SPM

From: Christopher Chancellor, CCP AKE

Date: September 24, 2009
RE: Evaluation of the Physical Waste Composition for K-Wing in Waste Stream AERHDM

The purpose of this memorandum is to address issues relating to the CCP assessment of the physical composition of the waste in the hot cells generated at the K-Wing to be included in waste stream AERHDM. This memo will be included with Attachment 6 (Waste Form, Waste Material Parameters, Prohibited Items, and Packaging) to further support the physical waste description of waste stream AERHDM.

As described in CCP-AK-ANLE-500, RH waste stream AERHDM will consist of heterogeneous debris waste generated by both the Alpha Gamma Hot Cell Facility (AGHCF) and the K-Wing hot cells. To determine the physical composition of the waste expected to be contained in the waste generated from the K-Wing, the AK documentation relating to the historic operations conducted in the K-Wing was reviewed, in addition to a walk-through of the facility by this AKE. Based on this evaluation it was determined that waste to be generated from the K-Wing will consist of predominantly organic and inorganic debris waste materials similar in composition to the waste generated at the AGHCF to be included into RH debris waste stream AERHDM.

This memo documents the estimation of the Waste Material Parameter (WMP) fractions for the K-Wing contribution to Waste Stream AERHDM at the Argonne National Laboratory. The WMPs for the waste stream were estimated by observation of the debris material that could be observed through the hot cell viewing windows compared to WMP estimates for similar debris waste located at the Alpha Gamma Hot Cell Facility (AGHCF). There was no physical waste inventory information available to establish an estimate; therefore, a preliminary estimate was developed and may be adjusted once waste packaging begins and data is available. Waste items were categorized into one or more of the following WMPs: iron based metals/alloys, aluminum based metals/alloys, other metals, other inorganic materials, cellulosics, rubber, and plastics (waste materials). The WMP weights were estimated based on observation and previous experience with other hot cell waste.

Based on visual inspection of the waste materials in the K-Wing hot cells, it has been determined that a vast majority of the waste to be packaged will be comprised of inorganic and organic debris items. All liquids are to be solidified as per the K-Wing Deactivation Project Plan (Reference P2011) and will comprise a small fraction (1-2%) of the total waste generated. The average weight percent was determined by observation of the debris waste material that could be seen through the hot cell viewing windows during a walk-through of the facility. Further, visual documentation is available via photographs that have been entered into the AK record (Reference U2001). A photograph of the waste materials in A Cell is attached (at the end of this document) as an example of the type of materials to be repacked in the K-Wing. The results of this evaluation are presented in the table on the next page, Waste Material Parameters Identified Inside K-Wing Hot Cells.

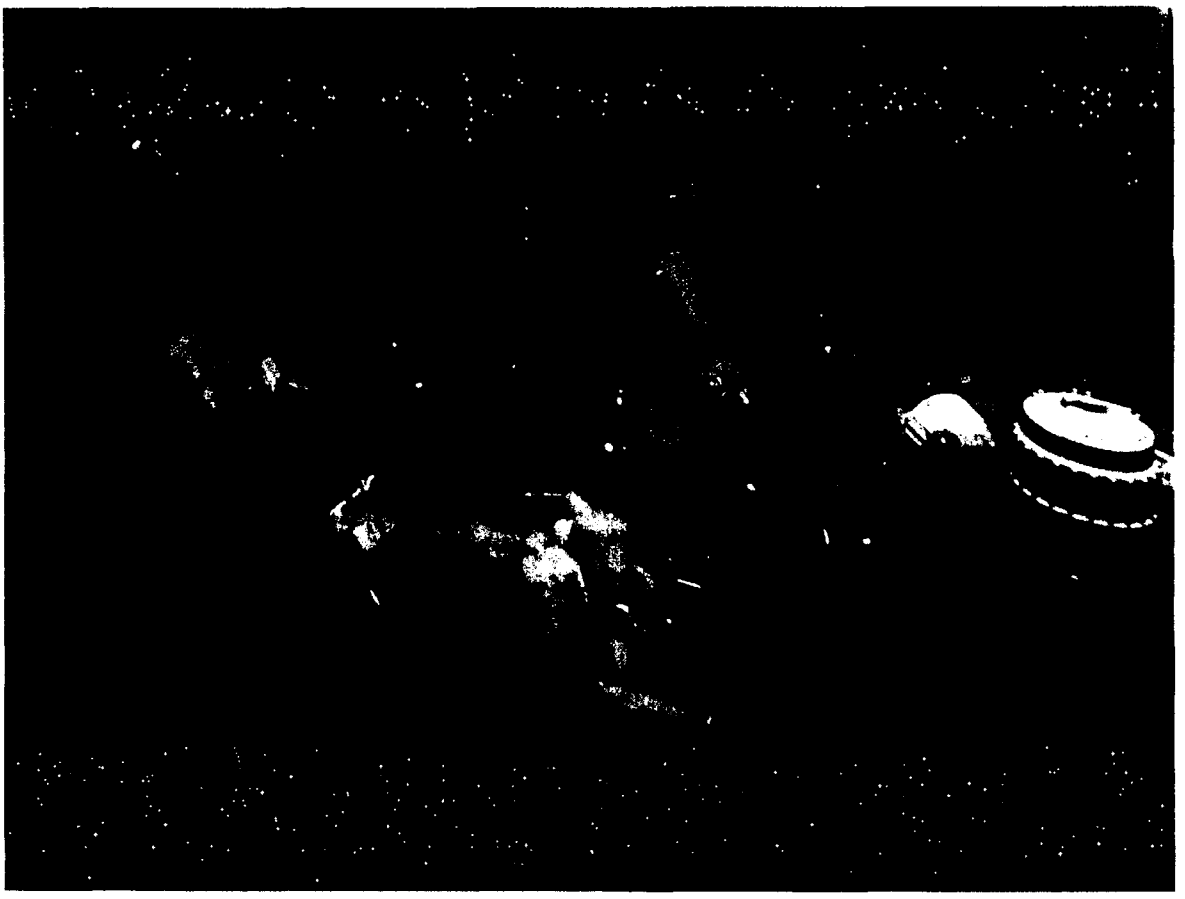
Waste Material Parameters Identified Inside K-Wing Hot Cells		
Waste Material Parameter	**Estimated Weight Percent**	**Sources**
Iron-Based Metals/Alloys	25-35 %	Clamps, columns, fixtures, hot plates, manipulator parts, motors, separations equipment, shelving, tools, trays, tubing, variacs
Aluminum-Based Metals/Alloys	15-25 %	Buckets, miscellaneous scrap items, shelving, trays
Other Metals	5-15%	Fixtures, motors, heating mantels, hot plates, pumps, tubing, weighing balance, variacs, wiring
Other Inorganic Materials	10-20 %	Bricks, glass apparatus, glass bottles, glass dishes, glass flasks
Cellulosics	1-5%	Filters, paper labels, tape, wipes
Rubber	1-5 %	Gloves, stoppers, tubing, wire/cord insulation
Plastics Waste Materials	5-15 %	Bottle caps, castor wheels, disposable pipettes, gloves, plastic bags, plastic bottles, Tygon tubing

Although the entire waste inventory could not be observed (e.g., small items in cans, bottles, and pipe nipples), as can be seen in the attached photograph, a majority of the waste items could be assessed. Based on these estimates, it has been determined that the waste inside the K-Wing hot cells is physically similar in composition and relative WMP amounts to the AERHDM waste stream estimates provided on the next page. The percentage of visible cellulosic materials is significantly lower than that of the waste stream; however, the quantity of cellulosic materials should increase substantially with the addition of wipes to be used during the clean up effort in the cell. Similar to waste generated in the AGHCF, a small fraction (1-2%) of the waste from the K-Wing clean out will consist of immobilized liquids as described in CCP-AK-ANLE-500.

Waste Material Parameters Identified for RH Drums in Waste Stream AERHDM		
Waste Material Parameter	**Average Weight Percent**	**Weight Percent Range**
Iron-Based Metals/Alloys	25.3 %	0.0 – 81.5 %
Aluminum-Based Metals/Alloys	12.1 %	0.0 – 71.5 %
Other Metals	11.2 %	0.0 – 66.0 %
Other Inorganic Materials	15.9 %	0.0 – 45.4 %
Cellulosics	20.3 %	0.0 – 100.0 %
Rubber	5.5 %	0.0 – 57.9 %
Plastics Waste Materials	9.8 %	0.0 – 58.2 %
Total Inorganic Waste Avg.	**64.4 %**	
Total Organic Waste Avg.	**35.6 %**	

As documented in the AK record, the AGHCF and K-Wing operations involved the destructive examination and research with the same and similar spent nuclear fuel specimens. Many of the experiments performed in the K-Wing were initiated in the AGHCF or utilized specimens from the AGHCF inventory. Based on the evaluation of the WMPs associated with the waste materials to be generated from the K-Wing, it has been determined that this waste is physically similar to waste generated in the AGHCF and that the WMP estimates in CCP-AK-ANLE-500 are comparable and bounding. Due to the similar composition of waste from K-Wing, it has been determined that waste from the K-Wing hot cells should be incorporated into waste stream AERDHM.

Photograph of Waste Material in K-Wing (A Cell)



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Attachment 3 - Acceptable Knowledge Source Document Summary

Waste Stream Number(s): AERHDM

Site(s): Argonne Generated RH TRU Waste	**Source Document Tracking Number: C2025**
Acceptable Knowledge Documentation Type: ✓ TRU Waste Management Program Information ✓ Waste Stream-Specific Information ✓ Supporting Information	**Category:** ✓ C - Correspondence D - Discrepancy Resolution P - Published Documents U - Unpublished Documents

Title of Source Document: Communication with Dan Pancake: Inventory Update and the Management of Potentially Reactive and Pyrophoric Materials

Source Document Reference Information (author(s), document and revision number, date, publisher): Kevin Peters, NA, NA, 11/13/2009; 11/30/2009, Tech Specs

AK # [a]	Source Doc. Page # [b]	AK Information Summary
PR7, PR8, WS1, WS2, WS3, WS9, S7, S16	Throughout	This Record of Communication summarizes interviews conducted on November 13 and 30, 2009 between CCP AKE Kevin Peters and Dan Pancake. The interviews focused on updating the inventory projections for waste stream AERHDM, including the exclusion of sodium bearing fuels and the planned management of potentially reactive and pyrophoric materials associated with the fuel examination residues originating in the AGHCF. Originally waste steam AERHDM consisted of 44 30-gallon drums packaged between November 1995 and June 2002 containing inner packaged between February 1993 and February 2002. It was originally estimated that an additional 50 more drums of debris would be generated for a total of approximately 100 containers. The original estimate did not include Building 205 debris or AGHCF fuel examination debris waste stored in Building 200. Based on the ongoing packaging of the original debris inventory the projection has been increased to an estimated 80 drums for a projected total of 124 drums of AGHCF debris. In addition, the Revision 4 of the AK Summary Report added an estimated 50 drums (55-gallons) of waste originated from associated operations in the K-Wing of Building 205. In addition to the original AGHCF debris, an additional 100 drums (30-gallon drums) of materials previously managed as accountable material will be added to the waste stream in Revision 5 of the AK Summary Report. Based on these updated estimates, the waste stream will consist of a total 274 drums (224 30-gallon and 50 55-gallon). 86 drums are currently in the tracking spreadsheet leaving 188 to be generated. It should be noted that these estimates do not include sodium bonded fuel specimens and residues to be segregated during retrieval and management of the fuel examination waste in storage in Building 200. Currently the plans for these materials include packaging and shipment to INL for final disposition. In addition, there are currently procedures in development for the management of potentially reactive and pyrophoric materials prior to inclusion in waste stream AERHDM. Treatment methods are being considered for deactivation of residual sodium that may be identified during

Attachment 3 - Acceptable Knowledge Source Document Summary (continued)

Site(s): Argonne Generated RH TRU Waste			Source Document Tracking Number: C2025
AK # [a]	Source Doc. Page # [b]	AK Information Summary	
		the packaging of fuel residues originating from LMFBR. In addition, potentially pyrophoric metal fines and dust materials (e.g. swarf) will be segregated until the method to immobilize them is developed. Methods such as microencapsulation are being considered and ANL is planning to implement these methods in the next 12 months. These materials will not be included in the waste stream until these methods are developed and the procedures assessed and included in the AK record.	

Source Document Data Limitations (if any):

1. Process for the management of potentially pyrophoric (swarf) and reactive material (sodium contaminated materials) is currently being developed.

Acceptable Knowlege Expert:

Christopher Chancellor / Date: 12/01/2009

Print /Sign

[a] Obtain from Acceptable Knowledge Documentation Checklist
[b] For microfilm or microfiche, identify box, tape, reel number and location.

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Attachment 2 – Record of Communication

Waste Stream Number(s): AERHDM	**Corresponding Source Document #:** C2025	
Interviewer: Kevin Peters	**Date:** Nov 13, 2009 Nov. 30, 2009	**Time:** 11:00 AM 9:00 AM
Interviewee: Dan Pancake	**Group/Organization:** Nuclear Operations & Deactivation Program **Position:** Project Manager	**Phone:** 638-252-8524 **Email:** dpancake@anl.gov

Subject: Communication with Dan Pancake: Inventory Update and the Management of Potentially Reactive and Pyrophoric Materials

Summary:

This Record of Communication summarizes interviews conducted on November 13 and 30, 2009 between CCP AKE Kevin Peters and Dan Pancake. The interviews focused on updating the inventory projections for waste stream AERHDM, including the exclusion of sodium bearing fuels and the planned management of potentially reactive and pyrophoric materials associated with the fuel examination residues originating in the AGHCF.

Originally waste steam AERHDM consisted of 44 30-gallon drums packaged between November 1995 and June 2002 containing inner packaged between February 1993 and February 2002. It was originally estimated that an additional 50 more drums of debris would be generated for a total of approximately 100 containers. The original estimate did not include Building 205 debris or AGHCF fuel examination debris waste stored in Building 200.

Based on the ongoing packaging of the original debris inventory the projection has been increased to an estimated 80 drums for a projected total of 124 drums of AGHCF debris.

In addition, the Revision 4 of the AK Summary Report added an estimated 50 drums (55-gallons) of waste originated from associated operations in the K-Wing of Building 205.

In addition to the original AGHCF debris, an additional 100 drums (30-gallon drums) of materials previously managed as accountable material will be added to the waste stream in Revision 5 of the AK Summary Report.

Based on these updated estimates, the waste stream will consist of a total 274 drums (224 30-gallon and 50 55-gallon). 86 drums are currently in the tracking spreadsheet leaving 188 to be generated.

It should be noted that these estimates do not include sodium bonded fuel specimens and residues to be segregated during retrieval and management of the fuel examination waste in storage in Building 200. Currently the plans for these materials include packaging and shipment to INL for final disposition.

In addition, there are currently procedures in development for the management of potentially reactive and pyrophoric materials prior to inclusion in waste stream AERHDM. Treatment methods are being considered for deactivation of residual sodium that may be identified during the packaging of fuel residues originating from LMFBR. In addition, potentially pyrophoric metal fines and dust materials (e.g. swarf) will be segregated until the method to immobilize them is

developed. Methods such as microencapsulation are being considered and ANL is planning to implement these methods in the next 12 months. These materials will not be included in the waste stream until these methods are developed and the procedures assessed and included in the AK record.
Data Limitations: Process for the management of potentially pyrophoric (swarf) and reactive material (sodium contaminated materials) is currently being developed.

Acceptable Knowledge Expert: Chris Chancellor for Kevin Peters 12/1/2009
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05/19/2011
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Attachment 3 - Acceptable Knowledge Source Document Summary

Waste Stream Number(s): AERHDM

Site(s): Argonne Generated RH TRU Waste

Source Document Tracking Number: C2027

Acceptable Knowledge Documentation Type:
- [x] TRU Waste Management Program Information
- [x] Waste Stream-Specific Information
- [ ] Supporting Information

Category:
- [x] C - Correspondence
- [ ] D - Discrepancy Resolution
- [ ] P - Published Documents
- [ ] U - Unpublished Documents

Title of Source Document: Waste Stream Delineation Evaluation for Waste Stream AERHDM to include K-Wing Waste

Source Document Reference Information (author(s), document and revision number, date, publisher): Kevin Peters, 7/14/2010

AK # [a]	Source Doc. Page # [b]	AK Information Summary
PR5, PR6, PR7, WS2, WS6, WS9, WS10, WS11, WS12	All	This evaluation was prepared to better document the conclusions made by the AKE and further document the commonality of the waste materials originating from fuel examination operations conducted in the AGHCF and K-Wing, by providing specific AK information, demonstrating the transfer, examination, and management of the same and similar fuel materials in these areas at Argonne. Based on the visual inspection of the materials in the K-Wing hot cell (C2010, C2026, and U2001) the waste from this area is similar and consistent with AGHCF waste materials. For these reasons, the K-Wing materials combined with the AGHCF waste meet the WCPIP and WAP waste stream definition. It should be noted, that even if the K-Wing waste containers were to be segregated from waste stream AERHDM, the same EPA HWNs would be assigned to the stream due to the contribution of potential contaminates introduced during the transfer of materials originating in the AGHCF.

Source Document Data Limitations (if any):

1. None

Acceptable Knowlege Expert:

Kevin J Peters, [signature] Date: 2/7/2011

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[a] Obtain from Acceptable Knowledge Documentation Checklist
[b] For microfilm or microfiche, identify box, tape, reel number and location.

CCP RECORDS ORIGINAL
DATE REC'D 7-28-11

MEMORANDUM TO CCP CENTRAL RECORDS

FROM: Kevin J. Peters

RE: ***Waste Stream Delineation Evaluation for Waste Stream AERHDM to Include K-Wing Waste (AK Reference C2027)***

As described in Section 4.2.1 in AK Summary Report CCP-AK-ANLE-500, waste materials generated in the K-Wing at Argonne were included with AGHCF waste currently in waste stream AERHDM due to the same Argonne process of generation (post-irradiation fuel examination studies), similarity of the waste materials, and radiological similarity of the waste due to the examination of the same and similar fuel materials, based on the AKE's review of the entire AK record. This evaluation has been prepared to better document the conclusions made by the AKE and further document the commonality of the waste materials originating from fuel examination operations conducted in the AGHCF and K-Wing, by providing specific AK information, demonstrating the transfer, examination, and management of the same and similar fuel materials in these areas at Argonne.

Originally this determination was made based on the review of the accountable materials stored in the K-Wing (AK Source U2004) compared to the materials examined in the AGHCF included in the waste stream originally. PDF pages 22-25 of U2004 list the solid specimen materials remaining in the K-Wing from the experiments described in the AK Summary report. As identified in the "A/G #" column in this table, most of the items have been assigned an A/G number assigned to test materials originally managed by AGHCF operations in Building 212. Most of the remaining materials, consist of "ATM" standard materials used in the UREX and corrosion study experiments consisting of fuels originating from the reactors that also sent fuel specimens to be examined in AGHCF. For example, fuels originating from H.B Robinson (ATM-101) and Quad Cities (ATM-109) fuels were also examined in the AGHCF as described in the earlier versions of the AK Summary Report.

The following table provides a comparison between accountable materials identified in the K-Wing inventory (U2004) and AK source documents collected during the characterization of the waste materials originating from the AGHCF in Building 212. This comparison was performed to verify the traceability of these materials examined in both the K-Wing and AGHCF and verify that the resulting flow of these materials between these areas would have resulted in the commingling of the same radiological and chemical contaminants as these materials were transferred between the different examination areas.

Fuel Type	K-Wing Inventory (U2004)	AGHCF Records
RERTR U-Mo ATR Fuel	PDF pgs. 24, 25 A/G – 600A,C,X & 623A,L,AD	**P551** (PDF pgs. 3,4,11,16.30,32) Specifically identifies RERTR 600A,C,X specimens examined in AGHCF. **P575** (PDF pgs. 2,3) Specifically identifies RERTR 623A,L,AD specimens examined in AGHCF.
EBR-II MOX Fuel (X462A)	PDF pg. 24 A/G – 498A,B	**U1003** (A/G 498) documents specimens 498A and 498B being transferred in the AGHCF early in 1995.
N-Reactor Fuel	PDF pg. 24 A/G – 562D,F	**P819** (PDF pgs. 4-8) This AGHCF sectioning plan for N-Reactor fuel element specifically identifies specimens 562D and 562F. **C812** (All) Report identifies the specimens from N-Reactor fuel element 562 including sectioning and analysis of samples in the AGHCF.
Limerick Fuel	PDF pg. 23 A/G – 574B2	**P344** (All) Specifically discusses the excising and analysis of Limerick fuel rod sample 574B2 in the AGHCF followed by preparation of the specimen for analysis in B205. **P519** (All) Describes the preparation of Limerick sections in the AGHCF including section 574B.
TMI Fuel	PDF pg. 24 A/G – 536A,B,C,D	**P515, P518, P523** (All) Documents the sectioning and testing associated with the TMI fuel 536, including the AGHCF test plans. Specifically identifies 536A,B,C, and D specimens.
LWBR U-Th Fuel	PDF pg. 24 A/G – 340A,C,E,G,H,J	**U1003** (A/G 340) documents the receipt of LWBR (A/G 340) fuel specimens from Idaho in the AGHCF during the 1986 -1988 time frame. Identifies the ongoing management of met mounts and samples from sections 340A,C,E,G,H,J and transfer of samples to 205 in 2001.
Big Rock Point Fuel	PDF pg. 25 A/G – 249B	**P802** (All) Documents the receipt of BRP fuel in early 1980s including A/G – 249B (rod JD100007) for extended burnup fuel examinations. **U802** (All) Documents the receipt in AGHCF of 249B from Consumers Power in April 1982; 249B in AGHCF inventory March 1982, transfer from AGHCF to 205 June 2003 and ongoing management of similar BRP materials in the AGHCF.
H.B. Robinson – High Burnup Fuel	PDF pg. 25 A/G – 611C and 615C	**P551** (PDF pgs. 5-7) AGHCF work plan for cutting H.B. Robinson rod sections and loading into shipping tubes, specifically identifies sections 611C and 615C. **P330** (PDF pgs. 3-6) AGHCF work plan identifies the examination plan for specimen 615C in the AGHCF and subsequent transfer to 205 for isotopic analysis. **U303** Identifies the transfer of samples 611C4 and 611C22 from the AGHCF to 205 in June 2003 (PDF pg. 56). Also includes AGHCF inventory of numerous 611Cand 615C samples, verifying the extensive sectioning and examination of these pin specimens in the AGHCF (PDF pgs 16-23). **U304** (PDF pg. 4) Documents the sectioning of samples 611C4 and 611C22 in the AGHCF and subsequent analysis in 205.

In addition to the evaluation described above, discussions with the Argonne managers responsible for the disposition of the AGHCF and K-Wing (Devin Hodge and Dan Pancake) further support the inclusion of K-Wing waste in waste stream AERHDM. Based on the site's waste management practices, these wastes, though separated by location are considered to be the same waste stream and would have eventually be managed together. Dan explained that as documented in the AK record, the waste inventory in the AGHCF originated from the historic operations conducted in the AGHCF in addition to materials historically examined in other buildings including Building 200 and 205 as described in the current AK Summary Report and the corresponding Idaho AK Summary Report. He further explained that the waste materials in the K-Wing would have been transferred to be packaged with the other materials in the AGHCF, before it was decided that it would be more expedient to package WIPP certifiable containers in Building 205, instead of moving the material to the AGHCF and packaging the materials twice. In addition, Dan clarified that the Argonne had no protocol for chemically characterizing or decontaminating the specimen materials sent from AGHCF to the K-Wing and that these materials could have been contaminated by any of the chemicals used in the AGHCF identified in the original report or have been contaminated (commingled) with minor amounts of radiological materials processed in the same areas.

Based on the visual inspection of the materials in the K-Wing hot cell (C2010, C2026, and U2001) the waste from this area is similar and consistent with AGHCF waste materials. For these reasons, the K-Wing materials combined with the AGHCF waste meet the WCPIP and WAP waste stream definition. It should be noted, that even if the K-Wing waste containers were to be segregated from waste stream AERHDM, the same EPA HWNs would be assigned to the stream due to the contribution of potential contaminates introduced during the transfer of materials originating in the AGHCF.

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Attachment 3 - Acceptable Knowledge Source Document Summary

Site(s): Argonne National Laboratory	Source Document Tracking Number: C2029
Waste Stream Number(s): AERHDM (Applicable only when site library is not in use)	
Acceptable Knowledge Documentation Type: ☑ TRU Waste Management Program Information ☑ Waste Stream-Specific Information ☑ Additional Information	Category: ☑ C - Correspondence ☐ D - Discrepancy Resolution ☐ P - Published Documents ☐ U - Unpublished Documents
Title of Source Document: Waste Containtainer Evaluation Memorandum for Waste Stream AERHDM	
Source Document Reference Information (author(s), document and revision number, date, publisher): Kevin Peters, 5/20/2008	

AK # [a]	Source Doc. Page # [b]	AK Information Summary
PR5, PR6, PR7, WS1, WS2, WS3, WS6, WS8, WS9, WS10, S16	All	The purpose of these memoranda is to satisfy the requirements of CCP AK Documentation procedure (CCP-TP-005) for updating AK for additional waste stream containers. The waste stream delineation for RH waste stream AERHDM is documented in AK Summary Report CCP-AK-ANLE and the Attachment 8 Waste Containers List prepared for this waste stream. This list identifies the specific containers evaluated and included in this waste stream. AK Source C2029 will include Waste Stream Container Evaluation Memorandum prepared in accordance with CCP-TP-005 to document the evaluation and addition of containers to waste stream AERHDM. Each container added was assessed to assure that the containers are bounded by current AK Summary Report and Attachment 8 for waste stream AERHDM for the following: •Waste generation location and process •Time period of generation •Physical form compared to the assigned Waste Material Parameters and waste matrix code •Chemical content •Prohibited items •Radionuclides

CCP RECORDS ORIGINAL
DATE REC'D 7-20-11

Attachment 3 - Acceptable Knowledge Source Document Summary (continued)

Site(s): Argonne National Laboratory	Source Document Tracking Number: C2029

Source Document Data Limitations (if any):

1. Will be updated to include memos as generated. Memos initially included in C2029 include all containers in the Attachment 8 Waste Containers list dated July 12, 2011, with the exception of 44 containers described in the initial AK Summary Report revisions.

Acceptable Knowlege Expert:

Kevin J. Peters [signature] Date: 7/13/2011
Print /Sign

[a] Obtain from Acceptable Knowledge Documentation Checklist
[b] For microfilm or microfiche, identify box, tape, reel number and location.

MEMORANDUM

To: Irene Quintana, CCP SPM

From: Kevin Peters, CCP AKE

Date: May 20, 2008

RE: Addition of 6 Containers to Waste Stream AERHDM

The purpose of this memorandum is to satisfy the requirements of CCP AK Documentation procedure (CCP-TP-005) for updating AK for additional waste stream containers.

This memorandum presents the evaluation of six (6) containers recently generated during repackaging of AGHCF waste not currently in waste stream AERHDM. Wes Root provided the VE Batch Data Reports (BDRs) for the following 30-gallon drums containing 12 7-gallon waste cans packaged in 2007 (see Attachment 1).

Drum ID	Internal Can	Internal Can
00865	395	387
00864	389	328
00857	375	353
00859	384	376
00860	388	370
00858	356	386

Based on a review VE BDRs RHANLVE080001, RHANLVE080002, and RHANLVE080004, all of the containers are bounded by current revision of the respective AK Summary Reports for the following:

- Waste generation location and process
- Time period of generation
- Physical form compared to the assigned Waste Material Parameters and waste matrix code
- Chemical content
- Prohibited items
- Radionuclides

Attachment 8 (Waste Containers List) for waste stream AERHDM waste stream and the AK Tracking Spreadsheet (AKTSS) will be updated to include these additional containers.

Attachment 1 – AK Tracking Spreadsheet Update Request

From: Root, Frank W. [mailto:rhwesr@anl.gov]
Sent: Thursday, May 15, 2008 7:49 AM
To: kpeters44@comcast.net
Subject: AK Tracking Spreadsheet Update

Kevin

Attached are PDFs of 3 VE BDRs for the 6 30-gallon drums that will be going thru Tier I ANL audit 5-28-08. Please update the AK tracking Spreadsheet. Where VE started on one day and the lid was installed on the following day, VE began on the date on page 1 of Attachment 1 and was completed (drum closure date) on the VEO signature dates on page 2.

Wes

MEMORANDUM

To: Hillari Neeley and Irene Quintana, CCP SPM

From: Kevin Peters, CCP AKE

Date: March 10, 2009

RE: Addition of 10 Containers to Waste Stream AERHDM

The purpose of this memorandum is to satisfy the requirements of CCP AK Documentation procedure (CCP-TP-005) for updating AK for additional waste stream containers.

This memorandum presents the evaluation of ten (10) containers recently generated during repackaging of AGHCF waste not currently in waste stream AERHDM. Wes Root provided the VE Batch Data Report (BDR) for the following 30-gallon drums containing 20 7-gallon waste cans packaged in 2007 (see Attachment 1).

Drum ID	Internal Can	Internal Can
00866	405	394
00867	397	400
00868	391	362
00869	401	379
00870	404	402
00871	364	406
00872	373	398
00873	383	399
00874	385	393
00875	392	344

Based on a review Visual Examination Data Forms for the above drums (VE BDR RHANLVE090001) the containers are bounded by current revision of the respective AK Summary Reports for the following:

- Waste generation location and process
- Time period of generation
- Physical form compared to the assigned Waste Material Parameters and waste matrix code
- Chemical content
- Prohibited items
- Radionuclides

Attachment 8 (Waste Containers List) for waste stream AERHDM waste stream and the AK Tracking Spreadsheet (AKTSS) will be updated to include these additional containers.

Attachment 1 – AK Tracking Spreadsheet Update Requests

From: Root, Frank W. [mailto:rhwesr@anl.gov]
Sent: Monday, March 09, 2009 3:02 PM
To: kpeters44@comcast.net
Cc: Quintana, Irene; hillari.neely@wipp.ws
Subject: ANL AK Tracking Spreadsheet Update

Kevin

Attached are PDFs of the VE Data Sheets for five 30-gallon drums (866, 867, 869, 874, 868) in VE BDR RHANLVE090001. Please update the AK tracking Spreadsheet.

Thanks

F. Wesley Root
CCP VPM, ANL

Off: 630-252-8306
Cell: 505695-9610

From: Root, Frank W. [mailto:rhwesr@anl.gov]
Sent: Monday, March 09, 2009 3:25 PM
To: kpeters44@comcast.net
Cc: Quintana, Irene; hillari.neely@wipp.ws
Subject: ANL AK Tracking Spreadsheet Update

Kevin

Attached are PDFs of the VE Data Sheets for the other five 30-gallon drums (870, 871, 873, 872, 875) in VE BDR RHANLVE090001. Please update the AK tracking Spreadsheet with these containers also.

Thanks

F. Wesley Root
CCP VPM, ANL

Off: 630-252-8306
Cell: 505695-9610

MEMORANDUM

To: Hillari Neeley and Irene Quintana, CCP SPM

From: Kevin Peters, CCP AKE

Date: April 16, 2009

RE: Addition of 15 Containers to Waste Stream AERHDM

The purpose of this memorandum is to satisfy the requirements of CCP AK Documentation procedure (CCP-TP-005) for updating AK for additional waste stream containers.

This memorandum presents the evaluation of fifteen (15) containers recently generated during repackaging of AGHCF waste not currently in waste stream AERHDM. Wes Root provided the VE Batch Data Reports (VE BDR RHANLVE090002 and VE BDR RHANLVE08003) for the following 30-gallon drums containing 29 7-gallon waste cans packaged in the AGHCF (see Attachment 1).

Drum ID	Internal Can	Internal Can
862	374	
863	390	343
876	350	464
877	481	336
878	380	482
879	366	465
880	396	450
881	367	378
882	438	461
883	452	441
884	439	372
885	442	475
886	470	382
887	453	403
888	422	440

Additionally, two NCRs relating to these containers were reviewed. NCR-RHANL-0001-08 for drum 862 was prepared to resolve the loading of a single can into this drum. It was originally documented that two cans were loaded into this container, then later determined that due to technical issues that only can 374 was actually loaded into this drum. NCR-RHANL-0002-08 documents the repackaging of can 396 (contained in drum 880) to meet site dose limits. This can was originally examined on 7/17/2008 and was repackaged on 12/10/2008.

Based on a review Visual Examination Data Forms for the above drums (VE BDR RHANLVE090002 and VE BDR RHANLVE08003) and the NCRs the containers are bounded by current revision of the AK Summary Report for waste stream AERHCM for the following:

- Waste generation location and process
- Time period of generation
- Physical form compared to the assigned Waste Material Parameters and waste matrix code
- Chemical content
- Prohibited items
- Radionuclides

Attachment 8 (Waste Containers List) for waste stream AERHDM waste stream and the AK Tracking Spreadsheet (AKTSS) will be updated to include these additional containers.

Attachment 1 – AK Tracking Spreadsheet Update Requests

From: Root, Frank W. [mailto:rhwesr@anl.gov]
Sent: Thursday, April 16, 2009 10:57 AM
To: kpeters44@comcast.net
Cc: Quintana, Irene
Subject: ANL AK Tracking Spreadsheet Update

Kevin

Attached are PDFs of the VE Data Sheets for five additional 30-gallon RH drums (882, 883, 884, 885, 887) in VE BDR RHANLVE090002. I will be sending you information on a total of 15 drums. Please have the ANL AK Tracking Spreadsheet updated. DTC operations are scheduled to begin on these containers next Tuesday, 4-21-09.

Thanks

F. Wesley Root
CCP VPM, ANL

Off: 630-252-8306
Cell: 505695-9610

From: Root, Frank W. [mailto:rhwesr@anl.gov]
Sent: Thursday, April 16, 2009 10:19 AM
To: kpeters44@comcast.net
Cc: Quintana, Irene
Subject: ANL AK Tracking Spreadsheet Update

Kevin

Attached are PDFs of the VE Data Sheets for five 30-gallon RH drums (876, 877, 878, 879, 881) in VE BDR RHANLVE090002. I will be sending you information on a total of 15 drums. Please have the ANL AK Tracking Spreadsheet updated. DTC operations are scheduled to begin on these containers next Tuesday, 4-21-09.

Thanks

F. Wesley Root
CCP VPM, ANL

Off: 630-252-8306
Cell: 505695-9610

From: Root, Frank W. [mailto:rhwesr@anl.gov]
Sent: Thursday, April 16, 2009 1:00 PM
To: Kevin Peters
Cc: Quintana, Irene
Subject: ANL AK Tracking Spreadsheet Update

Kevin

Attached are PDFs of the VE Data Sheets for the last five 30-gallon RH drums, 862, 863 in VE BDR RHANLVE08003 and 880, 886, 888) in VE BDR RHANLVE090002. The 15 drums you should have data for are 862, 863, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888. Please note when updating the ANL AK Tracking Spreadsheet that drum 862 only contains one 7-gal can.

Thanks for your help

F. Wesley Root
CCP VPM, ANL

Off: 630-252-8306
Cell: 505695-9610

MEMORANDUM

To: Hillari Neeley and Irene Quintana, CCP SPM

From: Kevin Peters, CCP AKE

Date: February 3, 2010

RE: Addition of 12 Containers to Waste Stream AERHDM

The purpose of this memorandum is to satisfy the requirements of CCP AK Documentation procedure (CCP-TP-005) for updating AK for additional waste stream containers.

This memorandum presents the evaluation of twelve (12) containers recently generated during repackaging of AGHCF waste not currently in waste stream AERHDM. Wes Root provided the Visual Examination Data Forms for the following 30-gallon drums containing 24 7-gallon waste cans packaged in the AGHCF (see Attachment 1).

Drum ID	Internal Can	Internal Can
898	469	457
899	408	468
900	430	411
901	476	415
902	431	456
903	434	433
904	436	432
905	437	473
906	460	466
907	446	467
908	418	479
909	458	419

Based on a review Visual Examination Data Forms for the above drums the containers are bounded by current revision of the AK Summary Report for waste stream AERHDM for the following:

- Waste generation location and process
- Time period of generation
- Physical form compared to the assigned Waste Material Parameters and waste matrix code
- Chemical content
- Prohibited items
- Radionuclides

Attachment 8 (Waste Containers List) for waste stream AERHDM waste stream and the AK Tracking Spreadsheet (AKTSS) will be updated to include these additional containers

Attachment 1 – AK Tracking Spreadsheet Update Requests

From: Root, Frank W. [mailto:rhwesr@anl.gov]
Sent: Tuesday, February 02, 2010 12:55 PM
To: Kevin Peters
Subject: AK Tracking Spreadsheet Update1

Kevin

Please update the ANL AK Tracking Spreadsheet with a total of 17 30-gallon RH drums. Attached are PDFs of the VE Data Sheets for three of these drums, 898, 899 and 900. The remaining 14 drums to follow. DTC operations are scheduled to begin 2-4-10.

Thanks.

F. Wesley Root

CCP VPM, ANL

From: Root, Frank W. [mailto:rhwesr@anl.gov]
Sent: Tuesday, February 02, 2010 12:47 PM
To: Kevin Peters
Subject: AK Tracking Spreadsheet Update2

Kevin

Please update the ANL AK Tracking Spreadsheet with a total of 17 30-gallon RH drums. Attached are PDFs of the VE Data Sheets for three more of these drums, 901, 902 and 903. The remaining 11 drums to follow. DTC operations are scheduled to begin 2-4-10.

Thanks.

F. Wesley Root

CCP VPM, ANL

Off: 630-252-8306

Cell: 505695-9610

From: Root, Frank W. [mailto:rhwesr@anl.gov]
Sent: Tuesday, February 02, 2010 12:50 PM
To: Kevin Peters
Subject: AK Tracking Spreadsheet Update3

Kevin

Please update the ANL AK Tracking Spreadsheet with a total of 17 30-gallon RH drums. Attached are PDFs of the VE Data Sheets for three more of these drums, 904, 905 and 906. The remaining 8 drums to follow. DTC operations are scheduled to begin 2-4-10.

Thanks.

F. Wesley Root

CCP VPM, ANL

Off: 630-252-8306

Cell: 505695-9610

From: Root, Frank W. [mailto:rhwesr@anl.gov]
Sent: Tuesday, February 02, 2010 12:52 PM
To: Kevin Peters
Subject: AK Tracking Spreadsheet Update4

Kevin

Please update the ANL AK Tracking Spreadsheet with a total of 17 30-gallon RH drums. Attached are PDFs of the VE Data Sheets for three more of these drums, 907, 908 and 909. The remaining 5 drums to follow. DTC operations are scheduled to begin 2-4-10.

Thanks.

F. Wesley Root

CCP VPM, ANL

Off: 630-252-8306

Cell: 505695-9610

Christopher Chancellor
signing for Kevin Peters *02/03/2010*
Printed Name / Signature Date

containerid	Internal_Can_1	Internal_Can_2	Internal_Can_3	AKReport	WasteStream	MatrixCode	ClosureDate	VentDate
898	469	457		CCP-AK-ANLE-500	AERHDM	S5400	11/4/2009	11/4/2009
899	408	468		CCP-AK-ANLE-500	AERHDM	S5400	11/4/2009	11/4/2009
900	430	411		CCP-AK-ANLE-500	AERHDM	S5400	11/5/2009	11/5/2009
901	476	415		CCP-AK-ANLE-500	AERHDM	S5400	11/5/2009	11/5/2009
902	431	456		CCP-AK-ANLE-500	AERHDM	S5400	11/5/2009	11/5/2009
903	434	433		CCP-AK-ANLE-500	AERHDM	S5400	11/6/2009	11/6/2009
904	436	432		CCP-AK-ANLE-500	AERHDM	S5400	11/6/2009	11/6/2009
905	437	473		CCP-AK-ANLE-500	AERHDM	S5400	11/9/2009	11/9/2009
906	460	466		CCP-AK-ANLE-500	AERHDM	S5400	11/30/2009	11/30/2009
907	446	467		CCP-AK-ANLE-500	AERHDM	S5400	11/30/2009	11/30/2009
908	418	479		CCP-AK-ANLE-500	AERHDM	S5400	12/1/2009	12/1/2009
909	458	419		CCP-AK-ANLE-500	AERHDM	S5400	12/1/2009	12/1/2009

MEMORANDUM

To: Hillari Neeley and Irene Quintana, CCP SPM

From: Kevin Peters, CCP AKE

Date: February 4, 2010

RE: Addition of 5 Containers to Waste Stream AERHDM

The purpose of this memorandum is to satisfy the requirements of CCP AK Documentation procedure (CCP-TP-005) for updating AK for additional waste stream containers.

This memorandum presents the evaluation of five (5) containers recently generated during repackaging of AGHCF waste not currently in waste stream AERHDM. Wes Root provided the Visual Examination Data Forms for the following 30-gallon drums containing 10 7-gallon waste cans packaged in the AGHCF (see Attachment 1).

Drum ID	Internal Can	Internal Can
910	472	448
911	451	462
912	463	455
913	447	459
914	425	454

Based on a review Visual Examination Data Forms for the above drums the containers are bounded by current revision of the AK Summary Report for waste stream AERHDM for the following:

- Waste generation location and process
- Time period of generation
- Physical form compared to the assigned Waste Material Parameters and waste matrix code
- Chemical content
- Prohibited items
- Radionuclides

Attachment 8 (Waste Containers List) for waste stream AERHDM waste stream and the AK Tracking Spreadsheet (AKTSS) will be updated to include these additional containers.

Attachment 1 – AK Tracking Spreadsheet Update Requests

From: Root, Frank W.
Sent: Tuesday, February 02, 2010 5:50 PM
To: 'Kevin Peters'
Subject: AK Tracking Spreadsheet Update5

Kevin

Please update the ANL AK Tracking Spreadsheet with a total of 17 30-gallon RH drums. Attached are PDFs of the VE Data Sheets for three more of these drums, 910, 911 and 912. The remaining 2 drums to follow. DTC operations are scheduled to begin 2-4-10.

Thanks.

F. Wesley Root

CCP VPM, ANL

From: Root, Frank W.
Sent: Tuesday, February 02, 2010 5:55 PM
To: 'Kevin Peters'
Subject: AK Tracking Spreadsheet Update6

Kevin

Please update the ANL AK Tracking Spreadsheet with a total of 17 30-gallon RH drums. Attached are PDFs of the VE Data Sheets for the last two drums, 913 and 914. The 17 Drum IDs are 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914.

Thanks.

F. Wesley Root

CCP VPM, ANL

Christopher Chancellor
signing for Kevin Peters *02/03/2010*
Printed Name / Signature Date

containerid	Internal_Can_1	Internal_Can_2	Internal_Can_3	AKReport	WasteStream	MatrixCode	ClosureDate	VentDate
910	472	448		CCP-AK-ANLE-500	AERHDM	S5400	12/2/2009	
911	451	462		CCP-AK-ANLE-500	AERHDM	S5400	12/2/2009	
912	463	455		CCP-AK-ANLE-500	AERHDM	S5400	12/2/2009	
913	447	459		CCP-AK-ANLE-500	AERHDM	S5400	12/3/2009	
914	425	454		CCP-AK-ANLE-500	AERHDM	S5400	12/3/2009	

MEMORANDUM

To: Hillari Neeley, CCP SPM

From: Kevin Peters, CCP AKE

Date: February 25, 2010

RE: Addition of 4 Containers to Waste Stream AERHDM

The purpose of this memorandum is to satisfy the requirements of CCP AK Documentation procedure (CCP-TP-005) for updating AK for additional waste stream containers.

This memorandum presents the evaluation of four (4) containers recently generated during repackaging of AGHCF waste not currently in waste stream AERHDM. Wes Root provided the Visual Examination Data Forms for the following 30-gallon drums containing 8 7-gallon waste cans packaged in the AGHCF (see Attachment 1).

Drum ID	Internal Can	Internal Can
915	519	490
916	492	486
917	518	484
918	471	474

Based on a review Visual Examination Data Forms for the above drums the containers are bounded by current revision of the AK Summary Report for waste stream AERHDM for the following:

- Waste generation location and process
- Time period of generation
- Physical form compared to the assigned Waste Material Parameters and waste matrix code
- Chemical content
- Prohibited items
- Radionuclides

Attachment 8 (Waste Containers List) for waste stream AERHDM waste stream and the AK Tracking Spreadsheet (AKTSS) will be updated to include these additional containers.

Attachment 1 – AK Tracking Spreadsheet Update Requests

From: Root, Frank W. [mailto:rhwesr@anl.gov]
Sent: Thursday, February 25, 2010 8:51 AM
To: Kevin Peters
Cc: Quintana, Irene
Subject: AK Tracking Spreadsheet Update

Kevin

Please add 30-gallon drums 915, 916, 917, and 918 to the ANL AK Tracking Spreadsheet. Attached are PDFs of the VE Data Sheets for the 4 drums.

Thanks.

F. Wesley Root

CCP VPM, ANL

Off: 630-252-8306

Cell: 505695-9610

MEMORANDUM

To: Hillari Neeley, CCP SPM

From: Kevin Peters, CCP AKE

Date: March 1, 2010

RE: Addition of 3 Containers to Waste Stream AERHDM

The purpose of this memorandum is to satisfy the requirements of CCP AK Documentation procedure (CCP-TP-005) for updating AK for additional waste stream containers.

This memorandum presents the evaluation of three (3) containers recently generated during repackaging of AGHCF waste not currently in waste stream AERHDM. Wes Root provided the Visual Examination Data Forms for the following 30-gallon drums containing 6 7-gallon waste cans packaged in the AGHCF (see Attachment 1).

Drum ID	Internal Can	Internal Can
921	485	483
922	524	449
923	488	522

Based on a review Visual Examination Data Forms for the above drums the containers are bounded by current revision of the AK Summary Report for waste stream AERHDM for the following:

- Waste generation location and process
- Time period of generation
- Physical form compared to the assigned Waste Material Parameters and waste matrix code
- Chemical content
- Prohibited items
- Radionuclides

Attachment 8 (Waste Containers List) for waste stream AERHDM waste stream and the AK Tracking Spreadsheet (AKTSS) will be updated to include these additional containers.

Attachment 1 – AK Tracking Spreadsheet Update Requests

From: Root, Frank W. [mailto:rhwesr@anl.gov]
Sent: Monday, March 01, 2010 8:16 AM
To: Kevin Peters
Cc: Quintana, Irene
Subject: AK Tracking Spreadsheet Update

Kevin

Please add 30-gallon drums 921, 922, and 923 to the ANL AK Tracking Spreadsheet. Attached are PDFs of the VE Data Sheets for the 3 30-gallon drums.

Thanks.

F. Wesley Root

CCP VPM, ANL

Off: 630-252-8306

Cell: 505695-9610

MEMORANDUM

To: Hillari Neeley, CCP SPM

From: Kevin Peters, CCP AKE

Date: March 10, 2010

RE: Addition of 2 Containers to Waste Stream AERHDM

The purpose of this memorandum is to satisfy the requirements of CCP AK Documentation procedure (CCP-TP-005) for updating AK for additional waste stream containers.

This memorandum presents the evaluation of two (2) containers recently generated during repackaging of AGHCF waste not currently in waste stream AERHDM. Wes Root provided the Visual Examination Data Forms for the following 30-gallon drums containing 4 7-gallon waste cans packaged in the AGHCF (see Attachment 1).

Drum ID	Internal Can	Internal Can
919	480	523
920	420	521

Based on a review Visual Examination Data Forms for the above drums the containers are bounded by current revision of the AK Summary Report for waste stream AERHDM for the following:

- Waste generation location and process
- Time period of generation
- Physical form compared to the assigned Waste Material Parameters and waste matrix code
- Chemical content
- Prohibited items
- Radionuclides

Attachment 8 (Waste Containers List) for waste stream AERHDM waste stream and the AK Tracking Spreadsheet (AKTSS) will be updated to include these additional containers.

Christopher Chancellor
Signing for Kevin Peters 03/10/2010

Printed Name / Signature Date

Attachment 1 – AK Tracking Spreadsheet Update Requests

From: Root, Frank W. [mailto:rhwesr@anl.gov]
Sent: Monday, March 08, 2010 6:50 AM
To: Kevin Peters
Cc: Quintana, Irene
Subject: AK Tracking Spreadsheet Update

Kevin

Please add 30-gallon drums 919 and 920 to the ANL AK Tracking Spreadsheet. Attached are PDFs of the VE Data Sheets for the 3 30-gallon drums.

Thanks.

F. Wesley Root

CCP VPM, ANL

Off: 630-252-8306

Cell: 505695-9610

containerid	Internal_Can_1	Internal_Can_2	Internal_Can_3	AKReport	WasteStream	MatrixCode	ClosureDate	VentDate
919	480	523		CCP-AK-ANLE-500	AERHDM	S5400	2/5/2010	2/5/2010
920	420	521		CCP-AK-ANLE-500	AERHDM	S5400	2/5/2010	2/5/2010

MEMORANDUM

To: Hillari Neeley, CCP SPM

From: Kevin Peters, CCP AKE

Date: March 22, 2010

RE: Addition of 5 Containers to Waste Stream AERHDM

The purpose of this memorandum is to satisfy the requirements of CCP AK Documentation procedure (CCP-TP-005) for updating AK for additional waste stream containers.

This memorandum presents the evaluation of seven (7) containers recently generated during repackaging of AGHCF waste not currently in waste stream AERHDM. Wes Root provided the Visual Examination Data Forms for the following 30-gallon drums containing 14 7-gallon waste cans packaged in the AGHCF (see Attachment 1).

Drum ID	Internal Can	Internal Can
924	502	491
925	414	500
926	496	517
927	494	497
928	495	503
929	489	504
930	501	487

Based on a review Visual Examination Data Forms for the above drums the containers are bounded by current revision of the AK Summary Report for waste stream AERHDM for the following:

- Waste generation location and process
- Time period of generation
- Physical form compared to the assigned Waste Material Parameters and waste matrix code
- Chemical content
- Prohibited items
- Radionuclides

Attachment 8 (Waste Containers List) for waste stream AERHDM waste stream and the AK Tracking Spreadsheet (AKTSS) will be updated to include these additional containers.

Attachment 1 – AK Tracking Spreadsheet Update Requests

From: Root, Frank W. [mailto:rhwesr@anl.gov]
Sent: Monday, March 22, 2010 12:00 PM
To: Kevin Peters
Cc: irene_quintana3@msn.com
Subject: AK Tracking Spreadsheet Update

Kevin

Please add 30-gallon drums 924, 925, and 926 to the ANL AK Tracking Spreadsheet. Attached are PDFs of the VE Data Sheets for the 3 30-gallon drums.

Thanks.

F. Wesley Root

CCP VPM, ANL

Off: 630-252-8306

Cell: 505695-9610

From: Root, Frank W. [mailto:rhwesr@anl.gov]
Sent: Monday, March 22, 2010 12:01 PM
To: Kevin Peters
Cc: irene_quintana3@msn.com
Subject: AK Tracking Spreadsheet Update

Kevin

Please add 30-gallon drums 927 and 928 to the ANL AK Tracking Spreadsheet. Attached are PDFs of the VE Data Sheets for the 2 30-gallon drums.

Thanks.

F. Wesley Root

CCP VPM, ANL

Off: 630-252-8306

Cell: 505695-9610

From: Root, Frank W. [mailto:rhwesr@anl.gov]
Sent: Monday, March 22, 2010 12:04 PM
To: Kevin Peters
Cc: irene_quintana3@msn.com
Subject: AK Tracking Spreadsheet Update

Kevin

Please add 30-gallon drums 929 and 930 to the ANL AK Tracking Spreadsheet. Attached are PDFs of the VE Data Sheets for the 2 30-gallon drums. You should have received data sheets for a total of seven drums in three separate e-mails.

Thanks.

F. Wesley Root

CCP VPM, ANL

Off: 630-252-8306

Cell: 505695-9610

Christopher Chancellor signing
For Kevin Peters 03/22/2010

Name / Signature Date

ANLE New Containers

containerid	Internal_Can_1	Internal_Can_2	Internal_Can_3	AKReport	WasteStream	MatrixCode	ClosureDate	VentDate
924	502	491		CCP-AK-ANLE-500	AERHDM	S5400	3/9/2010	3/9/2010
925	414	500		CCP-AK-ANLE-500	AERHDM	S5400	3/10/2010	3/10/2010
926	496	517		CCP-AK-ANLE-500	AERHDM	S5400	3/11/2010	3/11/2010
927	494	497		CCP-AK-ANLE-500	AERHDM	S5400	3/11/2010	3/11/2010
928	495	503		CCP-AK-ANLE-500	AERHDM	S5400	3/15/2010	3/15/2010
928	489	504		CCP-AK-ANLE-500	AERHDM	S5400	3/15/2010	3/15/2010
928	501	487		CCP-AK-ANLE-500	AERHDM	S5400	3/16/2010	3/16/2010

MEMORANDUM

To: Hillari Neeley, CCP SPM

From: Kevin Peters, CCP AKE

Date: April 27, 2010

RE: Addition of 7 Containers to Waste Stream AERHDM

The purpose of this memorandum is to satisfy the requirements of CCP AK Documentation procedure (CCP-TP-005) for updating AK for additional waste stream containers.

This memorandum presents the evaluation of seven (7) containers recently generated during repackaging of AGHCF waste not currently in waste stream AERHDM. Wes Root provided the Visual Examination Data Forms for the following 30-gallon drums containing 14 7-gallon waste cans packaged in the AGHCF (see Attachment 1).

Drum ID	Internal Can	Internal Can
934	536	514
935	535	530
936	506	533
937	531	520
938	511	527
939	513	499
940	534	516

Based on a review Visual Examination Data Forms for the above drums the containers are bounded by current revision of the AK Summary Report for waste stream AERHDM for the following:

- Waste generation location and process
- Time period of generation
- Physical form compared to the assigned Waste Material Parameters and waste matrix code
- Chemical content
- Prohibited items
- Radionuclides

Attachment 8 (Waste Containers List) for waste stream AERHDM waste stream and the AK Tracking Spreadsheet (AKTSS) will be updated to include these additional containers.

Christopher Chancellor
signing for Kevin Peters *04/27/2010*
Printed Name / Signature Date

Attachment 1 – AK Tracking Spreadsheet Update Requests

From: Root, Frank W. [mailto:rhwesr@anl.gov]
Sent: Tuesday, April 27, 2010 9:06 AM
To: Kevin Peters
Cc: irene.ouintana@wipp.ws
Subject: AK Tracking Spreadsheet Update

Kevin
Please add 30-gallon drums 934, 935, and 936 to the ANL AK Tracking Spreadsheet. Attached are PDFs of the VE Data Sheets for the 3 30-gallon drums.
Thanks.

F. Wesley Root
CCP VPM, ANL

Off: 630-252-8306
Cell: 505695-9610

From: Root, Frank W. [mailto:rhwesr@anl.gov]
Sent: Tuesday, April 27, 2010 9:21 AM
To: Kevin Peters
Cc: Quintana, Irene
Subject: AK Tracking Spreadsheet Update

Kevin
Please add 30-gallon drums 937 and 938 to the ANL AK Tracking Spreadsheet. Attached are PDFs of the VE Data Sheets for the two 30-gallon drums.
Thanks.

F. Wesley Root
CCP VPM, ANL

Off: 630-252-8306
Cell: 505-695-9610

From: Root, Frank W. [mailto:rhwesr@anl.gov]
Sent: Tuesday, April 27, 2010 9:36 AM
To: Kevin Peters
Cc: Quintana, Irene
Subject: AK Tracking Spreadsheet Update

Kevin
Please add 30-gallon drums 939 and 940 to the ANL AK Tracking Spreadsheet. Attached are PDFs of the VE Data Sheets for the two 30-gallon drums.
Thanks.

F. Wesley Root
CCP VPM, ANL

containerid	Internal_Can_1	Internal_Can_2	Internal_Can_3	AKReport	WasteStream	MatrixCode	ClosureDate	VentDate
934	536	514		CCP-AK-ANLE-500	AERHDM	S5400	4/22/2010	4/22/2010
935	535	530		CCP-AK-ANLE-500	AERHDM	S5400	4/22/2010	4/22/2010
936	506	533		CCP-AK-ANLE-500	AERHDM	S5400	4/23/2010	4/23/2010
937	531	520		CCP-AK-ANLE-500	AERHDM	S5400	4/23/2010	4/23/2010
938	511	527		CCP-AK-ANLE-500	AERHDM	S5400	4/26/2010	4/26/2010
939	513	499		CCP-AK-ANLE-500	AERHDM	S5400	4/26/2010	4/26/2010
940	534	516		CCP-AK-ANLE-500	AERHDM	S5400	4/26/2010	4/26/2010

MEMORANDUM

To: Hillari Neeley, CCP SPM

From: Kevin Peters, CCP AKE

Date: April 28, 2010

RE: Addition of 2 Containers to Waste Stream AERHDM

The purpose of this memorandum is to satisfy the requirements of CCP AK Documentation procedure (CCP-TP-005) for updating AK for additional waste stream containers.

This memorandum presents the evaluation of two (2) containers recently generated during repackaging of AGHCF waste not currently in waste stream AERHDM. Wes Root provided the Visual Examination Data Forms for the following 30-gallon drums containing 4 7-gallon waste cans packaged in the AGHCF (see Attachment 1).

Drum ID	Internal Can	Internal Can
941	529	525
942	526	532

Based on a review Visual Examination Data Forms for the above drums the containers are bounded by current revision of the AK Summary Report for waste stream AERHDM for the following:

- Waste generation location and process
- Time period of generation
- Physical form compared to the assigned Waste Material Parameters and waste matrix code
- Chemical content
- Prohibited items
- Radionuclides

Attachment 8 (Waste Containers List) for waste stream AERHDM waste stream and the AK Tracking Spreadsheet (AKTSS) will be updated to include these additional containers.

Christopher Chancellor
signing for Kevin Peters *04/28/2010*
Printed Name / Signature Date

Attachment 1 – AK Tracking Spreadsheet Update Requests

From: Root, Frank W. [mailto:rhwesr@anl.gov]
Sent: Wednesday, April 28, 2010 7:17 AM
To: Kevin Peters
Cc: Quintana, Irene
Subject: AK Tracking Spreadsheet Update

Kevin

Please add 30-gallon drums 941 and 942 to the ANL AK Tracking Spreadsheet. Attached are PDFs of the VE Data Sheets for the two 30-gallon drums. These are drum 8 and 9 of a total of 10 drums that I need added to the AK Tracking Spreadsheet this week with the first eight added by Thursday. The tenth drum should be completed today and I will immediately send you the data sheet.

Thanks.

F. Wesley Root

CCP VPM, ANL

Off: 630-252-8306

Cell: 505-695-9610

containerid	Internal_Can_1	Internal_Can_2	Internal_Can_3	AKReport	WasteStream	MatrixCode	ClosureDate	VentDate
941	529	525		CCP-AK-ANLE-500	AERHDM	S5400	4/27/2010	4/27/2010
942	526	532		CCP-AK-ANLE-500	AERHDM	S5400	4/27/2010	4/27/2010

MEMORANDUM

To: Hillari Neeley, CCP SPM

From: Kevin Peters, CCP AKE

Date: April 29, 2010

RE: Addition of 1 Container to Waste Stream AERHDM

The purpose of this memorandum is to satisfy the requirements of CCP AK Documentation procedure (CCP-TP-005) for updating AK for additional waste stream containers.

This memorandum presents the evaluation of one (1) container recently generated during repackaging of AGHCF waste not currently in waste stream AERHDM. Wes Root provided the Visual Examination Data Forms for the following 30-gallon drum containing 2 7-gallon waste cans packaged in the AGHCF (see Attachment 1).

Drum ID	Internal Can	Internal Can
943	537	528

Based on a review Visual Examination Data Forms for the above drum, the container is bounded by current revision of the AK Summary Report for waste stream AERHDM for the following:

- Waste generation location and process
- Time period of generation
- Physical form compared to the assigned Waste Material Parameters and waste matrix code
- Chemical content
- Prohibited items
- Radionuclides

Attachment 8 (Waste Containers List) for waste stream AERHDM waste stream and the AK Tracking Spreadsheet (AKTSS) will be updated to include this additional container.

Christopher Chancellor
signing for Kevin Peters *04/29/2010*
Printed Name / Signature Date

Attachment 1 – AK Tracking Spreadsheet Update Requests

From: Root, Frank W. [mailto:rhwesr@anl.gov]
Sent: Wednesday, April 29, 2010 10:01 AM
To: Kevin Peters
Cc: Quintana, Irene
Subject: AK Tracking Spreadsheet Update

Kevin

Please add 30-gallon drum 943 to the ANL AK Tracking Spreadsheet. Attached is the PDF of the VE Data Sheets for the drum. This is the tenth and last drum (934, 935, 936, 937, 938, 939, 940, 941, 942, and 943).

Thanks.

F. Wesley Root

CCP VPM, ANL

Off: 630-252-8306

Cell: 505-695-9610

containerid	Internal_Can_1	Internal_Can_2	Internal_Can_3	AKReport	WasteStream	MatrixCode	ClosureDate	VentDate
943	537	528		CCP-AK-ANLE-500	AERHDM	S5400	4/28/2010	4/28/2010

MEMORANDUM

To: Irene Quintana, CCP SPM

From: Kevin Peters, CCP AKE

Date: May 13, 2010

RE: Addition of 5 Containers (55-gallon drums) to Waste Stream AERHDM

The purpose of this memorandum is to satisfy the requirements of CCP AK Documentation procedure (CCP-TP-005) for updating AK for additional waste stream containers.

This memorandum presents the evaluation of five (5) containers recently generated during repackaging of K-Wing waste not currently in waste stream AERHDM. Irene Quintana provided the Visual Examination Data Forms for the following 55-gallon drums packaged in the K-Wing (see Attachment 1).

Drum ID	Container Type	Closure Date
RW18870	55-gallon	11/5/2009
RW18871	55-gallon	11/12/2009
RW18872	55-gallon	11/14/2009
RW18873	55-gallon	11/17/2009
RW18874	55-gallon	11/20/2009

Based on a review Visual Examination Data Forms for the above drum, the containers are bounded by current revision of the AK Summary Report for waste stream AERHDM for the following:

- Waste generation location and process
- Time period of generation
- Physical form compared to the assigned Waste Material Parameters and waste matrix code
- Chemical content
- Prohibited items
- Radionuclides

Attachment 8 (Waste Containers List) for waste stream AERHDM waste stream and the AK Tracking Spreadsheet (AKTSS) will be updated to include this additional container.

Christopher Chancellor
signing for Kevin Peters *05/13/2010*
Printed Name / Signature Date

Attachment 1 – AK Tracking Spreadsheet Update Requests

From: IRENE QUINTANA [mailto:irene_quintana3@msn.com]
Sent: Wednesday, May 12, 2010 8:12 PM
To: Kevin Peters; rhwesr@yahoo.com
Subject: Add K-Wing debris to RH ANL AK

Kevin,

Would you please add the containers to RH ANL AK that are in the attached VE BDR?

Thank you,

Irene

containerid	Internal_Can_1	Internal_Can_2	Internal_Can_3	AKReport	WasteStream	MatrixCode	ClosureDate	VentDate
RW18870				CCP-AK-ANLE-500	AERHDM	S5400	11/5/2009	11/5/2009
RW18871				CCP-AK-ANLE-500	AERHDM	S5400	11/12/2009	11/12/2009
RW18872				CCP-AK-ANLE-500	AERHDM	S5400	11/14/2009	11/14/2009
RW18873				CCP-AK-ANLE-500	AERHDM	S5400	11/17/2009	11/17/2009
RW18874				CCP-AK-ANLE-500	AERHDM	S5400	11/20/2009	11/20/2009

MEMORANDUM

To: Irene Quintana, CCP SPM

From: Kevin Peters, CCP AKE

Date: June 2, 2010

RE: Addition of 5 Containers (55-gallon drums) to Waste Stream AERHDM

The purpose of this memorandum is to satisfy the requirements of CCP AK Documentation procedure (CCP-TP-005) for updating AK for additional waste stream containers.

This memorandum presents the evaluation of five (5) containers recently generated during repackaging of K-Wing waste not currently in waste stream AERHDM. Wes Root provided the Visual Examination Data Forms for the following 55-gallon drums packaged in the K-Wing (see Attachment 1).

Drum ID	Container Type	Closure Date
RW18881	55-gallon	4/7/2010
RW18886	55-gallon	4/15/2010
RW18889	55-gallon	4/22/2010
RW18891	55-gallon	4/28/2010
RW18893	55-gallon	5/5/2010

Based on a review Visual Examination Data Forms for the above drum, the containers are bounded by current revision of the AK Summary Report for waste stream AERHDM for the following:

- Waste generation location and process
- Time period of generation
- Physical form compared to the assigned Waste Material Parameters and waste matrix code
- Chemical content
- Prohibited items
- Radionuclides

Attachment 8 (Waste Containers List) for waste stream AERHDM waste stream and the AK Tracking Spreadsheet (AKTSS) will be updated to include this additional container.

Christopher Chancellor
signing for Kevin Peters *06/02/2010*
Printed Name / Signature Date

Attachment 1 – AK Tracking Spreadsheet Update Requests

From: Root, Frank W. [mailto:rhwesr@anl.gov]
Sent: Tuesday, June 01, 2010 6:40 AM
To: Kevin Peters; Quintana, Irene
Subject: AK Tracking Spreadsheet Update

Kevin

Please add 55-gallon drums RW18881, RW18889 and RW18893 to the ANL AK Tracking Spreadsheet. Attached are PDFs of the VE Data Sheets for the three drums. These are 3 of 7 drums that I need on the AK for HSG sampling this Thursday.

Thanks.

F. Wesley Root
CCP VPM, ANL
Off: 630-252-8306
Cell: 505-695-9610

From: Root, Frank W. [mailto:rhwesr@anl.gov]
Sent: Tuesday, June 01, 2010 8:51 AM
To: Kevin Peters; Quintana, Irene
Subject: AK Tracking Spreadsheet Update

Kevin

Please add 55-gallon drums RW18886 and RW18891 to the ANL AK Tracking Spreadsheet. Attached are PDFs of the VE Data Sheets for the two drums. These are 4 and 5 of the 7 drums that I need on the AK for HSG sampling this Thursday.

Thanks.

F. Wesley Root
CCP VPM, ANL
Off: 630-252-8306
Cell: 505-695-9610

containerid	Internal_Can_1	Internal_Can_2	Internal_Can_3	AK Report	WasteStream	MatrixCode	ClosureDate	VentDate
RW18881				CCP-AK-ANLE-500	AERHDM	S5400	4/7/2010	4/7/2010
RW18886				CCP-AK-ANLE-500	AERHDM	S5400	4/15/2010	4/15/2010
RW18889				CCP-AK-ANLE-500	AERHDM	S5400	4/22/2010	4/22/2010
RW18891				CCP-AK-ANLE-500	AERHDM	S5400	4/28/2010	4/28/2010
RW18893				CCP-AK-ANLE-500	AERHDM	S5400	5/5/2010	5/5/2010

MEMORANDUM

To: Irene Quintana, CCP SPM

From: Kevin Peters, CCP AKE

Date: June 3, 2010

RE: Addition of 8 Containers to Waste Stream AERHDM

The purpose of this memorandum is to satisfy the requirements of CCP AK Documentation procedure (CCP-TP-005) for updating AK for additional waste stream containers.

This memorandum presents the evaluation of eight (8) containers recently generated during repackaging of AGHCF waste not currently in waste stream AERHDM. Wes Root provided the Visual Examination Data Forms for the following 30-gallon drums containing 16 7-gallon waste cans packaged in the AGHCF (see Attachment 1).

Drum ID	Internal Can	Internal Can
944	566	539
945	552	545
946	547	505
947	541	543
948	538	544
949	515	546
950	567	510
951	540	542

Based on a review Visual Examination Data Forms for the above drums the containers are bounded by current revision of the AK Summary Report for waste stream AERHDM for the following:

- Waste generation location and process
- Time period of generation
- Physical form compared to the assigned Waste Material Parameters and waste matrix code
- Chemical content
- Prohibited items
- Radionuclides

Review of the VE data sheet for can 540 in drum 951 identified a "light ballast" placed in the 7-gallon container in this drum. However, the Prohibited Item(s) Summary checklist of the VE data form identified that there was no indication of unauthorized PCBs. The AK Summary Report for waste stream AERHDM states the following:

"Electrical equipment that might have contained PCBs (such as ballasts, capacitors, and transformers) is located outside of the AGHCF on the second floor of the wing for ease of maintenance. Numerous light fixture items were identified in historical packaging documents; however, the ballasts for the lighting in the AGHFC were located outside of the cells and would not have been included in the RH TRU waste stream."

Wes Root was contacted to verify that the item was not PCB containing equipment. Wes reviewed the data sheet with the VEOs and determined that this is not PCB containing material as described in the attached email (See attachment 2).

Attachment 8 (Waste Containers List) for waste stream AERHDM waste stream and the AK Tracking Spreadsheet (AKTSS) will be updated to include these additional containers.

Christopher Chancellor
signing for Kevin Peters *06/07/2010*
Printed Name / Signature Date

Attachment 1 – AK Tracking Spreadsheet Update Requests

From: Root, Frank W. [mailto:rhwesr@anl.gov]
Sent: Thursday, June 03, 2010 7:23 AM
To: Kevin Peters
Cc: Quintana, Irene
Subject: AK Tracking Spreadsheet Update

Kevin

Please add 30-gallon drums 944 and 945 to the ANL AK Tracking Spreadsheet. Attached are PDFs of the VE Data Sheets for the three AGHCF drums. These are the last 2 drums of the 8 drums (944, 945, 946, 947, 948, 949, 950, 951) that I need on the AK for DTC this Friday. Thanks.

F. Wesley Root
CCP VPM, ANL

From: Root, Frank W. [mailto:rhwesr@anl.gov]
Sent: Thursday, June 03, 2010 6:30 AM
To: Kevin Peters
Cc: Quintana, Irene
Subject: AK Tracking Spreadsheet Update

Kevin

Please add 30-gallon drums 946, 947, and 948 to the ANL AK Tracking Spreadsheet. Attached are PDFs of the VE Data Sheets for the three AGHCF drums. These are 3 more of the 8 drums that I need on the AK for DTC this Friday. I will e-mail you the remaining two VE Data Sheets this morning.

Thanks.

F. Wesley Root
CCP VPM, ANL

From: Root, Frank W. [mailto:rhwesr@anl.gov]
Sent: Thursday, June 03, 2010 6:05 AM
To: Kevin Peters
Cc: Quintana, Irene
Subject: AK Tracking Spreadsheet Update

Kevin

Please add 30-gallon drums 949, 950, and 951 to the ANL AK Tracking Spreadsheet. Attached are PDFs of the VE Data Sheets for the three AGHCF drums. These are 3 of 8 drums that I need on the AK for DTC this Friday. I will e-mail you the remaining VE Data Sheets this morning.

Thanks.

F. Wesley Root
CCP VPM, ANL

Attachment 2 – Evaluation of Light Ballast in Container 951 (Can 540)

From: Root, Frank W. [mailto:rhwesr@anl.gov]
Sent: Thursday, June 03, 2010 1:01 PM
To: Kevin Peters
Cc: Quintana, Irene
Subject: Can 540 Waste Description

Kevin

In response to your inquiry about the use of the term "light ballast" in the VE waste description of Can 540 in drum 951, I have reviewed the potential issue with the VEOs who performed the VE. The VEOs described the item as a sodium vapor light ballast fixture identical to the lamps currently used in the AGHCF. The item had been cut into pieces so it would fit in a 7-gallon can and the VEOs confirmed that it contained no lamp bulb or potential PCB source such as a capacitor or transformer.

The lamps in the AGHCF are sheet metal fixtures with aluminum/copper mounts, and insulated bulb sockets composed primarily of porcelain, rubber, and plastic. They contain no potential PCB source such as a capacitor, transformer, or fluorescent lamp type ballast. Based on my review, the item was adequately examined during VE, the Waste Material Parameters were correctly identified, and no prohibited items are present. However, the VEOs and I, as the VEE, agree that a more accurate waste description of the item is "light fixture pieces" and the VE data sheet will be changed accordingly.

Thanks

F. Wesley Root

VPM/VEE ANL

Off:630-252-8306

Cell:505-695-9610

MEMORANDUM

To: Hillari Neeley and Irene Quintana, CCP SPM

From: Kevin Peters, CCP AKE

Date: June 27, 2008

RE: Addition of 2 Containers to Waste Stream AERHDM

The purpose of this memorandum is to satisfy the requirements of CCP AK Documentation procedure (CCP-TP-005) for updating AK for additional waste stream containers.

This memorandum presents the evaluation of two (2) containers recently generated during repackaging of AGHCF waste not currently in waste stream AERHDM. Wes Root provided the VE Batch Data Report (BDR) for the following 30-gallon drums containing 4 7-gallon waste cans packaged in 2007 (see Attachment 1).

Drum ID	Internal Can	Internal Can
00856	381	377
00861	369	363

Based on a review Visual Examination Data Forms for drums 00856 and 00861 (VE BDR RHANLVE080005) the containers are bounded by current revision of the respective AK Summary Reports for the following:

- Waste generation location and process
- Time period of generation
- Physical form compared to the assigned Waste Material Parameters and waste matrix code
- Chemical content
- Prohibited items
- Radionuclides

Attachment 8 (Waste Containers List) for waste stream AERHDM waste stream and the AK Tracking Spreadsheet (AKTSS) will be updated to include these additional containers.

Attachment 1 – AK Tracking Spreadsheet Update Request

From: Root, Frank W. [mailto:rhwesr@anl.gov]
Sent: Thursday, June 26, 2008 8:21 AM
To: kpeters44@comcast.net
Cc: hillari.neely@wipp.ws; Quintana, Irene
Subject: ANL AK Tracking Spreadsheet Update

Kevin

Attached are PDFs of the VE Data Sheets for 30-gallon drum 861 and drum 856 in VE BDR RHANLVE080005. Please update the AK tracking Spreadsheet.

Thanks

F. Wesley Root
CCP VPM, ANL

Off: 630-252-8306
Cell: 505695-9610

MEMORANDUM

To: Irene Quintana, CCP SPM

From: Kevin Peters, CCP AKE

Date: July 22, 2010

RE: Addition of 16 Containers to Waste Stream AERHDM

The purpose of this memorandum is to satisfy the requirements of CCP AK Documentation procedure (CCP-TP-005) for updating AK for additional waste stream containers.

This memorandum presents the evaluation of 16 containers recently generated during repackaging of AGHCF (13 30-gallon drums) and K-Wing (3 55-gallon drums) waste not currently in waste stream AERHDM. Wes Root and Irene Quintana provided the Visual Examination Data Forms for the following drums packaged in the AGHCF K-Wing (see Attachment 1).

Drum ID	Internal Container(s)	Container Type	Closure Date	Description
RW18888	N/A	55-gallon	4/20/2010	K-Wing Debris
RW18890	N/A	55-gallon	4/26/2010	K-Wing Debris
RW18892	N/A	55-gallon	4/29/2010	K-Wing Debris
931	509, 498	30-gallon	3/24/2010	AGHCF Debris (met mounts)
932	493, 512	30-gallon	3/25/2010	AGHCF Debris (met mounts)
933	508, 507	30-gallon	3/26/2010	AGHCF Debris (met mounts)
952	598, 607	30-gallon	6/21/2010	AGHCF Debris (FEW)
953	597, 604	30-gallon	6/22/2010	AGHCF Debris (FEW)
954	600, 603	30-gallon	6/22/2010	AGHCF Debris (FEW)
955	573, 571	30-gallon	6/24/2010	AGHCF Debris (FEW)
956	909, 507	30-gallon	6/22/2010	AGHCF Debris (FEW)
957	575, 592	30-gallon	6/28/2010	AGHCF Debris (FEW)
960	576, 574	30-gallon	6/25/2010	AGHCF Debris (met mounts)
961	549, 614	30-gallon	7/20/2010	AGHCF Debris
962	596, 568	30-gallon	7/21/2010	AGHCF Debris
963	602, 551	30-gallon	7/21/2010	AGHCF Debris

Based on a review Visual Examination Data Forms for the above drums, the containers are bounded by current revision of the AK Summary Report for waste stream AERHDM for the following:

- Waste generation location and process
- Time period of generation
- Physical form compared to the assigned Waste Material Parameters and waste matrix code
- Chemical content
- Prohibited items
- Radionuclides

Attachment 8 (Waste Containers List) for waste stream AERHDM waste stream and the AK Tracking Spreadsheet (AKTSS) will be updated to include this additional container.

Christopher Chancellor
signing for Kevin Peters *07/22/2010*

Printed Name / Signature Date

Attachment 1 – AK Tracking Spreadsheet Update Requests

From: Root, Frank W. [mailto:rhwesr@anl.gov]
Sent: Wednesday, July 21, 2010 4:25 PM
To: Kevin Peters
Subject: AK Tracking Spreadsheet Update

Kevin

Please add 30-gallon drums 931, 932 and 933 to the ANL AK Tracking Spreadsheet. Attached are PDFs of the VE Data Sheets for the three AGHCF drums. These are 3 of 8 drums (931, 932, 933, 952, 957, 960, 961, 963) that I need on the AK for DTC this Friday.

Thanks.

F. Wesley Root
CCP VPM, ANL
Off: 630-252-8306
Cell: 505-695-9610

From: Root, Frank W. [mailto:rhwesr@anl.gov]
Sent: Wednesday, July 21, 2010 4:58 PM
To: Kevin Peters
Subject: AK Tracking Spreadsheet Update2

Kevin

Please add 30-gallon drums 957 and 960 to the ANL AK Tracking Spreadsheet. Attached are PDFs of the VE Data Sheets for the two AGHCF drums. These are the two of 8 drums (931, 932, 933, 957, 960, 961, 962, 963) that I need on the AK for DTC this Friday.

Thanks.

F. Wesley Root
CCP VPM, ANL
Off: 630-252-8306
Cell: 505-695-9610

From: Root, Frank W. [mailto:rhwesr@anl.gov]
Sent: Thursday, July 22, 2010 7:01 AM
To: Kevin Peters
Subject: AK Tracking Spreadsheet Update3

Kevin

Please add 30-gallon drums 961, 962 and 963 to the ANL AK Tracking Spreadsheet. Attached are PDFs of the VE Data Sheets for the three AGHCF drums. These are the last of 8 drums (931, 932, 933, 957, 960, 961, 962, 963) that I need on the AK for DTC this Friday.

Thanks.

F. Wesley Root
CCP VPM, ANL
Off: 630-252-8306
Cell: 505-695-9610

From: Quintana, Irene [mailto:Irene.Quintana@wipp.ws]
Sent: Wednesday, July 21, 2010 5:55 PM
To: Peters, Kevin
Cc: Root, Wes - ANL
Subject: Please add RH ANL containers to RH ANL AK Tracking spreadsheet

Kevin,

Please add the containers in the attached BDRs to the ANL AK Tracking spreadsheet.

Thank you,

Irene Quintana
RH SPM

Request included containers: 952, 953, 954, 955, 956, RW18888, RW18890, and RW18892

MEMORANDUM

To: Irene Quintana, CCP SPM

From: Kevin Peters, CCP AKE

Date: July 23, 2010

RE: Addition of 4 Containers to Waste Stream AERHDM

The purpose of this memorandum is to satisfy the requirements of CCP AK Documentation procedure (CCP-TP-005) for updating AK for additional waste stream containers.

This memorandum presents the evaluation of 4 containers recently generated during repackaging of AGHCF (30-gallon drums) waste not currently in waste stream AERHDM. Wes Root provided the Visual Examination Data Forms for the following drums packaged in the AGHCF (see Attachment 1).

Drum ID	Internal Container(s)	Container Type	Closure Date	Description
964	569, 550	30-gallon	7/22/2010	AGHCF Debris
965	601, 609	30-gallon	7/22/2010	AGHCF Debris
966	593, 565	30-gallon	7/22/2010	AGHCF Debris
967	548, 595	30-gallon	7/22/2010	AGHCF Debris

Based on a review Visual Examination Data Forms for the above drums, the containers are bounded by current revision of the AK Summary Report for waste stream AERHDM for the following:

- Waste generation location and process
- Time period of generation
- Physical form compared to the assigned Waste Material Parameters and waste matrix code
- Chemical content
- Prohibited items
- Radionuclides

Attachment 8 (Waste Containers List) for waste stream AERHDM waste stream and the AK Tracking Spreadsheet (AKTSS) will be updated to include this additional container.

Attachment 1 – AK Tracking Spreadsheet Update Requests

From: Root, Frank W. [mailto:rhwesr@anl.gov]
Sent: Wednesday, July 23, 2010 1:10 PM
To: Kevin Peters
Subject: AK Tracking Spreadsheet Update

Kevin

Please add 30-gallon drums 964, 965, 966 and 967 to the ANL AK Tracking Spreadsheet. Attached are PDFs of the VE Data Sheets for the four AGHCF debris drums.

Thanks.

F. Wesley Root
CCP VPM, ANL
Off: 630-252-8306
Cell: 505-695-9610

MEMORANDUM

To: Irene Quintana, CCP SPM

From: Kevin Peters, CCP AKE

Date: August 25, 2010

RE: Addition of 10 Containers to Waste Stream AERHDM

The purpose of this memorandum is to satisfy the requirements of CCP AK Documentation procedure (CCP-TP-005) for updating AK for additional waste stream containers.

This memorandum presents the evaluation of 10 containers recently generated during repackaging of AGHCF (8 30-gallon drums) and K-Wing (2 55-gallon drums) waste not currently in waste stream AERHDM. Wes Root provided the Visual Examination Data Forms for the following drums packaged in the AGHCF K-Wing (see Attachment 1).

Drum ID	Internal Container(s)	Container Type	Closure Date	Description
969	616, 623	30-gallon	7/27/2010	AGHCF Debris (met mounts)
971	613, 615	30-gallon	7/28/2010	AGHCF Debris (met mounts)
972	610, 627	30-gallon	7/29/2010	AGHCF Debris (met mounts)
974	618, 617	30-gallon	7/26/2010	AGHCF Debris (met mounts)
975	634, 636	30-gallon	8/12/2010	AGHCF Debris
976	632, 635	30-gallon	8/12/2010	AGHCF Debris
977	641, 642	30-gallon	8/17/2010	AGHCF Debris (met mounts)
979	622, 599	30-gallon	8/17/2010	AGHCF Debris (met mounts)
RW18905	N/A	55-gallon	6/4/2010	K-Wing Debris
RW18906	N/A	55-gallon	6/8/2010	K-Wing Debris

Based on a review Visual Examination Data Forms for the above drums, the containers are bounded by current revision of the AK Summary Report for waste stream AERHDM for the following:

- Waste generation location and process
- Time period of generation
- Physical form compared to the assigned Waste Material Parameters and waste matrix code
- Chemical content
- Prohibited items
- Radionuclides

Wes Root contacted the AKE about the uranyl oxalate powder identified in the K-Wing debris container RW18906. It was determined that the salt originated from the UREX

process described in the AK Summary Report. Though this compound was not specifically identified in the report, numerous uranium salts from the originating from UREX are called out in the report. For this reason, it was determined that this material compound is similar to the salts identified and not inconsistent with the waste stream description.

Attachment 8 (Waste Containers List) for waste stream AERHDM waste stream and the AK Tracking Spreadsheet (AKTSS) will be updated to include these additional containers.

Christopher Chancellor
signing for Kevin Peters *08/25/2010*
Printed Name / Signature Date

Attachment 1 – AK Tracking Spreadsheet Update Requests

From: Root, Frank W. [mailto:rhwesr@anl.gov]
Sent: Tuesday, August 24, 2010 3:08 PM
To: Kevin Peters
Subject: ANL AK Tracking Spreadsheet update

Kevin

Please review and have the attached drums (972, 976, 977, and 979) added to the AK Tracking Spreadsheet. These are 4 of 13 drums I need added to the spreadsheet in preparation for DTC.

Thanks

F. Wesley Root
CCP VPM, ANL
Off: 630-252-8306
Cell: 505-695-9610

From: Root, Frank W. [mailto:rhwesr@anl.gov]
Sent: Wednesday, August 25, 2010 2:02 PM
To: Kevin Peters
Subject: ANL AK Tracking Spreadsheet update2

Kevin

Please review and have the attached drums (969, 971, 974, and 975) added to the AK Tracking Spreadsheet.

Thanks

F. Wesley Root
CCP VPM, ANL
Off: 630-252-8306
Cell: 505-695-9610

From: Root, Frank W. [mailto:rhwesr@anl.gov]
Sent: Wednesday, August 25, 2010 2:12 PM
To: Kevin Peters
Subject: ANL AK Tracking Spreadsheet update3

Kevin

Please review and have the attached 55-gallon drums (RW18905 and RW18906) added to the AK Tracking Spreadsheet.

Thanks

F. Wesley Root

Off: 630-252-8306
Cell: 505-695-9610

MEMORANDUM

To: Hillari Neeley and Irene Quintana, CCP SPM

From: Kevin Peters, CCP AKE

Date: September 14, 2009

RE: Addition of 9 Containers to Waste Stream AERHDM

The purpose of this memorandum is to satisfy the requirements of CCP AK Documentation procedure (CCP-TP-005) for updating AK for additional waste stream containers.

This memorandum presents the evaluation of nine (9) containers recently generated during repackaging of AGHCF waste not currently in waste stream AERHDM. Wes Root provided the Visual Examination Data Forms for the following 30-gallon drums containing 18 7-gallon waste cans packaged in the AGHCF (see Attachment 1).

Drum ID	Internal Can	Internal Can
889	478	426
890	428	444
891	427	445
892	412	435
893	410	416
894	421	413
895	424	423
896	443	429
897	409	477

Based on a review Visual Examination Data Forms for the above drums the containers are bounded by current revision of the AK Summary Report for waste stream AERHDM for the following:

- Waste generation location and process
- Time period of generation
- Physical form compared to the assigned Waste Material Parameters and waste matrix code
- Chemical content
- Prohibited items
- Radionuclides

Attachment 8 (Waste Containers List) for waste stream AERHDM waste stream and the AK Tracking Spreadsheet (AKTSS) will be updated to include these additional containers.

Christopher Chancellor
signing for Kevin Peters / 09/14/2009
Acceptable Knowledge Expert Sign Date

ORIGINAL

Attachment 1 – AK Tracking Spreadsheet Update Requests

From: Root, Frank W. [mailto:rhwesr@anl.gov]
Sent: Thursday, September 10, 2009 8:56 AM
To: Kevin Peters
Cc: Neely, Hillari; irene_quintana3@msn.com
Subject: ANL AK Tracking Spreadsheet Update

Kevin

Attached are PDFs of the VE Data Sheets for three 30-gallon RH drums, 889, 890 and 891. Please update the ANL AK Tracking Spreadsheet with these drums. There will be a total of 9 drums generated during this VE campaign and I will submit the remaining 6 drums to you by COB Friday. DTC operations are scheduled to begin next Monday, 9-14-09, and will require containers to be listed on the spreadsheet.

Thanks.

F. Wesley Root
CCP VPM, ANL

Off: 630-252-8306
Cell: 505695-9610

From: Root, Frank W. [mailto:rhwesr@anl.gov]
Sent: Friday, September 11, 2009 8:12 AM
To: Kevin Peters
Cc: irene_quintana3@msn.com; Neely, Hillari
Subject: ANL AK Tracking Spreadsheet Update

Kevin

Attached are PDFs of the VE Data Sheets for three additional 30-gallon RH drums, 892, 893 and 894. Please update the ANL AK Tracking Spreadsheet with these drums. I will submit the remaining 3 drums to you by COB today. DTC operations are scheduled to begin next Monday, 9-14-09, and will require the nine containers to be listed on the spreadsheet.

Thanks.

F. Wesley Root
CCP VPM, ANL

Off: 630-252-8306
Cell: 505695-9610

From: Root, Frank W. [mailto:rhwesr@anl.gov]
Sent: Friday, September 11, 2009 8:15 AM
To: Kevin Peters
Cc: irene_quintana3@msn.com; Neely, Hillari
Subject: ANL AK Tracking Spreadsheet Update

Kevin

Attached are PDFs of the VE Data Sheets for two additional 30-gallon RH drums, 895 and 896. Please update the ANL AK Tracking Spreadsheet with these drums. I will submit the remaining drum to you by COB today. DTC operations are scheduled to begin next Monday, 9-14-09, and will require the nine containers to be listed on the spreadsheet.

Thanks.

F. Wesley Root

CCP VPM, ANL

Off: 630-252-8306
Cell: 505695-9610

containerid	Internal_Can_1	Internal_Can_2	Internal_Can_3	AKReport	WasteStream	MatrixCode	ClosureDate	VentDate	ClosureDate1	VentDate1	Comment
889	478	426		CCP-AK-ANLE-500	AERHDM	S5400	9/2/2009	9/2/2009			
890	428	444		CCP-AK-ANLE-500	AERHDM	S5400	9/8/2009	9/8/2009			
891	427	445		CCP-AK-ANLE-500	AERHDM	S5400	9/8/2009	9/8/2009			
892	412	435		CCP-AK-ANLE-500	AERHDM	S5400	9/9/2009	9/9/2009			
893	410	416		CCP-AK-ANLE-500	AERHDM	S5400	9/9/2009	9/9/2009			
894	421	413		CCP-AK-ANLE-500	AERHDM	S5400	9/10/2009	9/10/2009			
895	424	423		CCP-AK-ANLE-500	AERHDM	S5400	9/10/2009	9/10/2009			
896	443	429		CCP-AK-ANLE-500	AERHDM	S5400	9/10/2009	9/10/2009			
897	409	477		CCP-AK-ANLE-500	AERHDM	S5400	9/11/2009	9/11/2009			

MEMORANDUM

To: Irene Quintana, CCP SPM

From: Kevin Peters, CCP AKE

Date: September 15, 2010

RE: Addition of 7 Containers to Waste Stream AERHDM

The purpose of this memorandum is to satisfy the requirements of CCP AK Documentation procedure (CCP-TP-005) for updating AK for additional waste stream containers.

This memorandum presents the evaluation of 7 containers recently generated during repackaging of AGHCF (30-gallon drums) waste not currently in waste stream AERHDM. Wes Root provided the Visual Examination Data Forms for the following drums packaged in the AGHCF (see Attachment 1).

Drum ID	Internal Container(s)	Container Type	Closure Date	Description
980	643, 645	30-gallon	9/8/2010	AGHCF Debris
981	648, 653	30-gallon	9/8/2010	AGHCF Debris
982	608, 629	30-gallon	9/9/2010	AGHCF Debris
983	644, 647	30-gallon	9/9/2010	AGHCF Debris
985	654, 646	30-gallon	9/9/2010	AGHCF Debris
986	656, 633	30-gallon	9/10/2010	AGHCF Debris
987	650, 657	30-gallon	9/10/2010	AGHCF Debris

Based on a review Visual Examination Data Forms for the above drums, the containers are bounded by current revision of the AK Summary Report for waste stream AERHDM for the following:

- Waste generation location and process
- Time period of generation
- Physical form compared to the assigned Waste Material Parameters and waste matrix code
- Chemical content
- Prohibited items
- Radionuclides

Attachment 8 (Waste Containers List) for waste stream AERHDM and the AK Tracking Spreadsheet (AKTSS) will be updated to include these additional containers.

Christopher Chancellor
signing for Kevin Peters *09/15/2010*
Printed Name / Signature Date

Attachment 1 – AK Tracking Spreadsheet Update Requests

From: Root, Frank W. [mailto:rhwesr@anl.gov]
Sent: Tuesday, September 14, 2010 4:16 PM
To: Kevin Peters
Subject: ANL AK Tracking Spreadsheet update2

Kevin

Please review and have the attached 30-gallon drums (985, 986, and 987) added to the AK Tracking Spreadsheet.

Thanks.

F. Wesley Root
CCP VPM, ANL
Off: 630-252-8306
Cell: 505-695-9610

From: Root, Frank W. [mailto:rhwesr@anl.gov]
Sent: Tuesday, September 14, 2010 4:09 PM
To: Kevin Peters
Subject: ANL AK Tracking Spreadsheet update

Kevin

Please review and have the attached 30-gallon drums (980, 981, 982, and 983) added to the AK Tracking Spreadsheet.

Thanks

F. Wesley Root
Off: 630-252-8306
Cell: 505-695-9610

MEMORANDUM

To: Irene Quintana, CCP SPM

From: Kevin Peters, CCP AKE

Date: September 29, 2010

RE: Addition of 8 Containers to Waste Stream AERHDM

The purpose of this memorandum is to satisfy the requirements of CCP AK Documentation procedure (CCP-TP-005) for updating AK for additional waste stream containers.

This memorandum presents the evaluation of 8 containers recently generated during repackaging of AGHCF (5 30-gallon drums) and K-Wing (3 55-gallon drums) waste not currently in waste stream AERHDM. Wes Root provided the Visual Examination Data Forms for the following drums packaged in the AGHCF and K-Wing (see Attachment 1).

Drum ID	Internal Container(s)	Container Type	Closure Date	Description
RW18903	N/A	55-gallon	9/22/2010	K-Wing Debris
RW18907	N/A	55-gallon	9/24/2010	K-Wing Debris
RW18908	N/A	55-gallon	9/28/2010	K-Wing Debris
958	594, 605	30-gallon	6/30/2010	AGHCF Debris (met mounts)
959	572, 577	30-gallon	6/28/2010	AGHCF Debris (met mounts)
973	620, 612	30-gallon	7/29/2010	AGHCF Debris (met mounts)
984	628, 651	30-gallon	9/9/2010	AGHCF Debris
988	655, 649	30-gallon	9/10/2010	AGHCF Debris

Based on a review Visual Examination Data Forms for the above drums, the containers are bounded by current revision of the AK Summary Report for waste stream AERHDM for the following:

- Waste generation location and process
- Time period of generation
- Physical form compared to the assigned Waste Material Parameters and waste matrix code
- Chemical content
- Prohibited items
- Radionuclides

It was noted that containers RW18903 and RW18903 contain batteries (cut up battery pieces and lithium battery, respectively. Wes Root was contacted to verify that these batteries had been dismantled (cut up) to assure that they were not intact and fully

discharged. Based on this discussion the VE data sheet for container RW18907 was revised (see attached email) to reflect that the lithium battery was indeed in pieces.

Attachment 8 (Waste Containers List) for waste stream AERHDM waste stream and the AK Tracking Spreadsheet (AKTSS) will be updated to include these additional containers.

Christopher Chancellor
signing for Kevin Peters *09/29/2010*
Printed Name / Signature Date

Attachment 1 – AK Tracking Spreadsheet Update Requests

From: Root, Frank W. [mailto:rhwesr@anl.gov]
Sent: Wednesday, September 29, 2010 9:08 AM
To: Kevin Peters
Subject: ANL AK Tracking Spreadsheet update3

Kevin

Please review and have the attached 55-gallon drums (RW18903, RW18907 and RW18908) added to the AK Tracking Spreadsheet.

Thanks

F. Wesley Root

Off: 630-252-8306
Cell: 505-695-9610

From: Root, Frank W. [mailto:rhwesr@anl.gov]
Sent: Wednesday, September 29, 2010 7:51 AM
To: Kevin Peters
Subject: ANL AK Tracking Spreadsheet update2

Kevin

Please review and have the attached 30-gallon drums (984 and 988) added to the AK Tracking Spreadsheet.

Thanks

F. Wesley Root

Off: 630-252-8306
Cell: 505-695-9610

From: Root, Frank W. [mailto:rhwesr@anl.gov]
Sent: Wednesday, September 29, 2010 7:51 AM
To: Kevin Peters
Subject: ANL AK Tracking Spreadsheet update

Kevin

Please review and have the attached 30-gallon drums (958, 959, 973) added to the AK Tracking Spreadsheet.

Thanks

F. Wesley Root

Off: 630-252-8306
Cell: 505-695-9610

From: Root, Frank W. [mailto:rhwesr@anl.gov]
Sent: Wednesday, September 29, 2010 1:04 PM
To: Kevin Peters
Subject: Lithium battery in RW18907

Kevin

In response to your inquiry about the "lithium battery" in the VE waste description of drum RW18907, I have reviewed the potential issue with the VEOs who performed the VE and confirmed the waste is pieces of a lithium battery that had been physically cut up to ensure the battery is in a state of discharge.

Based on my review, the item was adequately examined during VE, the Waste Material Parameters were correctly identified, and no prohibited items are present. However, the VEOs and I, as the VEE, agree that a more accurate waste description of the item is "lithium battery pieces" and the attached VE data sheet has been changed accordingly.

Thanks

F. Wesley Root
VPM/VEE ANL

Off:630-252-8306
Cell:505-695-9610

MEMORANDUM

To: Irene Quintana, CCP SPM

From: Kevin Peters, CCP AKE

Date: October 11, 2010

RE: Addition of 2 Containers to Waste Stream AERHDM

The purpose of this memorandum is to satisfy the requirements of CCP AK Documentation procedure (CCP-TP-005) for updating AK for additional waste stream containers.

This memorandum presents the evaluation of 2 containers recently generated during repackaging of K-Wing (2 55-gallon drums) waste not currently in waste stream AERHDM. Wes Root provided the Visual Examination Data Forms for the following drums packaged in the K-Wing (see Attachment 1).

Drum ID	Internal Container(s)	Container Type	Closure Date	Description
RW18909	N/A	55-gallon	9/30/2010	K-Wing Debris
RW18910	N/A	55-gallon	10/6/2010	K-Wing Debris

Based on a review Visual Examination Data Forms for the above drums, the containers are bounded by current revision of the AK Summary Report for waste stream AERHDM for the following:

- Waste generation location and process
- Time period of generation
- Physical form compared to the assigned Waste Material Parameters and waste matrix code
- Chemical content
- Prohibited items
- Radionuclides

Attachment 8 (Waste Containers List) for waste stream AERHDM waste stream and the AK Tracking Spreadsheet (AKTSS) will be updated to include these additional containers.

Christopher Chancellor
signing for Kevin Peters *10/12/2010*
Printed Name / Signature Date

Attachment 1 – AK Tracking Spreadsheet Update Requests

From: Root, Frank W. [rhwesr@anl.gov]
Sent: Friday, October 8, 2010 8:30 AM
To: Kevin Peters
Subject: ANL AK Tracking Spreadsheet Update

Kevin

Please review and have the attached 55-gallon drums (RW18909 and RW18910) added to the AK Tracking Spreadsheet.

Thanks

F. Wesley Root

Off: 630-252-8306
Cell: 505-695-9610

MEMORANDUM

To: Irene Quintana, CCP SPM

From: Kevin Peters, CCP AKE

Date: October 20, 2010

RE: Addition of 1 Container to Waste Stream AERHDM

The purpose of this memorandum is to satisfy the requirements of CCP AK Documentation procedure (CCP-TP-005) for updating AK for additional waste stream containers.

This memorandum presents the evaluation of 1 container recently generated during repackaging of K-Wing (1 55-gallon drum) waste not currently in waste stream AERHDM. Wes Root provided the Visual Examination Data Forms for the following drum packaged in the K-Wing.

Drum ID	Internal Container(s)	Container Type	Closure Date	Description
RW18900	N/A	55-gallon	5/17/2010	K-Wing Debris

Based on a review Visual Examination Data Forms for the above drums, the container is bounded by current revision of the AK Summary Report for waste stream AERHDM for the following:

- Waste generation location and process
- Time period of generation
- Physical form compared to the assigned Waste Material Parameters and waste matrix code
- Chemical content
- Prohibited items
- Radionuclides

Attachment 8 (Waste Containers List) for waste stream AERHDM waste stream and the AK Tracking Spreadsheet (AKTSS) will be updated to include this additional container.

Christopher Chancellor
signing for Kevin Peters *10/20/2010*
Printed Name / Signature Date

ORIGINAL

MEMORANDUM

To: Irene Quintana, CCP SPM

From: Kevin Peters, CCP AKE

Date: October 27, 2010

RE: Addition of 6 Containers to Waste Stream AERHDM

The purpose of this memorandum is to satisfy the requirements of CCP AK Documentation procedure (CCP-TP-005) for updating AK for additional waste stream containers.

This memorandum presents the evaluation of 6 containers recently generated during repackaging of AGHCF (6 30-gallon drums) waste not currently in waste stream AERHDM. Wes Root provided the Visual Examination Data Forms for the following drums packaged in the AGHCF (see Attachment 1).

Drum ID	Internal Container(s)	Container Type	Closure Date	Description
989	640, 665	30-gallon	10/21/2010	AGHCF Debris
990	638, 666	30-gallon	10/22/2010	AGHCF Debris
991	658, 667	30-gallon	10/22/2010	AGHCF Debris
992	630, 664	30-gallon	10/25/2010	AGHCF Debris
993	611, 662	30-gallon	10/25/2010	AGHCF Debris
994	637, 659	30-gallon	10/26/2010	AGHCF Debris

Based on a review Visual Examination Data Forms for the above drums, the containers are bounded by current revision of the AK Summary Report for waste stream AERHDM for the following:

- Waste generation location and process
- Time period of generation
- Physical form compared to the assigned Waste Material Parameters and waste matrix code
- Chemical content
- Prohibited items
- Radionuclides

Attachment 8 (Waste Containers List) for waste stream AERHDM waste stream and the AK Tracking Spreadsheet (AKTSS) will be updated to include these additional containers.

Christopher Chancellor
signing for Kevin Peters *10/27/2010*

Printed Name / Signature Date

Attachment 1 – AK Tracking Spreadsheet Update Requests

From: Root, Frank W. [mailto:rhwesr@anl.gov]
Sent: Tuesday, October 26, 2010 3:55 PM
To: Kevin Peters
Subject: AK Tracking Spreadsheet Update

Kevin

Please review and have the attached 30-gallon drums (989, 990, 991, 992, 993, and 994) added to the AK Tracking Spreadsheet. DTC of these drums is scheduled for Thursday 10-28-10.

Thanks

F. Wesley Root

Off: 630-252-8306
Cell: 505-695-9610

MEMORANDUM

To: Irene Quintana, CCP SPM

From: Kevin Peters, CCP AKE

Date: November 1, 2010

RE: Addition of 4 Containers to Waste Stream AERHDM

The purpose of this memorandum is to satisfy the requirements of CCP AK Documentation procedure (CCP-TP-005) for updating AK for additional waste stream containers.

This memorandum presents the evaluation of 4 containers recently generated during repackaging of K-Wing (4 55-gallon drums) waste not currently in waste stream AERHDM. Wes Root provided the Visual Examination Data Forms for the following drums packaged in the K-Wing (see Attachment 1).

Drum ID	Internal Container(s)	Container Type	Closure Date	Description
RW18911	N/A	55-gallon	10/13/2010	K-Wing Debris
RW18912	N/A	55-gallon	10/19/2010	K-Wing Debris
RW18913	N/A	55-gallon	10/26/2010	K-Wing Debris
RW18914	N/A	55-gallon	10/28/2010	K-Wing Debris

Based on a review Visual Examination Data Forms for the above drums, the containers are bounded by current revision of the AK Summary Report for waste stream AERHDM for the following:

- Waste generation location and process
- Time period of generation
- Physical form compared to the assigned Waste Material Parameters and waste matrix code
- Chemical content
- Prohibited items
- Radionuclides

Attachment 8 (Waste Containers List) for waste stream AERHDM waste stream and the AK Tracking Spreadsheet (AKTSS) will be updated to include these additional containers.

Christopher Chancellor
signing for Kevin Peters *11/01/2010*
Printed Name / Signature Date

 11/7/10

MEMORANDUM

To: Irene Quintana, CCP SPM

From: Kevin Peters, CCP AKE

Date: November 9, 2010

RE: Addition of 1 Container to Waste Stream AERHDM

The purpose of this memorandum is to satisfy the requirements of CCP AK Documentation procedure (CCP-TP-005) for updating AK for additional waste stream containers.

This memorandum presents the evaluation of 1 container recently generated during repackaging of K-Wing (1 55-gallon drum) waste not currently in waste stream AERHDM. Wes Root provided the Visual Examination Data Form for the following drum packaged in the K-Wing (see Attachment 1).

Drum ID	Internal Container(s)	Container Type	Closure Date	Description
RW18915	N/A	55-gallon	11/02/2010	K-Wing Debris

Based on a review Visual Examination Data Forms for the above drums, the container is bounded by current revision of the AK Summary Report for waste stream AERHDM for the following:

- Waste generation location and process
- Time period of generation
- Physical form compared to the assigned Waste Material Parameters and waste matrix code
- Chemical content
- Prohibited items
- Radionuclides

Attachment 8 (Waste Containers List) for waste stream AERHDM waste stream and the AK Tracking Spreadsheet (AKTSS) will be updated to include this additional container.

Christopher Chancellor
signing for Kevin Peters *11/09/2010*
Printed Name / Signature Date

Attachment 1 – Add Container Request

From: Root, Frank W. [mailto:rhwesr@anl.gov]
Sent: Monday, November 08, 2010 6:04 PM
To: Kevin Peters
Subject: AK Tracking Spreadsheet Update

Kevin

Please review and have the attached 55-gallon drum (RW18915) added to the AK Tracking Spreadsheet as early as possible on Tuesday. DTC of this drum is scheduled for 11-9-10 and I need this drum to complete shipments next week.

Thanks

F. Wesley Root

Retrieval, Characterization and Transportation Washington TRU Solutions LLC Contractor for the U.S. Department of Energy
Office: (630) 252-8306
Cell: (505) 695-9610

WASTE STREAM CONTAINER EVALUATION MEMORANDUM

To: Irene Quintana, CCP SPM

From: Kevin Peters, CCP AKE

Date: February 4, 2011

RE: Addition of 7 Containers to Waste Stream AERHDM

The purpose of this memorandum is to satisfy the requirements of CCP AK Documentation procedure (CCP-TP-005) for updating AK for additional waste stream containers.

This memorandum presents the evaluation of 7 containers recently generated during repackaging of AGHCF waste (7 30-gallon drums) not currently in waste stream AERHDM. Wes Root provided the Visual Examination Data Forms for the following drums packaged in the AGHCF.

Drum ID	Internal Container(s)	Container Type	Closure Date	Description
995	673, 675	30-gallon	12/14/2010	AGHCF Debris
996	671, 652	30-gallon	12/14/2010	AGHCF Debris
997	660, 680	30-gallon	12/15/2010	AGHCF Debris
998	663, 679	30-gallon	12/15/2010	AGHCF Debris
999	670, 661	30-gallon	12/15/2010	AGHCF Debris
1000	674, 668	30-gallon	12/16/2010	AGHCF Debris
1001	667, 669	30-gallon	12/16/2010	AGHCF Debris

Based on a review Visual Examination Data Forms for the above drums, the containers are bounded by current revision of the AK Summary Report for waste stream AERHDM for the following:

- Waste generation location and process
- Time period of generation
- Physical form compared to the assigned Waste Material Parameters and waste matrix code
- Chemical content
- Prohibited items
- Radionuclides

Attachment 8 (Waste Containers List) for waste stream AERHDM waste stream and the AK Tracking Spreadsheet (AKTSS) will be updated to include these additional containers.

WASTE STREAM CONTAINER EVALUATION MEMORANDUM

To: Irene Quintana, CCP SPM

From: Kevin Peters, CCP AKE

Date: February 14, 2011

RE: Addition of 10 Containers to Waste Stream AERHDM

The purpose of this memorandum is to satisfy the requirements of CCP AK Documentation procedure (CCP-TP-005) for updating AK for additional waste stream containers.

This memorandum presents the evaluation of 10 containers recently generated during repackaging of AGHCF waste (10 30-gallon drums) not currently in waste stream AERHDM. Wes Root provided the Visual Examination Data Forms for the following drums packaged in the AGHCF.

Drum ID	Internal Container(s)	Container Type	Closure Date	Description
1017	685,688	30-gallon	1/24/2011	AGHCF Debris
1018	689, 687	30-gallon	1/24/2011	AGHCF Debris
1019	700, 699	30-gallon	1/25/2011	AGHCF Debris
1020	694, 681	30-gallon	1/25/2011	AGHCF Debris
1021	701, 692	30-gallon	1/25/2011	AGHCF Debris
1022	703, 697	30-gallon	1/26/2011	AGHCF Debris
1023	690, 693	30-gallon	1/26/2011	AGHCF Debris
1024	691, 695	30-gallon	1/27/2011	AGHCF Debris
1025	686, 684	30-gallon	1/27/2011	AGHCF Debris
1026	683, 676	30-gallon	1/27/2011	AGHCF Debris

Based on a review Visual Examination Data Forms for the above drums, the containers are bounded by current revision of the AK Summary Report for waste stream AERHDM for the following:

- Waste generation location and process
- Time period of generation
- Physical form compared to the assigned Waste Material Parameters and waste matrix code
- Chemical content
- Prohibited items
- Radionuclides

Attachment 8 (Waste Containers List) for waste stream AERHDM waste stream and the AK Tracking Spreadsheet (AKTSS) will be updated to include these additional containers.

WASTE STREAM CONTAINER EVALUATION MEMORANDUM

To: Irene Quintana, CCP SPM

From: Kevin Peters, CCP AKE

Date: February 15, 2011

RE: Addition of 6 Containers to Waste Stream AERHDM

The purpose of this memorandum is to satisfy the requirements of CCP AK Documentation procedure (CCP-TP-005) for updating AK for additional waste stream containers.

This memorandum presents the evaluation of 6 containers recently generated during repackaging of K-Wing direct loaded debris waste (6 55-gallon drums) not currently in waste stream AERHDM. Wes Root provided the Visual Examination Data Forms for the following drums packaged in the K-Wing.

Drum ID	Internal Container(s)	Container Type	Closure Date	Description
RW48249	N/A	55-gallon	1/17/2011	K-Wing Debris
RW48250	N/A	55-gallon	1/19/2011	K-Wing Debris
RW18916	N/A	55-gallon	12/17/2010	K-Wing Debris
RW18917	N/A	55-gallon	12/21/2010	K-Wing Debris
RW18918	N/A	55-gallon	1/5/2011	K-Wing Debris
RW18919	N/A	55-gallon	1/7/2011	K-Wing Debris

Based on a review Visual Examination Data Forms for the above drums, the containers are bounded by current revision of the AK Summary Report for waste stream AERHDM for the following:

- Waste generation location and process
- Time period of generation
- Physical form compared to the assigned Waste Material Parameters and waste matrix code
- Chemical content
- Prohibited items
- Radionuclides

Attachment 8 (Waste Containers List) for waste stream AERHDM waste stream and the AK Tracking Spreadsheet (AKTSS) will be updated to include these additional containers.

WASTE STREAM CONTAINER EVALUATION MEMORANDUM

To: Irene Quintana, CCP SPM

From: Kevin Peters, CCP AKE

Date: March 2, 2011

RE: Addition of 13 Containers to Waste Stream AERHDM

The purpose of this memorandum is to satisfy the requirements of CCP AK Documentation procedure (CCP-TP-005) for updating AK for additional waste stream containers.

This memorandum presents the evaluation of 13 containers recently generated during repackaging of K-Wing direct loaded debris waste (13 55-gallon drums) not currently in waste stream AERHDM. Wes Root provided the Visual Examination Data Forms for the following drums packaged in the K-Wing.

Drum ID	Internal Container(s)	Container Type	Closure Date	Description
RW18882	N/A	55-gallon	4/9/2010	K-Wing Debris
RW18883	N/A	55-gallon	4/12/2010	K-Wing Debris
RW18884	N/A	55-gallon	4/13/2010	K-Wing Debris
RW18885	N/A	55-gallon	4/14/2010	K-Wing Debris
RW18887	N/A	55-gallon	4/16/2010	K-Wing Debris
RW18894	N/A	55-gallon	5/5/2010	K-Wing Debris
RW18895	N/A	55-gallon	5/6/2010	K-Wing Debris
RW18896	N/A	55-gallon	5/7/2010	K-Wing Debris
RW18897	N/A	55-gallon	5/10/2010	K-Wing Debris
RW18898	N/A	55-gallon	5/11/2010	K-Wing Debris
RW18899	N/A	55-gallon	5/13/2010	K-Wing Debris
RW18901	N/A	55-gallon	5/17/2010	K-Wing Debris
RW18902	N/A	55-gallon	5/19/2010	K-Wing Debris

Based on a review Visual Examination Data Forms for the above drums, the containers are bounded by current revision of the AK Summary Report for waste stream AERHDM for the following:

- Waste generation location and process
- Time period of generation
- Physical form compared to the assigned Waste Material Parameters and waste matrix code
- Chemical content
- Prohibited items
- Radionuclides

Attachment 8 (Waste Containers List) for waste stream AERHDM waste stream and the AK Tracking Spreadsheet (AKTSS) will be updated to include these additional containers.

ORIGINAL

WASTE STREAM CONTAINER EVALUATION MEMORANDUM

To: Irene Quintana, CCP SPM

From: Kevin Peters, CCP AKE

Date: March 17, 2011

RE: Addition of 12 Containers to Waste Stream AERHDM

The purpose of this memorandum is to satisfy the requirements of CCP AK Documentation procedure (CCP-TP-005) for updating AK for additional waste stream containers.

This memorandum presents the evaluation of 12 containers recently generated during repackaging of AGHCF debris waste (12 30-gallon drums) not currently in waste stream AERHDM. Wes Root provided the Visual Examination Data Forms for the following drums packaged in the AGHCF.

Drum ID	Internal Container(s)	Container Type	Closure Date	Description
1038	710, 736	30-gallon	3/7/2011	AGHCF Debris
1039	706, 705	30-gallon	3/7/2011	AGHCF Debris
1040	728, 734	30-gallon	3/8/2011	AGHCF Debris
1041	729, 702	30-gallon	3/8/2011	AGHCF Debris
1042	722, 731	30-gallon	3/8/2011	AGHCF Debris
1043	708, 735	30-gallon	3/9/2011	AGHCF Debris
1044	732, 698	30-gallon	3/9/2011	AGHCF Debris
1045	737, 744	30-gallon	3/9/2011	AGHCF Debris
1046	738, 733	30-gallon	3/10/2011	AGHCF Debris
1047	696, 740	30-gallon	3/10/2011	AGHCF Debris
1048	730, 707	30-gallon	3/10/2011	AGHCF Debris
1049	743, 709	30-gallon	3/11/2011	AGHCF Debris

Based on a review Visual Examination Data Forms for the above drums, the containers are bounded by current revision of the AK Summary Report for waste stream AERHDM for the following:

- Waste generation location and process
- Time period of generation
- Physical form compared to the assigned Waste Material Parameters and waste matrix code
- Chemical content
- Prohibited items
- Radionuclides

Attachment 8 (Waste Containers List) for waste stream AERHDM waste stream and the AK Tracking Spreadsheet (AKTSS) will be updated to include these additional containers.

WASTE STREAM CONTAINER EVALUATION MEMORANDUM

To: Irene Quintana, CCP SPM

From: Kevin Peters, CCP AKE

Date: March 21, 2011

RE: Addition of 6 Containers to Waste Stream AERHDM

The purpose of this memorandum is to satisfy the requirements of CCP AK Documentation procedure (CCP-TP-005) for updating AK for additional waste stream containers.

This memorandum presents the evaluation of 6 containers recently generated during repackaging of K-Wing direct loaded debris waste (6 55-gallon drums) not currently in waste stream AERHDM. Wes Root provided the Visual Examination Data Forms for the following drums packaged in the K-Wing.

Drum ID	Internal Container(s)	Container Type	Closure Date	Description
RW48251	N/A	55-gallon	2/11/2011	K-Wing Debris
RW48252	N/A	55-gallon	2/16/2011	K-Wing Debris
RW48253	N/A	55-gallon	3/4/2011	K-Wing Debris
RW48254	N/A	55-gallon	2/22/2011	K-Wing Debris
RW48255	N/A	55-gallon	2/24/2011	K-Wing Debris
RW48256	N/A	55-gallon	3/2/2011	K-Wing Debris

Based on a review Visual Examination Data Forms for the above drums, the containers are bounded by current revision of the AK Summary Report for waste stream AERHDM for the following:

- Waste generation location and process
- Time period of generation
- Physical form compared to the assigned Waste Material Parameters and waste matrix code
- Chemical content
- Prohibited items
- Radionuclides

In addition to the review above, additional review of documentation was performed for waste contained in drum RW48253. This drum contains waste (can RW79450) previously generated during the K-Wing operations described in the AK Summary Report stored in Building 306. Based on an evaluation of the information provided by Argonne (See attachments 1 and 2), the three 5-gallon cans of debris generated during the 2001 and 2003 time frame during the corrosion and UREX operations currently described in the AK Summary Report have been added to the waste stream. Based on this evaluation, this small volume of waste has been returned to be included with waste originating from the same processes already described and bounding these waste items. Specifically, RW8253 contains debris waste from container RW79450 described in

ORIGINAL

Attachment 1. This debris was generated by the corrosion studies on MOX and N-Reactor specimens conducted in 1989 packaged in August 2001 in the K-Wing.

Attachment 8 (Waste Containers List) for waste stream AERHDM waste stream and the AK Tracking Spreadsheet (AKTSS) will be updated to include these additional containers.

ATTACHMENT 1 – Information Provided by Laura Maggos

To: Kevin Peters, CCP
From: Laura Maggos, ANL
Date: October 20, 2010
Subject: Inclusion of previously packaged K-wing waste into the ANL RH-TRU waste stream

The acceptable knowledge (AK) document CCP-AK-ANL-500 describes RH-TRU waste from the AGHCF and K-wing hot cell facility at Argonne National Laboratory. This RH-TRU waste, designated as waste stream AERHDM, includes test specimens and contaminated debris material from experiments conducted in K-wing from the late 1990's through 2007. Some waste generated during this time period was packaged, transferred out of K-wing and stored elsewhere on site at Argonne, awaiting final disposition. These waste items will be returned to K-wing to be repackaged under visual examination (VE) and included in the RH-TRU stream.

The items planned for inclusion in the AERHDM waste stream meet specific criteria. First, they are waste requisitions generated from experiments in K-wing during the period discussed in the AK document. Second, they do not include wastes from any other sources. Third, the radiological characterization of these items can be achieved using the data collected in January 2010 under the CCP-AK-ANL-502 sampling plan.

Specific items to be returned to K-wing and repackaged are as follows:

(1) RW 79450, a 5-gallon can of solid waste generated from experiments with N-reactor and MOX specimens, packaged in August 2001,
(2) RW 17417, a 5-gallon can of solid waste generated during the 2003 UREX+ demonstration, packaged in November 2003, and
(3) RW 17418, a 5-gallon can of solid waste generated during the 2003 UREX+ demonstration, packaged in November 2003.

The RWs listed consist of waste generated by experiments performed in K-wing. The experiments and test specimens are described in the current AK document. Drip-thru tests with MOX specimens were initiated in September 1998 and are documented in Argonne notebooks #1535, 1667, and 1839. Petri-dish tests with MOX specimens were initiated in October 1998 and are documented in notebook #1605. Documents relating to the 2003 UREX+ demonstration have previously been supplied to and reviewed by CCP personnel for preparation of the current AK document.

The tests with N-reactor and MOX specimens were defense-funded. The waste from UREX+ demonstrations was comingled with the defense-related material in the hot cell due to the lack of separate facilities for defense and non-defense work. All of the above waste items are RH and TRU in their current state. There is no load management involved. No additional waste items have been or will be added to these containers and the waste will be repackaged with VE to ensure compliance with WIPP requirements. Additional items to be brought back and repackaged as part of the AERHDM waste stream will be detailed in a separate memo.

The radiological characterization for the above items can be determined using the data collected in January 2010 under the CCP-AK-ANL-502 sampling plan. The cutting, crushing, and sieving of test materials that contributed largely to the general contamination in the K-wing hot cell had already occurred when these items were removed from the cell. The experiments that followed were conducted with similar types of material and the contamination that resulted from them is not expected to alter the radiological characterization significantly. Furthermore, the radiological characterization for K-wing debris is based on an average of many samples collected from items utilized in various experiments. It is not designed to be an accurate representation of individual items, but of the waste stream as a whole.

ATTACHMENT 2 - Argonne Waste Log Sheet for Drum RW48253

RW 48253

K-Wing RH-TRU Waste Log Sheet

Personnel Involved:
PIC = Mark Clark
VE = Gloria R / Eric B.
HP = Gordon
OPS = John F.
TS = Laney C.
Other =

Packaged	Item Description	Contact Dose (R/h)
	5 gal poly pail ~~with vacuum mount on top~~ filled with floor debris (broken plastics, broken glass, metal shavings, pyrofoam) → we decided to take this off pail	20.2 R/hr
	Tube ~3.5" long & 1/2" OD Labeled 8A (or 4A) at the nut may have been a shipping container ("thimbles") from ATM fuels from PNNL in 1996, except smaller	0.3 R/hr
	Container Treatment Transfer RW79450 from Building 306 contained (plastic bags, plastic labware, tape, paper, ~~saw blades~~, copper gaskets) ~~Pouch & O-ring~~	
	Aluminum & Saw blades	
	Pouch & O-ring	0.2 R/hr
	Dry Rags	
	Thermal couple & wires	
	Clamp	
	Hand tools	
	Metal 5 gal lid	
	Broken bottles	
	~~Teflon cap~~	
	Unistrut	

This was in together

Comments: Background at the start of today is 0.2 R/h. Dose readings indicated include contribution from background.

We hooked a bucket vacuum to a 5 gallon pail & vacuumed track between A & ~~B~~ cells, also vacuumed by main shield door & B cell table.

Recorded by: Laney Callahan

Date: 3 / 2 / 20 11

3/3/11

RW 48253

K-Wing RH-TRU Waste Log Sheet

Personnel Involved:
PIC = Mark Clark
VE = Gloria R / Eric B.
HP Gordon

OPS = John F.
TS = Laney C.
Other =

Packaged	Item Description	Contact Dose (R/h)
	Volumetric glass labware	0.3 R/hr
	Caliper	
	Dried ~~Sil~~ Silicone in a tube	

Comments: Background at the start of today is 0.2 R/h. Dose readings indicated include contribution from background.

Recorded by: Laney Callahan

Date: 3 / 3 / 20 11

WASTE STREAM CONTAINER EVALUATION MEMORANDUM

To: Irene Quintana, CCP SPM

From: Kevin Peters, CCP AKE

Date: April 8, 2011

RE: Addition of 1 Container to Waste Stream AERHDM

The purpose of this memorandum is to satisfy the requirements of CCP AK Documentation procedure (CCP-TP-005) for updating AK for additional waste stream containers.

This memorandum presents the evaluation of one container recently generated during repackaging of AGHCF fuel examination waste (FEW)(1 30-gallon drum) not currently in waste stream AERHDM. Irene Quintana provided the Visual Examination Data Forms for the following drum packaged in the AGHCF.

Drum ID	Internal Container(s)	Container Type	Closure Date	Description
1002	678, 672	30-gallon	12/22/2010	K-Wing Debris

Based on a review Visual Examination Data Forms for the above drums, the container is bounded by current revision of the AK Summary Report for waste stream AERHDM for the following:

- Waste generation location and process
- Time period of generation
- Physical form compared to the assigned Waste Material Parameters and waste matrix code
- Chemical content
- Prohibited items
- Radionuclides

Attachment 8 (Waste Containers List) for waste stream AERHDM waste stream and the AK Tracking Spreadsheet (AKTSS) will be updated to include these additional containers.

ORIGINAL

WASTE STREAM CONTAINER EVALUATION MEMORANDUM

To: Irene Quintana, CCP SPM

From: Kevin Peters, CCP AKE

Date: April 8, 2011

RE: Addition of 14 Containers to Waste Stream AERHDM

The purpose of this memorandum is to satisfy the requirements of CCP AK Documentation procedure (CCP-TP-005) for updating AK for additional waste stream containers.

This memorandum presents the evaluation of 14 containers recently generated during repackaging of AGHCF fuel examination waste (FEW)(14 30-gallon drums) not currently in waste stream AERHDM. Irene Quintana provided the Visual Examination Data Forms for the following drum packaged in the AGHCF (RHANLVE110005 and RHANLVE110006).

Drum ID	Internal Container(s)	Container Type	Closure Date	Description
968	619, 621	30-gallon	7/26/2010	AGHCF FEW
978	626, 631	30-gallon	7/26/2010	AGHCF FEW
1003	721, 718	30-gallon	2/14/2011	AGHCF FEW
1004	715, 713	30-gallon	2/15/2011	AGHCF FEW
1008	719, 717	30-gallon	2/15/2011	AGHCF FEW
1009	725, 724	30-gallon	2/16/2011	AGHCF FEW
1011	727, 716	30-gallon	2/17/2011	AGHCF FEW
1016	711, 712	30-gallon	2/17/2011	AGHCF FEW
1028	750, 753	30-gallon	3/21/2011	AGHCF FEW
1031	739, 755	30-gallon	3/22/2011	AGHCF FEW
1032	746, 756	30-gallon	3/22/2011	AGHCF FEW
1033	745, 752	30-gallon	3/23/2011	AGHCF FEW
1034	749, 748	30-gallon	3/23/2011	AGHCF FEW
1036	747, 751	30-gallon	3/23/2011	AGHCF FEW

Based on a review Visual Examination Data Forms for the above drums, the containers are bounded by current revision of the AK Summary Report for waste stream AERHDM for the following:

- Waste generation location and process
- Time period of generation
- Physical form compared to the assigned Waste Material Parameters and waste matrix code
- Chemical content
- Prohibited items
- Radionuclides

ORIGINAL

Attachment 8 (Waste Containers List) for waste stream AERHDM waste stream and the AK Tracking Spreadsheet (AKTSS) will be updated to include these additional containers.

WASTE STREAM CONTAINER EVALUATION MEMORANDUM

To: Irene Quintana, CCP SPM

From: Kevin Peters, CCP AKE

Date: June 20, 2011

RE: Addition of 8 Containers to Waste Stream AERHDM

The purpose of this memorandum is to satisfy the requirements of CCP AK Documentation procedure (CCP-TP-005) for updating AK for additional waste stream containers.

This memorandum presents the evaluation of 8 containers recently generated during repackaging of AGHCF debris waste (8 30-gallon drums) not currently in waste stream AERHDM. Irene Quintana provided the Visual Examination Data Forms (BDRs ANLRHVE1108 and ANLRHVE1109) for the following drums packaged in the AGHCF.

Drum ID	Internal Container(s)	Container Type	Closure Date	Description
1005	792, 770	30-gallon	5/31/2011	AGHCF FEW Debris
1006	772, 781	30-gallon	6/2/2011	AGHCF FEW Debris
1007	764, 780	30-gallon	6/3/2011	AGHCF FEW Debris
1010	762, 773	30-gallon	6/3/2011	AGHCF FEW Debris
1012	765, 777	30-gallon	6/6/2011	AGHCF FEW Debris
1013	763, 778	30-gallon	6/7/2011	AGHCF FEW Debris
1029	720, 774	30-gallon	6/8/2011	AGHCF FEW Debris
1030	797, 775	30-gallon	6/9/2011	AGHCF FEW Debris

Based on a review Visual Examination Data Forms for the above drums, the containers are bounded by current revision of the AK Summary Report for waste stream AERHDM for the following:

- Waste generation location and process
- Time period of generation
- Physical form compared to the assigned Waste Material Parameters and waste matrix code
- Chemical content
- Prohibited items
- Radionuclides

This memorandum will be added to Attachment 8 (Waste Containers List) for waste stream AERHDM waste stream and the AK Tracking Spreadsheet (AKTSS) will be updated to include these additional containers.

WASTE STREAM CONTAINER EVALUATION MEMORANDUM

To: Irene Quintana, CCP SPM

From: Kevin Peters, CCP AKE

Date: July 5, 2011

RE: Addition of 8 Containers to Waste Stream AERHDM

The purpose of this memorandum is to satisfy the requirements of CCP AK Documentation procedure (CCP-TP-005) for updating AK for additional waste stream containers.

This memorandum presents the evaluation of eight containers generated during repackaging of fuel examination waste (FEW) and debris (8 55-gallon drums) not currently in waste stream AERHDM. Irene Quintana provided the Visual Examination Data Forms for the following drums packaged in the in the Building 205 K-Wing Hot Cell.

Drum ID	Internal Container(s)	Container Type	Closure Date	Description
RW18875	FEW #5	55-gallon	12/03/2009	K-Wing FEW and Debris
RW18876	FEW #5, FEW #9	55-gallon	12/08/2009	K-Wing FEW and Debris
RW18877	FEW #14, FEW #13	55-gallon	12/15/2009	K-Wing FEW and Debris
RW18878	FEW #15	55-gallon	12/17/2009	K-Wing FEW and Debris
RW18879	Pot #101	55-gallon	03/10/2010	K-Wing FEW and Debris
RW18880	FEW #4	55-gallon	03/23/2010	K-Wing FEW and Debris
RW18881	Pot #102	55-gallon	04/07/2010	K-Wing FEW and Debris
RW18904	Pot #103	55-gallon	06/04/2010	K-Wing FEW and Debris

Based on a review Visual Examination Data Forms for the above drums, these containers are bounded by current revision of the AK Summary Report for waste stream AERHDM for the following:

- Waste generation location and process
- Time period of generation
- Physical form compared to the assigned Waste Material Parameters and waste matrix code
- Chemical content
- Prohibited items
- Radionuclides

Attachment 8 (Waste Containers List) for waste stream AERHDM waste stream and the AK Tracking Spreadsheet (AKTSS) will be updated to include these additional containers.

CCP RECORDS ORIGINAL
DATE REC'D 7-6-11

WASTE STREAM CONTAINER EVALUATION MEMORANDUM

To: Irene Quintana, CCP SPM

From: Kevin Peters, CCP AKE

Date: July 12, 2011

RE: Addition of 5 Containers to Waste Stream AERHDM

The purpose of this memorandum is to satisfy the requirements of CCP AK Documentation procedure (CCP-TP-005) for updating AK for additional waste stream containers.

This memorandum presents the evaluation of 5 containers recently generated during repackaging of AGHCF and K-Wing debris waste (3 30-gallon drums and 2 55-gallon drums) not currently in waste stream AERHDM. Wes Root provided the Visual Examination Data Forms for the following drums packaged in the K-Wing and AGHCF.

Drum ID	Internal Container(s)	Container Type	Closure Date	Description
1014	726, 723	30-gallon	2/17/2011	AGHCF Debris (metmounts)
1015	741, 779	30-gallon	6/9/2011	AGHCF Debris
1037	742, 757	30-gallon	3/24/2011	AGHCF Debris (metmounts)
RW48257	N/A	55-gallon	3/9/2011	K Wing Debris
RW48258	N/A	55-gallon	3/15/2011	K Wing Debris

Based on a review Visual Examination Data Forms for the above drums, the containers are bounded by current revision of the AK Summary Report for waste stream AERHDM for the following:

- Waste generation location and process
- Time period of generation
- Physical form compared to the assigned Waste Material Parameters and waste matrix code
- Chemical content
- Prohibited items
- Radionuclides

This waste stream container evaluation memorandum will be added to AK Source C2029 for waste stream AERHDM waste stream and the AK Tracking Spreadsheet (AKTSS) will be updated to include these additional containers.

WASTE STREAM CONTAINER EVALUATION MEMORANDUM

To: Irene Quintana, CCP SPM

From: Kevin Peters, CCP AKE

Date: July 14, 2011

RE: Addition of 1 Container to Waste Stream AERHDM

The purpose of this memorandum is to satisfy the requirements of CCP AK Documentation procedure (CCP-TP-005) for updating AK for additional waste stream containers.

This memorandum presents the evaluation of 1 container recently generated during repackaging of AGHCF and K-Wing debris waste (1 30-gallon drum) not currently in waste stream AERHDM. Wes Root provided the Visual Examination Data Forms for the following drum packaged in the AGHCF.

Drum ID	Internal Container(s)	Container Type	Closure Date	Description
1058	810, 805	30-gallon	7/13/2011	AGHCF Debris (metmounts)

Based on a review Visual Examination Data Forms for the above drums, the container is bounded by current revision of the AK Summary Report for waste stream AERHDM for the following:

- Waste generation location and process
- Time period of generation
- Physical form compared to the assigned Waste Material Parameters and waste matrix code
- Chemical content
- Prohibited items
- Radionuclides

This waste stream container evaluation memorandum will be added to AK Source C2029 for waste stream AERHDM waste stream and the AK Tracking Spreadsheet (AKTSS) will be updated to include this additional container.

CCP RECORDS ORIGIN
DATE REC'D 7-28-11

WASTE STREAM CONTAINER EVALUATION MEMORANDUM

To: Irene Quintana, CCP SPM

From: Kevin Peters, CCP AKE

Date: September 12, 2011

RE: Addition of 10 Containers to Waste Stream AERHDM

The purpose of this memorandum is to satisfy the requirements of CCP AK Documentation procedure (CCP-TP-005) for updating AK for additional waste stream containers.

This memorandum presents the evaluation of 10 containers recently generated during repackaging of K-Wing debris waste (10 55-gallon drums) not currently in waste stream AERHDM. Wes Root provided the Visual Examination Data Forms for the following drum packaged in the K-Wing.

Drum ID	Internal Container(s)	Container Type	Closure Date	Description
RW48261	NA	55-gallon	8/2/2011	K-Wing Debris
RW48262	6284	55-gallon	8/4/2011	K-Wing Debris
RW48263	6282	55-gallon	8/5/2011	K-Wing Debris
RW48267	6281	55-gallon	8/24/2011	K-Wing Debris
RW48268	6283	55-gallon	8/26/2011	K-Wing Debris
RW49813	6288	55-gallon	8/30/2011	K-Wing Debris
RW49814	6285	55-gallon	9/1/2011	K-Wing Debris
RW49815	6289	55-gallon	9/2/2011	K-Wing Debris
RW49816	NA	55-gallon	9/7/2011	K-Wing Debris
RW49817	6287	55-gallon	9/8/2011	K-Wing Debris

Based on a review Visual Examination Data Forms for the above drums, the containers are bounded by current revision of the AK Summary Report for waste stream AERHDM for the following:

- Waste generation location and process
- Time period of generation
- Physical form compared to the assigned Waste Material Parameters and waste matrix code
- Chemical content
- Prohibited items
- Radionuclides

It should be noted that these drums contain vented one-gallon paint (see internal containers) cans loaded with waste. Though this packaging configuration is not specifically identified in the AK Summary Report, paint cans are described as potential waste items and inclusion of these containers is not inconsistent with the waste stream description in the report.

This waste stream container evaluation memorandum will be added to AK Source C2029 for waste stream AERHDM waste stream and the AK Tracking Spreadsheet (AKTSS) will be updated to include these additional containers.

CCP RECORDS ORIGINAL
DATE REC'D 9-14-11

WASTE STREAM CONTAINER EVALUATION MEMORANDUM

To: Irene Quintana, CCP SPM

From: Kevin Peters, CCP AKE

Date: October 4, 2011

RE: Addition of 17 Containers to Waste Stream AERHDM

The purpose of this memorandum is to satisfy the requirements of CCP AK Documentation procedure (CCP-TP-005) for updating AK for additional waste stream containers.

This memorandum presents the evaluation of 17 containers recently generated during repackaging of AGHCF debris waste (17 30-gallon drums) not currently in waste stream AERHDM. Wes Root, Irene Quintana, and Laura Nelson provided the Visual Examination Data Forms for the following drums packaged in the AGHCF.

Drum ID	Internal Container(s)	Container Type	Closure Date	Description
1027	760, 807	30-gallon	7/15/2011	AGHCF FEW
1050	761, 791	30-gallon	7/18/2011	AGHCF FEW
1051	784, 806	30-gallon	7/18/2011	AGHCF FEW
1052	758, 800	30-gallon	7/15/2011	AGHCF FEW
1053	785, 812	30-gallon	7/22/2011	AGHCF FEW
1054	798, 811	30-gallon	7/18/2011	AGHCF FEW
1055	787, 809	30-gallon	9/19/2011	AGHCF FEW
1056	799, 803	30-gallon	9/19/2011	AGHCF FEW
1057	759, 804	30-gallon	9/21/2011	AGHCF FEW
1059	788, 795	30-gallon	9/22/2011	AGHCF Debris
1060	828, 816	30-gallon	9/21/2011	AGHCF FEW
1062	830, 824	30-gallon	9/22/2011	AGHCF FEW
1064	801, 768	30-gallon	9/26/2011	AGHCF FEW
1069	790, 836	30-gallon	9/26/2011	AGHCF Debris
1070	826, 793	30-gallon	9/26/2011	AGHCF Debris
1071	776, 782	30-gallon	9/22/2011	AGHCF Debris
1073	754, 827	30-gallon	9/20/2011	AGHCF Debris

CCP RECORDS ORIGINAL
DATE REC'D 10-7-11

Based on a review Visual Examination Data Forms for the above drums, the containers are bounded by current revision of the AK Summary Report for waste stream AERHDM for the following:

- Waste generation location and process
- Time period of generation
- Physical form compared to the assigned Waste Material Parameters and waste matrix code
- Chemical content
- Prohibited items
- Radionuclides

This waste stream container evaluation memorandum will be added to AK Source C2029 for waste stream AERHDM waste stream and the AK Tracking Spreadsheet (AKTSS) will be updated to include these additional containers.

WASTE STREAM CONTAINER EVALUATION MEMORANDUM

To: Irene Quintana, CCP SPM

From: Kevin Peters, CCP AKE

Date: October 19, 2011

RE: Addition of 4 Containers to Waste Stream AERHDM

The purpose of this memorandum is to satisfy the requirements of CCP AK Documentation procedure (CCP-TP-005) for updating AK for additional waste stream containers.

This memorandum presents the evaluation of 4 containers recently generated during repackaging of AGHCF debris waste (4 30-gallon drums) not currently in waste stream AERHDM. Wes Root provided the Visual Examination Data Forms for the following drums packaged in the AGHCF.

Drum ID	Internal Container(s)	Container Type	Closure Date	Description
1035	821, 813	30-gallon	10/13/2011	AGHCF FEW
1063	823, 818	30-gallon	10/14/2011	AGHCF FEW
1065	808, 814	30-gallon	10/17/2011	AGHCF FEW
1066	829, 831	30-gallon	10/17/2011	AGHCF FEW

Based on a review Visual Examination Data Forms for the above drums, the containers are bounded by current revision of the AK Summary Report for waste stream AERHDM for the following:

- Waste generation location and process
- Time period of generation
- Physical form compared to the assigned Waste Material Parameters and waste matrix code
- Chemical content
- Prohibited items
- Radionuclides

This waste stream container evaluation memorandum will be added to AK Source C2029 for waste stream AERHDM waste stream and the AK Tracking Spreadsheet (AKTSS) will be updated to include these additional containers.

CCP RECORDS ORIGINAL
DATE REC'D 11-22-11

WASTE STREAM CONTAINER EVALUATION MEMORANDUM

To: Irene Quintana, CCP SPM

From: Kevin Peters, CCP AKE

Date: October 24, 2011

RE: Addition of 3 Containers to Waste Stream AERHDM

The purpose of this memorandum is to satisfy the requirements of CCP AK Documentation procedure (CCP-TP-005) for updating AK for additional waste stream containers.

This memorandum presents the evaluation of 3 containers recently generated during repackaging of AGHCF debris waste (3 30-gallon drums) not currently in waste stream AERHDM. Wes Root provided the Visual Examination Data Forms for the following drums packaged in the AGHCF.

Drum ID	Internal Container(s)	Container Type	Closure Date	Description
1061	815, 876	30-gallon	10/20/2011	AGHCF FEW
1067	832, 825	30-gallon	10/19/2011	AGHCF FEW
1068	835, 820	30-gallon	10/19/2011	AGHCF FEW

Based on a review Visual Examination Data Forms for the above drums, the containers are bounded by current revision of the AK Summary Report for waste stream AERHDM for the following:

- Waste generation location and process
- Time period of generation
- Physical form compared to the assigned Waste Material Parameters and waste matrix code
- Chemical content
- Prohibited items
- Radionuclides

This waste stream container evaluation memorandum will be added to AK Source C2029 for waste stream AERHDM waste stream and the AK Tracking Spreadsheet (AKTSS) will be updated to include these additional containers.

CCP RECORDS ORIGINAL
DATE REC'D 12-14-11

WASTE STREAM CONTAINER EVALUATION MEMORANDUM

To: Irene Quintana, CCP SPM

From: Kevin Peters, CCP AKE

Date: February 16, 2012

RE: Addition of 16 Containers to Waste Stream AERHDM

The purpose of this memorandum is to satisfy the requirements of CCP AK Documentation procedure (CCP-TP-005) for updating AK for additional waste stream containers.

This memorandum presents the evaluation of 16 containers recently generated during repackaging of AGHCF debris waste (3 30-gallon drums) not currently in waste stream AERHDM. Irene Quintana provided the Visual Examination Data Forms for the following drums packaged in the AGHCF.

Drum ID	Internal Container(s)	Container Type	Closure Date	Description
1072	769, 783	30-gallon	10/14/2011	AGHCF Debris
1076	838, 863	30-gallon	11/29/2011	AGHCF FEW
1077	878, 870	30-gallon	12/1/2011	AGHCF FEW
1078	884, 877	30-gallon	12/2/2011	AGHCF FEW
1079	875, 873	30-gallon	12/6/2011	AGHCF FEW
1083	857, 854	30-gallon	12/8/2011	AGHCF FEW
1084	822, 837	30-gallon	12/9/2011	AGHCF FEW
1085	871, 874	30-gallon	12/12/2011	AGHCF FEW
1086	861, 639	30-gallon	11/23/2011	AGHCF Debris
1087	865, 869	30-gallon	11/30/2011	AGHCF Debris
1088	867, 860	30-gallon	11/30/2011	AGHCF Debris
1091	796, 704	30-gallon	1/27/2012	AGHCF Debris
1093	846, 885	30-gallon	1/27/2012	AGHCF Debris
1095	855, 882	30-gallon	2/1/2012	AGHCF Debris
1097	856, 849	30-gallon	2/2/2012	AGHCF Debris
1098	844, 853	30-gallon	12/13/2011	AGHCF FEW

Based on a review Visual Examination Data Forms for the above drums, the containers are bounded by current revision of the AK Summary Report for waste stream AERHDM for the following:

- Waste generation location and process
- Time period of generation
- Physical form compared to the assigned Waste Material Parameters and waste matrix code
- Chemical content

CCP RECORDS ORIGINAL
DATE REC'D 4-3-12

- Prohibited items
- Radionuclides

This waste stream container evaluation memorandum will be added to AK Source C2029 for waste stream AERHDM waste stream and the AK Tracking Spreadsheet (AKTSS) will be updated to include these additional containers.

WASTE STREAM CONTAINER EVALUATION MEMORANDUM

To: Irene Quintana, CCP SPM

From: Kevin Peters, CCP AKE

Date: March 14, 2012

RE: Addition of 15 Containers to Waste Stream AERHDM

The purpose of this memorandum is to satisfy the requirements of CCP AK Documentation procedure (CCP-TP-005) for updating AK for additional waste stream containers.

This memorandum presents the evaluation of 15 containers recently generated during repackaging of AGHCF and K-Wing debris waste (9 30-gallon drums and 6 55-gallon drums) not currently in waste stream AERHDM. Wes Root provided the Visual Examination Data Forms for the following drums packaged in the AGHCF and the K-Wing (ANLRHVE12006, ANLRHVE12007, ANLRHVE12009, and ANLRHVE12010).

Drum ID	Internal Container(s)	Container Type	Closure Date	Description
1090	841, 851	30-gallon	1/30/2012	AGHCF FEW
1092	850, 840	30-gallon	2/3/2012	AGHCF FEW
1096	848, 839	30-gallon	1/31/2012	AGHCF FEW
1098	898, 897	30-gallon	2/21/2012	AGHCF Debris
1100	896, 889	30-gallon	2/21/2012	AGHCF Debris
1102	887, 888	30-gallon	2/22/2012	AGHCF Debris
1104	852, 886	30-gallon	2/24/2012	AGHCF Debris
1106	858, 901	30-gallon	2/24/2012	AGHCF Debris
1108	935, 936	30-gallon	2/29/2012	AGHCF Debris (metmounts)
RW49818	NA	55-gallon	9/14/2011	K-Wing Debris
RW49819	NA	55-gallon	9/16/2011	K-Wing Debris
RW49820	NA	55-gallon	9/21/2011	K-Wing Debris
RW49821	NA	55-gallon	9/22/2011	K-Wing Debris
RW49822	NA	55-gallon	9/28/2011	K-Wing Debris
RW49893	NA	55-gallon	9/30/2011	K-Wing Debris

Based on a review Visual Examination Data Forms for the above drums, the containers are bounded by current revision of the AK Summary Report for waste stream AERHDM for the following:

- Waste generation location and process
- Time period of generation
- Physical form compared to the assigned Waste Material Parameters and waste matrix code
- Chemical content

CCP RECORDS ORIGINAL
DATE REC'D 4-3-12

- Prohibited items
- Radionuclides

This waste stream container evaluation memorandum will be added to AK Source C2029 for waste stream AERHDM waste stream and the AK Tracking Spreadsheet (AKTSS) will be updated to include these additional containers.

WASTE STREAM CONTAINER EVALUATION MEMORANDUM

To: Irene Quintana, CCP SPM

From: Kevin Peters, CCP AKE

Date: March 27, 2012

RE: Addition of 6 Containers to Waste Stream AERHDM

The purpose of this memorandum is to satisfy the requirements of CCP AK Documentation procedure (CCP-TP-005) for updating AK for additional waste stream containers.

This memorandum presents the evaluation of 6 containers recently generated during repackaging of AGHCF debris waste (6 30-gallon drums) not currently in waste stream AERHDM. Laura Nelson provided the Visual Examination Data Forms for the following drums packaged in the AGHCF.

Drum ID	Internal Container(s)	Container Type	Closure Date	Description
1074	868, 872	30-gallon	11/22/2011	AGHCF FEW
1075	862, 859	30-gallon	11/28/2011	AGHCF FEW
1080	864, 880	30-gallon	12/5/2011	AGHCF FEW
1081	866, 833	30-gallon	12/6/2011	AGHCF FEW
1082	879, 834	30-gallon	12/7/2011	AGHCF FEW
1094	847, 845	30-gallon	2/1/2012	AGHCF FEW

Based on a review Visual Examination Data Forms for the above drums, the containers are bounded by current revision of the AK Summary Report for waste stream AERHDM for the following:

- Waste generation location and process
- Time period of generation
- Physical form compared to the assigned Waste Material Parameters and waste matrix code
- Chemical content
- Prohibited items
- Radionuclides

This waste stream container evaluation memorandum will be added to AK Source C2029 for waste stream AERHDM waste stream and the AK Tracking Spreadsheet (AKTSS) will be updated to include these additional containers.

CCP RECORDS ORIGINAL
DATE REC'D 5-19-12

WASTE STREAM CONTAINER EVALUATION MEMORANDUM

To: Irene Quintana, CCP SPM

From: Kevin Peters, CCP AKE

Date: April 2, 2012

RE: Addition of 14 Containers to Waste Stream AERHDM

The purpose of this memorandum is to satisfy the requirements of CCP AK Documentation procedure (CCP-TP-005) for updating AK for additional waste stream containers.

This memorandum presents the evaluation of 6 containers recently generated during repackaging of AGHCF debris waste (14 30-gallon drums) not currently in waste stream AERHDM. Wes Root provided the Visual Examination Data Forms for the following drums packaged in the AGHCF.

Drum ID	Internal Container(s)	Container Type	Closure Date	Description
1103	920, 939	30-gallon	2/23/2012	AGHCF FEW and metmounts
1105	932, 883	30-gallon	2/24/2012	AGHCF FEW and metmounts
1107	934, 906	30-gallon	2/21/2012	AGHCF FEW and metmounts
1110	891, 940	30-gallon	3/20/2012	AGHCF FEW and metmounts
1111	942, 921	30-gallon	3/22/2012	AGHCF FEW and metmounts
1112	842, 907	30-gallon	3/22/2012	AGHCF FEW
1113	911, 890	30-gallon	3/23/2012	AGHCF FEW and metmounts
1114	922, 923	30-gallon	3/26/2012	AGHCF FEW
1115	908, 919	30-gallon	3/28/2012	AGHCF FEW and metmounts
1116	894, 893	30-gallon	3/23/2012	AGHCF Debris and metmounts
1117	916, 892	30-gallon	3/26/2012	AGHCF Debris
1118	926, 899	30-gallon	3/27/2012	AGHCF Debris and metmounts
1119	895, 946	30-gallon	3/27/2012	AGHCF Debris and metmounts
1120	789, 900	30-gallon	3/27/2012	AGHCF Debris and metmounts

Based on a review Visual Examination Data Forms for the above drums, the containers are bounded by current revision of the AK Summary Report for waste stream AERHDM for the following:

- Waste generation location and process
- Time period of generation
- Physical form compared to the assigned Waste Material Parameters and waste matrix code
- Chemical content
- Prohibited items
- Radionuclides

This waste stream container evaluation memorandum will be added to AK Source C2029 for waste stream AERHDM waste stream and the AK Tracking Spreadsheet (AKTSS) will be updated to include these additional containers.

CCP RECORDS ORIGINAL
DATE REC'D 5-19-12

WASTE STREAM CONTAINER EVALUATION MEMORANDUM

To: Irene Quintana, CCP SPM

From: Kevin Peters, CCP AKE

Date: July 24, 2012

RE: Addition of 19 Containers to Waste Stream AERHDM

The purpose of this memorandum is to satisfy the requirements of CCP AK Documentation procedure (CCP-TP-005) for updating AK for additional waste stream containers.

This memorandum presents the evaluation of 19 containers recently generated during repackaging of AGHCF debris waste (19 30-gallon drums) not currently in waste stream AERHDM. Wes Root provided the Visual Examination Data Forms for the following drums packaged in the AGHCF.

Drum ID	Internal Container(s)		Container Type	Closure Date	Description
1121	1008	950	30-gallon	5/4/2012	AGHCF Debris
1122	984	999	30-gallon	5/9/2012	AGHCF Debris
1123	997	945	30-gallon	5/10/2012	AGHCF Debris
1124	924	915	30-gallon	5/10/2012	AGHCF Debris
1125	962	968	30-gallon	5/10/2012	AGHCF Debris
1126	1011	995	30-gallon	5/11/2012	AGHCF Debris
1127	986	977	30-gallon	5/14/2012	AGHCF Debris
1128	1003	992	30-gallon	5/14/2012	AGHCF Debris
1129	952	989	30-gallon	5/14/2012	AGHCF Debris
1130	951	913	30-gallon	5/15/2012	AGHCF Debris
1131	985	1012	30-gallon	5/15/2012	AGHCF Debris
1132	1010	918	30-gallon	5/16/2012	AGHCF Debris
1133	988	965	30-gallon	5/17/2012	AGHCF Debris
1134	987	914	30-gallon	5/18/2012	AGHCF Debris
1135	991	943	30-gallon	5/18/2012	AGHCF Debris
1142	973	971	30-gallon	5/25/2012	AGHCF Debris
1143	904	910	30-gallon	5/29/2012	AGHCF Debris
1144	978	976	30-gallon	5/29/2012	AGHCF Debris
1145	905	972	30-gallon	5/29/2012	AGHCF Debris

CCP RECORDS ORIGINAL
DATE REC'D 7/24/12

Based on a review Visual Examination Data Forms for the above drums, the containers are bounded by current revision of the AK Summary Report for waste stream AERHDM for the following:

- Waste generation location and process
- Time period of generation
- Physical form compared to the assigned Waste Material Parameters and waste matrix code
- Chemical content
- Prohibited items
- Radionuclides

This waste stream container evaluation memorandum will be added to AK Source C2029 for waste stream AERHDM waste stream and the AK Tracking Spreadsheet (AKTSS) will be updated to include these additional containers.

WASTE STREAM CONTAINER EVALUATION MEMORANDUM

To: Irene Quintana, CCP SPM

From: Kevin Peters, CCP AKE

Date: August 24, 2012

RE: Addition of 3 Containers to Waste Stream AERHDM & Resolution of Container 1089/1098 Addition

The purpose of this memorandum is to satisfy the requirements of CCP AK Documentation procedure (CCP-TP-005) for updating AK for additional waste stream containers.

This memorandum presents the evaluation of 3 containers recently generated during repackaging of AGHCF debris waste (3 30-gallon drums) not currently in waste stream AERHDM. Wes Root provided the Visual Examination Data Forms for the following drums packaged in the AGHCF. In addition, this memorandum was written to document the transcription error in the memorandum dated 2/16/2012 for container 1089 (identified as 1098) to verify that this container of AGHCF FEW was appropriately added to waste stream AERHDM.

Drum ID	Internal Container(s)	Container Type	Closure Date	Description
1138	1067, 1046	30-gallon	8/8/2012	AGHCF Debris
1147	1047, 1043	30-gallon	8/8/2012	AGHCF Debris
1149	1068, 1036	30-gallon	8/9/2012	AGHCF Debris
1089*	844, 853	30-gallon	12/13/2011	AGHCF FEW

* Container 1089 was originally evaluated on 2/16/2012. A transcription error in the memo identifies the container as 1098. This error was subsequently corrected in the AK Tracking Spreadsheet.

Based on a review Visual Examination Data Forms for the above drums, the containers are bounded by current revision of the AK Summary Report for waste stream AERHDM for the following:

- Waste generation location and process
- Time period of generation
- Physical form compared to the assigned Waste Material Parameters and waste matrix code
- Chemical content
- Prohibited items
- Radionuclides

This waste stream container evaluation memorandum will be added to AK Source C2029 for waste stream AERHDM waste stream and the AK Tracking Spreadsheet (AKTSS) will be updated to include these additional containers.

CCP RECORDS ORIGINAL
DATE REC'D 8-27-12

WASTE STREAM CONTAINER EVALUATION MEMORANDUM

To: Irene Quintana, CCP SPM

From: Kevin Peters, CCP AKE

Date: October 9, 2012

RE: Addition of 5 Containers to Waste Stream AERHDM

The purpose of this memorandum is to satisfy the requirements of CCP AK Documentation procedure (CCP-TP-005) for updating AK for additional waste stream containers.

This memorandum presents the evaluation of five containers generated during repackaging of the immobilized liquids and debris (5 55-gallon drums) not currently in waste stream AERHDM. Irene Quintana provided the Visual Examination Data Forms for the following drums packaged in the in the Building 205 K-Wing Hot Cell.

Drum ID	Internal Container(s)	Container Type	Closure Date	Description
RW48259	Clearboy #3 and #4	55-gallon	7/26/2011	K-Wing Debris
RW48260	Clearboy #7 and #8	55-gallon	7/28/2011	K-Wing Debris
RW48264	Clearboy #5 and #6	55-gallon	8/9/2011	K-Wing Debris
RW48265	Clearboy #1 and #2	55-gallon	8/10/2011	K-Wing Debris
RW48266	Clearboy #1A	55-gallon	8/11/2011	K-Wing Debris

Based on a review Visual Examination Data Forms for the above drums, these containers are bounded by current revision of the AK Summary Report for waste stream AERHDM for the following:

- Waste generation location and process
- Time period of generation
- Physical form compared to the assigned Waste Material Parameters and waste matrix code
- Chemical content
- Prohibited items
- Radionuclides

This waste stream container evaluation memorandum will be added to AK Source C2029 for waste stream AERHDM waste stream and the AK Tracking Spreadsheet (AKTSS) will be updated to include these additional containers.

NTPC RECORDS ORIGINAL
DATE REC'D 8/27/13

WASTE STREAM CONTAINER EVALUATION MEMORANDUM

To: Irene Quintana, CCP SPM

From: Kevin Peters, CCP AKE

Date: October 12, 2012

RE: Addition of 10 Containers to Waste Stream AERHDM

The purpose of this memorandum is to satisfy the requirements of CCP AK Documentation procedure (CCP-TP-005) for updating AK for additional waste stream containers.

This memorandum presents the evaluation of 10 containers recently generated during repackaging of AGHCF debris waste (10 30-gallon drums) not currently in waste stream AERHDM. Wes Root provided the Visual Examination Data Forms for the following drums packaged in the AGHCF.

Drum ID	Internal Container(s)	Container Type	Closure Date	Description
1157	1040, 3041	30-gallon	9/26/2012	AGHCF Debris
1158	1065, 1034	30-gallon	9/27/2012	AGHCF Debris
1159	1072, 1059	30-gallon	9/29/2012	AGHCF Debris
1160	938, 954	30-gallon	9/27/2012	AGHCF FEW
1161	1048, 1044	30-gallon	9/28/2012	AGHCF FEW
1162	953, 1064	30-gallon	10/01/2012	AGHCF FEW
1163	1006, 1032	30-gallon	10/01/2012	AGHCF FEW
1164	1035, 925	30-gallon	10/02/2012	AGHCF FEW
1165	1041, 983	30-gallon	10/02/2012	AGHCF FEW
1166	930, 1039	30-gallon	10/03/2012	AGHCF FEW

Based on a review Visual Examination Data Forms for the above drums, the containers are bounded by current revision of the AK Summary Report for waste stream AERHDM for the following:

- Waste generation location and process
- Time period of generation
- Physical form compared to the assigned Waste Material Parameters and waste matrix code
- Chemical content
- Prohibited items
- Radionuclides

This waste stream container evaluation memorandum will be added to AK Source C2029 for waste stream AERHDM waste stream and the AK Tracking Spreadsheet (AKTSS) will be updated to include these additional containers.

CCP RECORDS ORIGINAL
DATE REC'D 11-27-2012

WASTE STREAM CONTAINER EVALUATION MEMORANDUM

To: Irene Quintana, CCP SPM

From: Kevin Peters, CCP AKE

Date: February 11, 2013

RE: Addition of 15 Containers to Waste Stream AERHDM

The purpose of this memorandum is to satisfy the requirements of CCP AK Documentation procedure (CCP-TP-005) for updating AK for additional waste stream containers.

This memorandum presents the evaluation of 15 containers recently generated during repackaging of AGHCF debris and FEW waste (15 30-gallon drums) not currently in waste stream AERHDM. Wes Root provided the Visual Examination Data Forms for the following drums packaged in the AGHCF.

Drum ID	Internal Container(s)	Container Type	Closure Date	Description
1167	1056, 964	30-gallon	10/3/2012	AGHCF FEW
1168	1055, 1060	30-gallon	10/4/2012	AGHCF FEW
1169	1002, 980	30-gallon	10/8/2012	AGHCF FEW
1171	1062, 1117	30-gallon	1/23/2013	AGHCF Debris
1172	1016, 990	30-gallon	1/24/2013	AGHCF FEW
1173	1083, 947	30-gallon	1/24/2013	AGHCF Debris
1174	974, 1088	30-gallon	1/24/2013	AGHCF FEW
1175	1097, 929	30-gallon	1/28/2013	AGHCF Debris
1176	1017, 993	30-gallon	1/28/2013	AGHCF FEW
1177	1098, 1022	30-gallon	1/29/2013	AGHCF Debris
1178	931, 1029	30-gallon	1/29/2013	AGHCF FEW
1179	912, 1100	30-gallon	1/29/2013	AGHCF Debris
1180	1087, 1092	30-gallon	1/30/2013	AGHCF FEW
1181	1114, 1045	30-gallon	1/31/2013	AGHCF Debris
1182	1091, 1086	30-gallon	1/30/2013	AGHCF FEW

Based on a review Visual Examination Data Forms for the above drums, the containers are bounded by current revision of the AK Summary Report for waste stream AERHDM for the following:

- Waste generation location and process
- Time period of generation
- Physical form compared to the assigned Waste Material Parameters and waste matrix code
- Chemical content
- Prohibited items
- Radionuclides

This waste stream container evaluation memorandum will be added to AK Source C2029 for waste stream AERHDM waste stream and the AK Tracking Spreadsheet (AKTSS) will be updated to include these additional containers.

NTPC RECORDS ORIGINAL
DATE REC'D 2.15.13

C2029

WASTE STREAM CONTAINER EVALUATION MEMORANDUM

To: Irene Quintana, CCP SPM

From: Kevin Peters, CCP AKE

Date: March 20, 2013

RE: Addition of 5 Containers to Waste Stream AERHDM

The purpose of this memorandum is to satisfy the requirements of CCP AK Documentation procedure (CCP-TP-005) for updating AK for additional waste stream containers.

This memorandum presents the evaluation of 5 containers recently generated during repackaging of AGHCF debris and FEW waste (5 30-gallon drums) not currently in waste stream AERHDM. Laura Nelson provided the Visual Examination Data Forms for the following drums packaged in the AGHCF.

Drum ID	Internal Container(s)	Container Type	Closure Date	Description
1099	903, 902	30-gallon	2/27/2012	AGHCF FEW
1101	843, 933	30-gallon	2/22/2012	AGHCF FEW
1109	937, 909	30-gallon	3/19/2012	AGHCF FEW
1136	1001, 1009	30-gallon	5/21/2012	AGHCF FEW
1170	1015, 1042	30-gallon	10/08/2012	AGHCF FEW

Based on a review Visual Examination Data Forms for the above drums, the containers are bounded by current revision of the AK Summary Report for waste stream AERHDM for the following:

- Waste generation location and process
- Time period of generation
- Physical form compared to the assigned Waste Material Parameters and waste matrix code
- Chemical content
- Prohibited items
- Radionuclides

This waste stream container evaluation memorandum will be added to AK Source C2029 for waste stream AERHDM waste stream and the AK Tracking Spreadsheet (AKTSS) will be updated to include these additional containers.

NTPC RECORDS ORIGINAL
DATE REC'D 8/27/13

C2029

WASTE STREAM CONTAINER EVALUATION MEMORANDUM

To: Irene Joo, CCP SPM

From: Kevin Peters, CCP AKE

Date: March 21, 2013

RE: Addition of 10 Containers to Waste Stream AERHDM

The purpose of this memorandum is to satisfy the requirements of CCP AK Documentation procedure (CCP-TP-005) for updating AK for additional waste stream containers.

This memorandum presents the evaluation of 10 containers recently generated during repackaging of AGHCF debris and FEW waste (10 30-gallon drums) not currently in waste stream AERHDM. Wes Root provided the Visual Examination Data Forms for the following drums packaged in the AGHCF.

Drum ID	Internal Container(s)	Container Type	Closure Date	Description
1183	1063, 927	30-gallon	2/18/2013	AGHCF Debris
1185	1096, 1033	30-gallon	2/19/2013	AGHCF Debris
1187	941, 1052	30-gallon	2/19/2013	AGHCF Debris
1189	1115, 1024	30-gallon	2/20/2013	AGHCF Debris
1191	1027, 1018	30-gallon	2/20/2013	AGHCF Debris
1193	1028, 948	30-gallon	2/21/2013	AGHCF Debris
1195	1119, 1030	30-gallon	2/21/2013	AGHCF Debris
1197	1026, 1095	30-gallon	2/26/2013	AGHCF Debris
1199	1116, 928	30-gallon	2/27/2013	AGHCF Debris
1201	1020, 1118	30-gallon	2/28/2013	AGHCF Debris

Based on a review Visual Examination Data Forms for the above drums, the containers are bounded by current revision of the AK Summary Report for waste stream AERHDM for the following:

- Waste generation location and process
- Time period of generation
- Physical form compared to the assigned Waste Material Parameters and waste matrix code
- Chemical content
- Prohibited items
- Radionuclides

This waste stream container evaluation memorandum will be added to AK Source C2029 for waste stream AERHDM waste stream and the AK Tracking Spreadsheet (AKTSS) will be updated to include these additional containers.

NTPC RECORDS ORIGINAL
DATE REC'D 5/27/13

C2029

WASTE STREAM CONTAINER EVALUATION MEMORANDUM

To: Irene Joo, CCP SPM

From: Kevin Peters, CCP AKE

Date: April 1, 2013

RE: Addition of 7 Containers to Waste Stream AERHDM

The purpose of this memorandum is to satisfy the requirements of CCP AK Documentation procedure (CCP-TP-005) for updating AK for additional waste stream containers.

This memorandum presents the evaluation of 7 containers recently generated during repackaging of AGHCF FEW waste (7 30-gallon drums) not currently in waste stream AERHDM. Laura Nelson provided the Visual Examination Data Forms for the following drums packaged in the AGHCF.

Drum ID	Internal Container(s)	Container Type	Closure Date	Description
1146	1005, 1053	30-gallon	8/14/2012	AGHCF FEW
1148	1013, 970	30-gallon	8/15/2012	AGHCF FEW
1150	1007, 1057	30-gallon	8/15/2012	AGHCF FEW
1151	998, 1066	30-gallon	8/15/2012	AGHCF FEW
1152	1004, 1073	30-gallon	8/17/2012	AGHCF FEW
1153	1014, 960	30-gallon	8/17/2012	AGHCF FEW
1154	994, 1061	30-gallon	9/17/2012	AGHCF FEW

Based on a review Visual Examination Data Forms for the above drums, the containers are bounded by current revision of the AK Summary Report for waste stream AERHDM for the following:

- Waste generation location and process
- Time period of generation
- Physical form compared to the assigned Waste Material Parameters and waste matrix code
- Chemical content
- Prohibited items
- Radionuclides

This waste stream container evaluation memorandum will be added to AK Source C2029 for waste stream AERHDM waste stream and the AK Tracking Spreadsheet (AKTSS) will be updated to include these additional containers.

NTPC RECORDS ORIGINAL
DATE REC'D 8/27/13

C2029

WASTE STREAM CONTAINER EVALUATION MEMORANDUM

To: Irene Joo, CCP SPM

From: Kevin Peters, CCP AKE

Date: April 8, 2013

RE: Addition of 11 Containers to Waste Stream AERHDM

The purpose of this memorandum is to satisfy the requirements of CCP AK Documentation procedure (CCP-TP-005) for updating AK for additional waste stream containers.

This memorandum presents the evaluation of 11 containers recently generated during repackaging of AGHCF FEW and debris waste (11 30-gallon drums) not currently in waste stream AERHDM. Wes Root provided the Visual Examination Data Forms for the following drums packaged in the AGHCF.

Drum ID	Internal Container(s)	Container Type	Closure Date	Description
1205	1108, 1149	30-gallon	3/27/2013	AGHCF FEW, Debris
1207	1128, 1107	30-gallon	3/27/2013	AGHCF FEW, Debris
1208	1023, 1110	30-gallon	3/28/2013	AGHCF FEW, Debris
1209	1141, 1084	30-gallon	3/28/2013	AGHCF FEW, Debris
1210	1094, 1124	30-gallon	3/29/2013	AGHCF FEW, Debris
1211	1132, 1131	30-gallon	4/1/2013	AGHCF FEW, Debris
1212	1140, 1122	30-gallon	4/1/2013	AGHCF FEW, Debris
1213	1109, 1104	30-gallon	4/2/2013	AGHCF FEW, Debris
1214	1112, 1151	30-gallon	4/2/2013	AGHCF FEW, Debris
1215	1125, 1058	30-gallon	4/3/2013	AGHCF FEW, Debris
1216	1130, 1085	30-gallon	4/3/2013	AGHCF FEW, Debris

Based on a review Visual Examination Data Forms for the above drums, the containers are bounded by current revision of the AK Summary Report for waste stream AERHDM for the following:

- Waste generation location and process
- Time period of generation
- Physical form compared to the assigned Waste Material Parameters and waste matrix code
- Chemical content
- Prohibited items
- Radionuclides

This waste stream container evaluation memorandum will be added to AK Source C2029 for waste stream AERHDM waste stream and the AK Tracking Spreadsheet (AKTSS) will be updated to include these additional containers.

NTPC RECORDS ORIGINAL
DATE REC'D 8/21/13

WASTE STREAM CONTAINER EVALUATION MEMORANDUM

To: Irene Joo, CCP SPM

From: Kevin Peters, CCP AKE

Date: April 17, 2013

RE: Addition of 1 Container to Waste Stream AERHDM

The purpose of this memorandum is to satisfy the requirements of CCP AK Documentation procedure (CCP-TP-005) for updating AK for additional waste stream containers.

This memorandum presents the evaluation of 1 container recently generated during repackaging of AGHCF FEW and debris waste (1 30-gallon drum) not currently in waste stream AERHDM. Wes Root provided the Visual Examination Data Forms for the following drum packaged in the AGHCF.

Drum ID	Internal Container(s)	Container Type	Closure Date	Description
1206	1135, 1111	30-gallon	3/27/2013	AGHCF FEW, Debris

Based on a review Visual Examination Data Forms for the above drums, the container is bounded by current revision of the AK Summary Report for waste stream AERHDM for the following:

- Waste generation location and process
- Time period of generation
- Physical form compared to the assigned Waste Material Parameters and waste matrix code
- Chemical content
- Prohibited items
- Radionuclides

This waste stream container evaluation memorandum will be added to AK Source C2029 for waste stream AERHDM waste stream and the AK Tracking Spreadsheet (AKTSS) will be updated to include this additional container.

NTPC RECORDS ORIGINAL
DATE REC'D 5/21/13

WASTE STREAM CONTAINER EVALUATION MEMORANDUM

To: Irene Joo, CCP SPM

From: Kevin Peters, CCP AKE

Date: May 1, 2013

RE: Addition of 12 Containers to Waste Stream AERHDM

The purpose of this memorandum is to satisfy the requirements of CCP AK Documentation procedure (CCP-TP-005) for updating AK for additional waste stream containers.

This memorandum presents the evaluation of 12 containers recently generated during repackaging of AGHCF FEW and debris waste (12 30-gallon drums) not currently in waste stream AERHDM. Laura Nelson provided the Visual Examination Data Forms for the following drums packaged in the AGHCF.

Drum ID	Internal Container(s)	Container Type	Closure Date	Description
1184	1113, 1075	30-gallon	2/18/2013	AGHCF FEW
1186	1069, 1076	30-gallon	2/19/2013	AGHCF FEW
1188	1051, 1080	30-gallon	2/19/2013	AGHCF FEW
1190	1081, 1089	30-gallon	2/20/2013	AGHCF FEW
1192	1079, 1142	30-gallon	2/20/2013	AGHCF FEW
1194	1082, 1077	30-gallon	2/20/2013	AGHCF FEW
1196	1138, 1025	30-gallon	2/25/2013	AGHCF FEW
1198	1137, 1000	30-gallon	2/27/2013	AGHCF FEW
1200	1146, 1078	30-gallon	2/27/2013	AGHCF FEW
1202	1145, 955	30-gallon	2/28/2013	AGHCF FEW
1203	1139, 1090	30-gallon	2/28/2013	AGHCF FEW
1204	1136, 1129	30-gallon	3/1/2013	AGHCF FEW

Based on a review Visual Examination Data Forms for the above drums, the containers are bounded by current revision of the AK Summary Report for waste stream AERHDM for the following:

- Waste generation location and process
- Time period of generation
- Physical form compared to the assigned Waste Material Parameters and waste matrix code
- Chemical content
- Prohibited items
- Radionuclides

This waste stream container evaluation memorandum will be added to AK Source C2029 for waste stream AERHDM waste stream and the AK Tracking Spreadsheet (AKTSS) will be updated to include these additional containers.

NTPC RECORDS ORIGINAL
DATE REC'D 5/27/13

WASTE STREAM CONTAINER EVALUATION MEMORANDUM

To: Irene Joo, CCP SPM

From: Kevin Peters, CCP AKE

Date: May 30, 2013

RE: Addition of 2 Containers to Waste Stream AERHDM

The purpose of this memorandum is to satisfy the requirements of CCP AK Documentation procedure (CCP-TP-005) for updating AK for additional waste stream containers.

This memorandum presents the evaluation of 2 containers recently generated during repackaging of AGHCF FEW and debris waste (2 30-gallon drums) not currently in waste stream AERHDM. Wes Root provided the Visual Examination Data Forms for the following drums packaged in the AGHCF.

Drum ID	Internal Container(s)	Container Type	Closure Date	Description
1241	949, 1070	30-gallon	5/30/2013	AGHCF Debris
1242	1133, 1021	30-gallon	5/30/2013	AGHCF Debris

Based on a review Visual Examination Data Forms for the above drums, the containers are bounded by current revision of the AK Summary Report for waste stream AERHDM for the following:

- Waste generation location and process
- Time period of generation
- Physical form compared to the assigned Waste Material Parameters and waste matrix code
- Chemical content
- Prohibited items
- Radionuclides

This waste stream container evaluation memorandum will be added to AK Source C2029 for waste stream AERHDM waste stream and the AK Tracking Spreadsheet (AKTSS) will be updated to include these additional containers.

NTPC RECORDS ORIGINAL
DATE REC'D 8/27/13

WASTE STREAM CONTAINER EVALUATION MEMORANDUM

To: Irene Joo, CCP SPM

From: Kevin Peters, CCP AKE

Date: July 30, 2013

RE: Addition of 7 Containers to Waste Stream AERHDM

The purpose of this memorandum is to satisfy the requirements of CCP AK Documentation procedure (CCP-TP-005) for updating AK for additional waste stream containers.

This memorandum presents the evaluation of 7 containers recently generated during repackaging of AGHCF debris waste (7 30-gallon drums containing debris) not currently in waste stream AERHDM. Wes Root provided the Visual Examination Data Forms for the following drums packaged in the AGHCF.

Drum ID	Internal Container(s)	Container Type	Closure Date	Description
1243	1099, 1219	30-gallon	7/18/2013	AGHCF Debris
1244	1243, 1242	30-gallon	7/18/2013	AGHCF Debris
1245	1134, 1244	30-gallon	7/19/2013	AGHCF Debris
1246	1249, 1106	30-gallon	7/22/2013	AGHCF Debris
1247	917, 1127	30-gallon	7/22/2013	AGHCF Debris
1248	1147, 1248	30-gallon	7/23/2013	AGHCF Debris
1249	1206, 1159	30-gallon	7/23/2013	AGHCF Debris

Based on a review Visual Examination Data Forms for the above drums, the containers are bounded by current revision of the AK Summary Report for waste stream AERHDM for the following:

- Waste generation location and process
- Time period of generation
- Physical form compared to the assigned Waste Material Parameters and waste matrix code
- Chemical content
- Prohibited items
- Radionuclides

This waste stream container evaluation memorandum will be added to AK Source C2029 for waste stream AERHDM waste stream and the AK Tracking Spreadsheet (AKTSS) will be updated to include these additional containers.

NTPC RECORDS ORIGINAL
DATE REC'D 8/27/13

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Attachment 3 - Acceptable Knowledge Source Document Summary

Site(s): Argonne National Laboratory	**Source Document Tracking Number:** U2021

Waste Stream Number(s): AERHDM
(Applicable only when site library is not in use)

Acceptable Knowledge Documentation Type: ☑ TRU Waste Management Program Information ☑ Waste Stream-Specific Information ☑ Additional Information	**Category:** ☐ C - Correspondence ☐ DR - Discrepancy Resolution ☐ I - Internal procedures ☐ M - Miscellaneous ☐ P - Published plans, documents, and procedures ☑ U - Unpublished Documents

Title or Description of Source Document [a]: K-Wing RH-TRU Liquids Crosswalk

Source Document Reference Information (author(s), document and revision number, date, publisher): Laura Maggos, 11/30/2010

AK # [b]	Source Doc. Page # [c]	AK Information Summary
PR4, PR7, WS1, WS6, WS9, WS10, WS11, S7, S9, S16	Throughout	These tables prepared by Laura Maggos provide the information to trace connections between sample IDs, bulking containers, solidification containers, and waste drums pertaining to the K-Wing RH-TRU liquids. Specifically, the 23 samples taken from the 10 liquid bulking containers (BCs) are identified and the liquid solidification containers and pitchers (LSs and LSPs) placed into each of the 16 55-gallon waste drum are tracked.

Source Document Data Limitations (if any):

1. Compilation of data from Argonne generator records is applicable only to the UREX and corrosion study liquids immobilized in the K-Wing area.

Acceptable Knowlege Expert:

Kevin J. Peters, [signature] Date: 2/20/2012
Print /Sign

a Provide description for non-titled information (i.e., container paperwork, MSDS sheets, etc)
b Obtain from Acceptable Knowledge Documentation Checklist
c For microfilm or microfiche, identify box, tape, reel number and location.

CCP RECORDS ORIGINAL
DATE REC'D 4-16-12

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Attachment 3 - Acceptable Knowledge Source Document Summary

Waste Stream Number(s): AERHDM, ID-ANLE-S5000

Site(s): Idaho National Laboratory

Source Document Tracking Number: P009

Acceptable Knowledge Documentation Type:
- [x] TRU Waste Management Program Information
- [x] Waste Stream-Specific Information
- [x] Supplemental Information

Category:
- [ ] C - Correspondence
- [ ] D - Discrepancy Resolution
- [x] P - Published Documents
- [ ] U - Unpublished Documents

Title of Source Document: TRU-RH Waste Certification Plan for Waste Management Operations

Source Document Reference Information (author(s), document and revision number, date, publisher): Ralph W. Ditch, Gary E. Griffin, J0306-0033-SA, 2 and 4, 11/10/1986 & 4/16/1991

AK # [a]	Source Doc. Page # [b]	AK Information Summary
PR8	1,2	TRU-RH Waste Certification Plan Document # J0306-0033-SA Approved on November 10, 1986, Rev. 2.
PR8	5,6	Plan written in compliance with WIPP-DOE-069 for waste acceptance at WIPP. Lists references.
PR2	6,7	AGHCF, a kilocurie complex, used for metallurgical examination of irradiated fast reactor fuel and examination of DOE-sponsored, light-water reactor fuel. Hot cell has 11 ft by 32 ft main working area and a high purity nitrogen atmosphere containing < 1% oxygen. TRU content of waste resulting from the above activities exceed a 100 nCi/g and the CH limit of 200 mrem/h at package surface. Recoverable fuel is shipped to recoverable storage at ANL-ID. Shipments to recoverable storage include high-level, gamma, non-fuel components of the test assemblies such as fuel cladding and encapsulation components (scrap materials). This destination for materials having high fissile content and/or gamma activity greater than 30 rem/h, precludes the necessity for placing such materials into the TRU-RH waste stream.
PR4, S16	7	TRU wastes are sealed in metal cans inside the AGHCF and are bagged out and heat sealed inside a 0.02-in-thick polyvinylchloride bag connected to the bagout port and contain the same nitrogen atmosphere as the AGHCF.
PR8	8,9	AGHCF facility supervisor is responsible for assuring that procedures are followed when wastes are placed into each TRU-RH waste package and for having the contents of each package properly documented and traceable to the package. The PFS/WMO manager participates in an annual TRU-RH waste generator audit and ascertains that TRU-RH waste packages meet the WIPP-WAC requirements.
PR8	10,11	Waste generation and management organizational chart.
PR2, S16	12-14	Waste processing and packaging data are collected and maintained by the AGHCF facility supervisor and include 1) complete waste processing and packaging procedures, 2) waste-package contents documentation (includes accounting fissile materials assay information). Instrument calibrations are performed at a minimum of each 6 months. The calibration with date are fixed to each portable beta-gamma instrument. Scales used to weigh RH-TRU waste are calibrated at least annually and calibration labels are

Attachment 3 - Acceptable Knowledge Source Document Summary (continued)

Site(s): Idaho National Laboratory		Source Document Tracking Number: P009
AK # [a]	Source Doc. Page # [b]	AK Information Summary
		fixed to the instrument. Waste disposal requisitions and supplemental information include data sheets used for the radiation survey results, weight of package, package identification number, and a copy of the sign-off sheet for accountable materials completed by the OHS-Special Materials group.
S16	15-16	TRU-RH container: DOT specified 17H, 30-gallon drums having the specified markings in 49 CFR 178.118-10. Lid gaskets for the drums will meet requirements of AEC Drawing P-14135. Packaging will have three alpha barriers. Internal metal cans (7.5 gallon steel cans) are not considered alpha barriers because they could be contaminated on the outside. They are (not--handwritten) gasketed and toggle-bolt sealed in a nitrogen atmosphere. Barrier #1: provided by a heat-sealed, 0.02-in.-thick polyvinylchloride bag placed over the can. Bagged cans are inserted into a 1/10-in.-thick polyethylene drum liner with a 1/16-in.-thick polyethylene disc installed on top of the liner. The PVC bag is sealed in a nitrogen atmosphere. Barrier #2: Consists of another heat-sealed, 0.02-in.-thick PVC bag placed on the outside of the drum liner and disc. Barrier #3: Consists of the DOT 17H drum. A serial-number tamper seal is spot welded across the drum's lock ring. The number on the seal corresponds with the high visibility serial number stenciled on the sides and top of the drum. Wastes placed into cans which are (not hand written in) sealed inside the AGHCF. A fiber drum is placed inside of the bag and the bag is attached to the bag-out port. The waste cans are passed through the port into the bag and the bag is heat-sealed closed above the fiber drum.
S16	17-18	Figure showing packaging and description of elements in figure. Again there is hand editing of the text--do not know which is valid.
PR4, WS4, WS11, S16	18	Destructive examinations in the AGHCF may involve cutting, grinding and polishing. Scrap is not considered waste, but recoverable fissile material stored at the ANL-ID site. Remaining debris following scrap removal is normally packaged as RH-TRU waste. Waste drum packages having a maximum weight of 200 lbs typically contain less than 10 g fissile material. Surface radiation do not exceed 30 rem/h and are usually in the range of 1 to 15 rem/h. Other than sorting and packaging, RH-TRU wastes from the AGHCF do not usually require further processing.
PR8	20	Wastes are certifiable or will be made certifiable; thus, no identified non certifiable waste forms. Wastes will be sorted or treated to conform to meet WIPP-WAC.
S16	21	TRU-RH will be packaged in canisters and shipped to interim storage where the drums will be canisterized. With the exception of canisterization, ANL-IL will certify that the WIPP-WAC criteria have been met and the drums can be canisterized without additional processing. Packages tested and survived abusive handling.
PR5, PR8, WS12	23-25	Items sorted in the AGHCF according to procedure to segregate prohibited waste identified in the WIPP-WAC. Sorting is performed by qualified personnel familiar with materials and their appearance. A second individual will physically verify that waste meets the WIPP-WAC. Waste-package documentation is completed and includes the following: solid radioactive waste disposal requisition (PFS-195) and the supplemental sheet (PFS-196). Questions will be answered that pertain to: 1) amount of fines below 10 microns and 200 microns, 2) liquids or absorbed liquids, 3) pyrophoric, 4) pressurized vessels, 5)mixed wastes, 6) corrosives, and 7) special hazards. The PFS-196 is used to 1) provide a generic description of the package contents and 2) list accountable isotopes and amounts, 3) etc.
PR4	24	Particulates collected through sweeping will be placed into cans. Depending upon their activity, they will either be sorted as scrap or stabilized with resin. Recoverable scrap is not RH-TRU waste. If put in the waste and activity is high, it would be removed from the waste because AGHCF requires that any TRU-RH waste package that exceeds 30 R/h be opened and the contents resorted to locate and remove the high activity materials.

Attachment 3 - Acceptable Knowledge Source Document Summary (continued)

Site(s): Idaho National Laboratory		Source Document Tracking Number: P009
AK # [a]	Source Doc. Page # [b]	AK Information Summary
PR8, S16	25,26	Free liquids will be evaporated or solidified; pyrophoric materials not common in waste. Some zircaloy fuel cladding (pyrophoric under certain conditions) would exist in gram amounts (<1%) as particulate, due to its high dose rate. Explosives and compressed gases were uncommon. Compressed gases would have been detected during waste sorting. Any compressed gas container found was punctured or the valve was removed. Explosives items were prohibited in the AGHCF. The AGHCF drums containing combustible wastes will not exceed 25 grams of Pu-239 or the equivalent alpha curies. Hazardous chemicals are not normally used in the facility that produces TUR-RH. When used and contaminated, they will be listed and quantified; otherwise, they are not part of the RH-TRU package. Sodium will be removed during decladding and made nonreactive using alcohol. Each TRU-RH drum package will have a maximum weight of 200 lbs and a unique identification number.
PR4, WS11, S16	27-34	Each RH-TRU package will: 1) 30 gallon packages will not exceed Pu-239 fissile equivalent of 100 grams. 2) TUR-RH waste packages will normally contain < 10 g of fissile materials (Pu-239 and U-235) 3) Calculations are performed to determine how much fissile material was removed, how much was placed into recoverable containers, and how much was packaged as TRU-RH waste. 4) The fission yield of Ce-137 in U-235 and Pu-239 is known and the amount of U-235 and Pu-239 in older reactor fuel can be roughly determined by the amount of gamma activity emitted. It was found that each 325 mR/h at one foot equals approximately one gram of fissile material (old fuel). Doesn't hold for newer fuel--would be more. 5) Fissile materials and amounts are documented on PFS-195. 6) Typical TRU-RH waste package contains a maximum of approximately 10 g of Pu-239 and 1 g of Pu-240. 7) Surface dose rate of 30 rem/h will not be exceeded and the contribution by neutrons will be less than 20 mrem/h. 8) Each package is assigned a unique identification number. 9) Surface contamination will be removed. Loose activity is recorded on the TRU-RH waste package radiation survey form. 10) Thermal power will be calculated and reported in waste package shipment information. 11) Pu-239 and Pu-240 are the only significant TRU radionuclides in the fuel; Pu-240 is calculated to be 10% of the Pu-239 amount. The amount of fission products are determined by the gamma activity through the side of a package at a distance of one foot and are converted to curies having a decay energy of one MeV using the formula R=6CE. 12) PFS-195 is reviewed and includes checking that the sum of fissile materials in terms of Pu-239 equivalency does not exceed 100 grams. 13) Nitrogen atmosphere inside the cans can not be displaced with > 5% oxygen. 14) Each package will be identified with a unique identification number. 15) TRU-RH data file will be maintained by the waste generator. 16) The waste package identifier will be stenciled on the drum package. 17)Waste package will include PFS-195, PFS-196, waste package radiation survey data sheet, waste package supplemental data sheet, and SPM-23. Keywords: Identification number, PFS-195, PFS-196, SPM-23, waste package, drum package, nitrogen, Pu-239, Pu-240, U-235, loose activity, surface contamination, fission product determinations, free liquids, pyrophoric materials, compressed gases, explosives, combustible waste, hazardous chemicals, particulates, sorting waste, WIPP-WAC, organizational chart, recoverable fuel, calibration, AGHCF, packaging, fissile material, abusive handling tests, cutting,

Attachment 3 - Acceptable Knowledge Source Document Summary (continued)

Site(s): Idaho National Laboratory		Source Document Tracking Number: P009
AK # [a]	Source Doc. Page # [b]	AK Information Summary
		grinding, and polishing
S16	35	Rev. 4 (This appears to be Rev. 4, but headers on individual pages differ--some say Rev. 1, others Rev. 2, and still others Rev. 3). The document hasn't changed that much from the original and likely someone just forgot to change the "headers." The page numbers throughout the document are consistent and continuous. TRU-RH Certification Plan for Waste Management Department prepared by Gary E. Griffin for ANL-E dated April 19, 1991. Plan is written to comply with WIPP-DOE-069 so that RH-TRU waste will be certified for disposal at WIPP. Provides an overview of waste-generation operations that is similar to the earlier document. The TRU wastes are placed in metal cans inside the AGHCF and are bagged out, heat sealed and vented inside of a 0.02in.-thick polyvinylchloride bag connected to the bagout port. Hence, the wastes inside of this bag are contained in the same nitrogen atmosphere as the AGHCF.
PR8	42, 45-46	The PFS/WM manager has responsibility for TRU-RH Waste Certification Program. The AGHCF supervisor is responsible for assuring that procedures are followed when wastes are placed into each TRU-RH package and for having the contents of each package properly documented and traceable to the package. In earlier Rev., the PFS/WMO QA coordinator "signs the TRU-RH waste certification statement. Not listed in Rev. 4. A third responsibility of the QA Representative is to conduct "quarterly assessments of Waste Management and waste activities and issues reports summarizing these assessments to Waste Management Manager." Organization charts are different.
PR8, S16	48, 49	Calibration labels showing calibration date are affixed to portable survey instruments. Calibrated a minimum of every 6 mo. A calibration label showing the calibration date is affixed to the scale used to weight the TRU-RH waste packages. Scale is calibrated at least annually. Cal records maintained by the AGHCF supervisor. Nonportable survey instruments are "calibrated" rather than "checked for accuracy" using NIST traceable rather than check sources. Results are recorded by the ESH-HP not OSH-HP using sources directly traceable to the NIST rather than ion chambers and electrometers traceable to the NBS. Calibration responsibilities are given to the ESH-Dosimetry and Analytical Group personnel rather than the OHS-HP Health Physicist. Waste package and shipping documentation: 1) Waste disposal requisitions and supplemental information includes data sheets used for the radiation survey results, weight of package, package identification number, and a copy of the signoff sheet for accountable materials completed by the site representative of the SSD-Special Material group. 2) shipping documentation, 3) waste-package certification statements, 4) correspondence about waste and waste shipments.
PR4, S16	50-54	Primary waste container is DOT 17H, 30-gallon drums. The lid gasket for the drums meets requirements. Packages are handled using a vacuum-lift device. AGHCF plans to continue shipping drum packages to an interim storage site for canisterization. RH-TRU packages have three alpha barriers. 7.5 gallon cans are lock ring closed and are bagged out of the facility. The metal cans provide an alpha shield between the wastes and the rest of the package. Cans are closed (not sealed, Rev. 2) and placed in an open top fiber drum (Rev. 4) in a nitrogen atmosphere. Alpha barriers: 1) heat-sealed, 0.02 in thick PVC bad placed over the waste cans and fiber drum. 2) a second 0.02 in thick PVC bag placed on the outside of the drum liner and disc and sealed in an air atmosphere. Bags contain vents. 3) third barrier

Attachment 3 - Acceptable Knowledge Source Document Summary (continued)

Site(s): Idaho National Laboratory		Source Document Tracking Number: P009
AK # [a]	**Source Doc. Page # [b]**	**AK Information Summary**
		provided by the DOT 17H drum which is gasketed vented and draw bolted. Figure and description provided of waste bag components.
PR8	54	Rev. 4 (page says Rev. 3) has a sorting procedure (AGHCF-Sort Rev. 0). . . ."and logged on the Waste Can Inventory Sheets." Rev. 4 uses a sorting check list which identifies prohibited items and segregation requirements.
PR8	61	Under 6.8.1 add, "Methods used to quantify hazardous materials are found in SW-846, 'Test Methods for Evaluating of Solid Waste,' USEPA, November 1986, 3rd Revision. See Reference 1.1.12"
PR8	65, 66	6.13 added "Detectable contamination is determined using the equation for calculating minimum levels of detectability (MLD) found in EPA 520/1-80-012 'Reporting of Environmental Radiation Data' by Colle et al., 1980." Gives the equation used. 6.13.1 Technician changed from OHS-Hp to ESH-HP.
PR8	69, 70	6.17 Changes "The waste reviewer will be the PFS/WMO Supervisor," not or PFS/WMA QA Coordinator. 6.17.2 "The certification statement will be signed by the PFS/WMO Supervisor," not as an alternate, the PFS/WMO QA Coordinator.

Source Document Data Limitations (if any):

1. Informal handwritten corrections throughout the document indicate that inner waste cans were not sealed.
2. Specific waste management protocols may not be applicable to AERHDM, however discriptions of the operations and types of waste materials and contaminatin is relavent.

Acceptable Knowlege Expert:

D. B. Becker for K. Peters / DBBecker Date: 3/22/2006
Print /Sign

[a] Obtain from Acceptable Knowledge Documentation Checklist
[b] For microfilm or microfiche, identify box, tape, reel number and location.

P009

TRU-RH WASTE CERTIFICATION PLAN

FOR

WASTE MANAGEMENT OPERATIONS

Document No. J0306-0033-SA

PLANT FACILITIES AND SERVICES DIVISION

ARGONNE NATIONAL LABORATORY

ARGONNE, ILLINOIS

APPROVED DOCUMENT

NOV 10 1986

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Prepared by:	Ralph W. Ditch QA Coordinator, PFS/WMO	11-7-86 Date
Reviewed by:	Aubrey C. Smith Jr. Supervisor, PFS/WMO	110686 Date
Reviewed by:	[illegible] Supervisor, MCT/AGHCF	11-6-86 Date
Approved by:	Charles L. Keever Manager, PFS/WMO	11/10/86 Date

ARGONNE NATIONAL LABORATORY	*Document No. J0306-0033-SA
NOTIFICATION OF SPECIFICATIONS REVISION	
Title TRU-RH Waste Certification Plan Waste Management Operations	Page 1 of 33

*The document number as it appears on this page only shall be used to identify this document. The last two digits denote the revision number of this document (see Revision Authorization block below).

This document is fully representative of the Document No. only when the revision number on its pages correspond with those in the index below.

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REVISION AUTHORIZATION

REVISION NUMBER	00	01	02	03	04	05	06	07	08
NUMBER	-	009	012						
DATE	11/10/86	3/19/87	6/9/88						
APPROVED BY	CJC	CJC	LB						

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1.0 PURPOSE, FEATURES, AND RESPONSIBILITIES

1.1 Purpose and Requirements for Certification. This plan is written for Argonne National Laboratory, Illinois site (ANL-IL), to comply with the WIPP-DOE-069 "TRU Waste Acceptance Criteria for the Waste Isolation Pilot Plant," by which transuranic, remote-handled waste will be accepted for emplacement at the Waste Isolation Pilot Plant (WIPP). Guidance for meeting these requirements has been provided by the following documents, which may be referred to in this plan by the following paragraph numbers:

1.1.1 WIPP-DOE-069, "TRU Waste Acceptance Criteria for the Waste Isolation Pilot Plant," as updated.

1.1.2 WIPP-DOE-158, "TRU Waste Certification Compliance Requirements for Remote-Handled Wastes for Shipment to the WIPP," as updated.

1.1.3 WIPP-DOE-120, "Quality Assurance Measures for Certification of TRU Waste for shipment to the WIPP," as updated.

1.1.4 WIPP-DOE-157, "Data Package Format for Certified Transuranic Waste for the Waste Isolation Pilot Plant," as updated.

1.1.5 DOE Order 5820.2, "Radioactive Waste Management," as updated.

1.1.6 DOE Order 5700.6, "Quality Assurance," as updated.

1.1.7 ANL-J0306-0007SA, "Quality Assurance Plan for ANL Plant Facilities and Services, Waste Management Operations," as updated.

1.1.8 "ANL-IL Waste Handling Procedures" manual, as updated.

1.1.9 ANL-M4000-0025-SA-01, "Safety Analysis Report for the Alpha-Gamma Hot Cell Facility (BLDG. 212)," dated November 1982.

1.1.10 ANL internal document, "Safety Analysis for Twenty Year Retrievable Storage of Intermediate Gamma Level Transuranic Waste," dated June 1, 1976. Written by W. D. Jackson (MST) on the waste and characteristics of the waste generated by the Alpha-Gamma Hot Cell Facility.

1.1.11 A. R. Kazanjian, et al., "Gas Generation Results and Venting Study for Transuranic Waste Drums," RFP-3739, September 23, 1985.

1.2 **Overview of Waste-Generation Operations.** The Alpha-Gamma Hot Cell Facility (AGHCF) generates waste classified as TRU-RH. The facility is located in Building 212 and is operated by the Materials and Components Technology Division.

The AGHCF is a kilocurie shielded hot-cell complex used for metallurgical examination of irradiated fast reactor fuel and for examinations of DOE-sponsored, light-water reactor fuel.

The hot cell has an 11 ft. by 32 ft. main working area with additional integral areas having six remote-control work stations. The hot cell has a high purity nitrogen atmosphere containing less than 1% oxygen. The hot cell is designed such that it can be operated for extended periods without personnel entry.

The TRU content and radioactive levels of both types of reactor fuel are such that the wastes outloaded from the facility exceed the non-TRU limit of 100 nanoCurie per gram (nCi/g) and the contact-handled limit of 200 mrem/h at the package surface. ?

Recoverable, fuel-bearing debris from the facility is sorted from the waste and is shipped to recoverable storage located at the ANL site in Idaho (ANL-ID).

The TRU wastes are sealed in metal cans inside the AGHCF and are bagged out and heat sealed inside of a .02-inch-thick polyvinylchloride bag connected to the bagout port. Hence, the wastes inside of this bag are contained in the same nitrogen atmosphere as the AGHCF.

These shipments to recoverable storage also include high-level, gamma, non-fuel components of the test assemblies such as fuel cladding and encapsulation components (scrap materials). This destination for materials having high fissile content and/or gamma activity greater than 30 rem/h, precludes the necessity for placing such materials into the TRU-RH waste stream.

1.3 **Scope and Organization of the Certification Plan.** The following sections of this plan describe, with appropriate reference to documented controls and supporting data, various site-specific activities relating to the TRU-RH Waste Certification Program. Specifically, the Certification Plan uses the following format:

1.3.1 Section 2 outlines and illustrates, by organization chart, the ANL structure for waste generation, management responsibility and authorities, and the interfaces of the waste-generating, processing, and supporting organizations that participate in the TRU-RH Waste Certification Program.

1.3.2 Section 3 describes, in general, the data-collecting and archiving methods and records control.

1.3.3 Section 4 describes the waste containers and package components.

1.3.4 Section 5 describes the waste-generation and processing operation and lists certifiable forms of waste.

1.3.5 Section 6 describes the specific methodologies used to certify TRU-RH Waste Packages.

1.4 Responsibilities

1.4.1 The PFS/WMO Manager has overall responsibility for the TRU-RH Waste Certification Program.

1.4.2 The AGHCF Facility Supervisor is responsible for assuring that procedures are followed when wastes are placed into each TRU-RH waste package and for having the contents of each package properly documented and traceable to the package.

1.4.3 The PFS/WMO Supervisor is responsible for interim storage of the waste packages, shipment documentation, and shipments. Other authorities include:

Review and approval of the waste package documentation. Ascertains that TRU-RH waste packages meet the WIPP-WAC and the requirements of this plan, and signs the TRU-RH waste certification statement.

1.4.4 The PFS/WMO QA Coordinator has responsibility for review of all QA and Certification activities and has "stop work" authority for any actions that are not conducive to providing certified waste packages. Other responsibilites and authorities include:

1. Participation with the Quality Assurance and Safety Office in an audit of the TRU-RH waste generator(s) at least annually.

2. Review and approval of the waste package documentation. Ascertains that TRU-RH waste packages meet the WIPP-WAC and the requirements of this plan, and signs the TRU-RH waste certification statement.

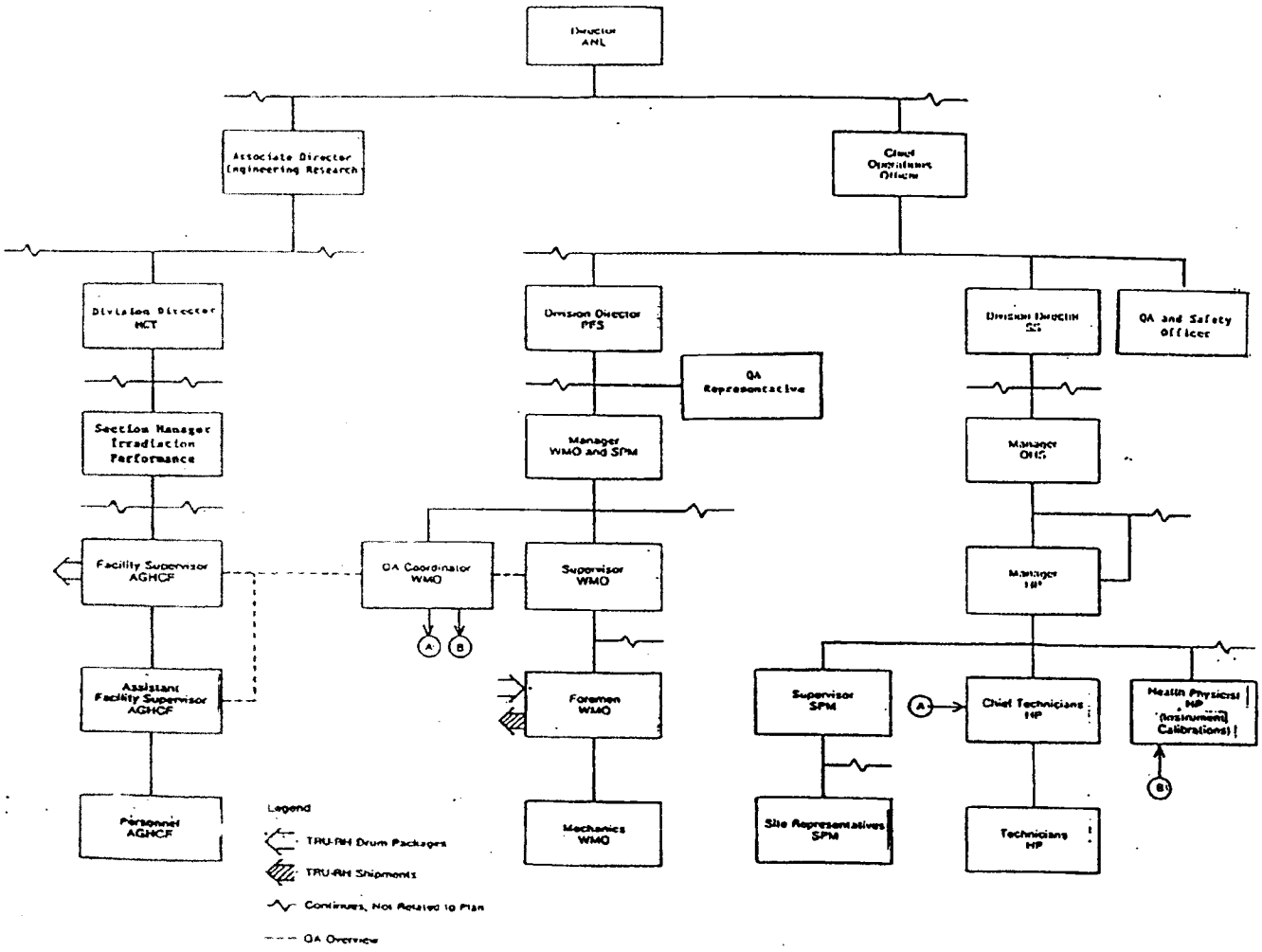
2.0 WASTE GENERATION AND MANAGEMENT: ORGANIZATIONAL STRUCTURE AND INTERFACES

2.1 Infrastructure of the Organizational Chart

Laboratory Director

- Associate Laboratory Director for Engineering Research
  - Division Director of Materials and Components Technology (MCT)
    - Section Manager of Irradiation Performance
      - Facility Supervisor of the AGHCF
        - Assistant Facility Supervisor of the AGHCF
          - Personnel assigned to the AGHCF
- Chief Operations Officer
  - Director Support Services (SS)
    - Manager Occupational Health and Safety (OHS)
      - Associate OHS Manager, OHS/Manager of Health Physics (HP) and Special Materials (SPM)
        - Health Physicist (OHS)
        - Chief Technicians (OHS)
          - Technicians (OHS)
        - Supervisor Special Materials (SPM)
          - Site Representative (SPM)
  - Director Plant Facilities and Services (PFS)
    - Manager Waste Management Operations (WMO)
      - QA Coordinator (WMO)
      - Supervisor (WMO)
        - Foremen (WMO)
          - Mechanics (WMO)

2.2 Waste Generation and Organizational Structure



3.0 DATA COLLECTION AND ARCHIVING

3.1 Data Collection and Archiving. Data collection and archiving are divided into four categories as shown in 3.2 through 3.5 below.

The Plant Facilities and Services Division, Waste Management Operations QA Coordinator is responsible for maintaining procurement records for waste-package containers.

The AGHCF Facility Supervisor is responsible for maintaining procedures used to process the waste, calibration records for the weighing scale, and documentation on waste packages and waste package constituents.

The Occupational Health and Safety Division, Health Physics (OHS/HP) is responsible for maintaining the Health Physics computerized instrument-calibration file.

The Plant Facilities and Services Division, Waste Management Operations (PFS/WMO) Supervisor is responsible for maintaining the Radioactive Waste Disposal Requisitions and supplemental information and the waste shipment records.

3.2 **Waste Processing and Waste Packaging.** Waste processing and packaging data are collected and maintained by the AGHCF Facility Supervisor, and includes:

1. Completed waste processing and packaging procedures.
2. Waste-package contents documentation (includes accounting assay information on fissile materials). ?

3.3 **Radiation Survey Instrumentation Calibrations.** Calibration labels showing the calibration date and the date of the next calibration are affixed to each portable beta-gamma survey instrument. The nonportable alpha-beta survey instruments used for detecting removable activity are checked for accuracy at the beginning of each work day using alpha and beta check sources and the results are recorded by the OHS-HP technician who performed the check.

Where — WM equipment or AGHCF?

3.3.1 The portable beta-gamma radiation survey instruments are calibrated at a minimum of every six months using ion chambers and electrometers traceable to the National Bureau of Standards. The OHS-HP Health Physicist is responsible for instrument calibration and maintaining the calibration data.

3.4 **Weigh Scale Calibration.** A calibration label showing the calibration date is affixed to the scale used to weigh the TRU-RH waste packages. The scale is calibrated at least annually using weights of known values. The calibration results are recorded on a data form traceable to the scale. The calibration record is maintained by the AGHCF Supervisor. Prior to usage, the accuracy of the scale is checked against a known weight.

3.5 **Waste Package and Shipping Documentation.** Waste package and shipping data which are collected and maintained by the PFS/WMO Supervisor include the following:

1. Waste Disposal Requisitions and supplemental information submitted by the waste generator. Supplemental information includes data sheets used for the radiation survey results, weight of package, package identification number, and a copy of the sign-off sheet

for accountable materials completed by a site representative from the OHS-Special Materials (OHS-SPM) group.

2. Shipping documentation.

3. Waste-package certification statements.

4. Correspondence about waste and waste shipments.

4.0 DESCRIPTION OF CONTAINER AND COMPONENTS

4.1 **Description of Primary Container.** DOT specification 17H, 30-gallon drums are used as the container for TRU-RH wastes. Only 30-gallon drums having the markings as specified by 49 CFR 178.118-10 will be used by ANL-IL as TRU-RH waste containers. The lid gasket for the drums will meet the requirements of AEC Drawing P-14135. The TRU-RH Waste Packages are handled using a vacuum-lift device. Note: ANL-IL does not plan to canisterize the drums and intends to continue shipping the drum packages to an interim storage site for canisterization.

4.2 **Description of Package Components.** TRU-RH waste-drum packages have three alpha barriers. Internal metal waste cans are used to contain the waste, e.g., 7.5-gallon steel cans. These cans are NOT gasketed and toggle-bolt sealed and are bagged out of the facility. The metal cans provide an alpha shield between the wastes and the rest of the package. However, credit is not taken for the alpha barrier because the external surfaces of these cans are contaminated. These cans are sealed in a nitrogen atmosphere.

The first alpha barrier is provided by a heat-sealed, .02-inch-thick polyvinylchloride (PVC) bag that is placed over the waste cans. The bagged cans are inserted into a 1/10-inch-thick polyethylene drum liner, and a 1/16-inch-thick polyethylene disc is installed on top of the liner. The drum liner, disc, and the bagged-out, metal cans serve as puncture guards in the event the waste package is subjected to rough handling. This PVC bag is sealed in a nitrogen atmosphere.

The second barrier is provided by another heat-sealed, .02-inch-thick PVC bag placed on the outside of the drum liner and disc.

The third barrier is provided by the DOT 17H drum, which is gasketed and draw-bolt characteristic of DOT 17H drums. A serial-numbered tamper seal is spot welded across the drum's lock ring. The number on this seal corresponds with the high visibility serial number stenciled on the sides and top of the drum.

4.3 CONTAINMENT OF WASTES IN A NITROGEN ATMOSPHERE.

The AGHCF has a nitrogen atmosphere which contains less than 1% oxygen. The waste cans and the bag-out bag have this same oxygen-free atmosphere since thay are sealed within the AGHCF atmosphere.

Wastes are placed into cans which are Not sealed inside of the AGHCF. A fiber drum is placed inside of the bag and the bag is attached to the bag-out port. The waste cans are passed through the port into the bag and the bag is heat-sealed ~~closed~~ above the fiber drum. See Items 1 and 2 in Figure 1.

TRU-RH package components are shown in Figure 1.

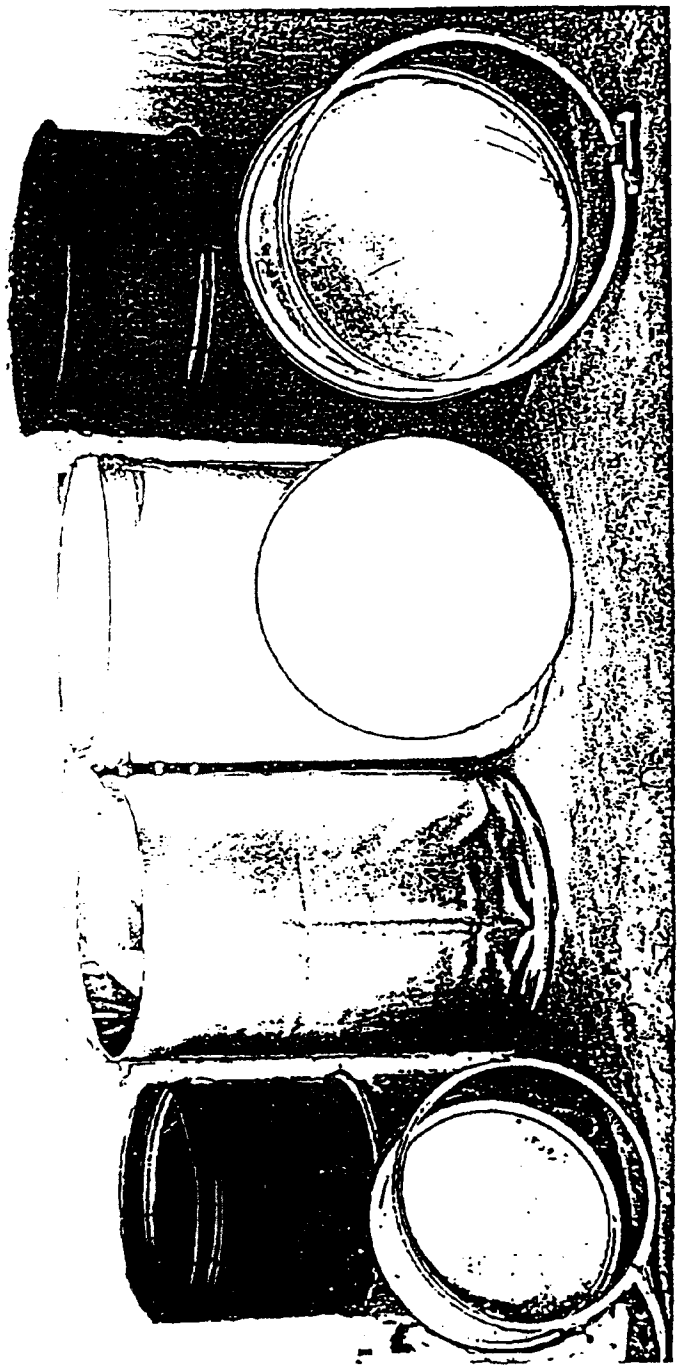


Figure 1. TRU-RH Package Components

4.4 DESCRIPTION OF FIGURE 1 TRU-RH WASTE PACKAGE COMPONENTS

Item 1. Two 22-gauge steel waste cans with gasketed cover and toggle-latch cover clamp rings. These cans contain the TRU-RH waste and are transferred out of the facility through a bag-out waste chute into the Item 2 pouch. The cans are sealed in a nitrogen atmosphere. Item 2 is sealed to the outside of the waste chute using a bag-out procedure that prevents the outside of Item 2 from becoming contaminated during the transfer.

Item 2. The first .02-inch thick polyvinylchloride (PVC) pouch that is dielectrically heat sealed after Item 1 is inserted. The fiber drum is used to prevent collapse of the pouch when cans are inserted and also serves as a package puncture guard. This bag is sealed in a nitrogen atmosphere.

Item 3. Polyethylene 1/10-inch-thick drum liner with the second .02-inch-thick PVC pouch over the outside. This pouch is dielectrically heat sealed after Item 4 is inserted over Item 2.

Item 4. Puncture guard 1/16-inch-thick polyethylene disc. This disc is placed on top of the Item 2 pouch prior to dielectrically heat sealing the Item 3 pouch.

Item 5. DOT 17H, 30-gallon steel drum and cover. The drum cover has a styrene butadiene tubular o-ring gasket. The drum cover is sealed to the drum by the gasket and a steel, bolted lock-ring. The lock-ring bolt is torqued to 40 foot pounds and, after final closure, is provided with a serial-numbered tamper seal that is tack welded across the lock-ring lugs. The serial number corresponds to the high visibility serial number stenciled on the sides and top of the drum.

5.0 WASTE GENERATION AND TREATMENT

5.1 **Description of TRU-RH Waste Generation.** The Alpha-Gamma Hot Cell Facility (AGHCF) is used for destructive examination of irradiated fuel elements and fuel-element clusters which may involve cutting into--and through--irradiated fuel to obtain specimens of the materials to be examined. This is followed by extensive grinding and polishing of the specimens to prepare them for microscopic and electron-beam instrument examinations.

Note: The use of the term "scrap" in the following sections is for recoverable fuel-bearing materials that are placed into special canisters for storage and are not considered waste. Scrap is placed into recoverable fissile material storage at the ANL, Idaho site (ANL-ID).

All TRU waste and scrap originating in the AGHCF will be sorted in accordance with the procedure titled "AGHCF Waste and Scrap Sorting Procedure" to ensure that scrap is removed and that the only materials packaged as TRU-RH waste will be those that meet the waste-form requirements as specified in WIPP-DOE-069 and WIPP-DOE-158.

Scrap plus the examined specimens and the remaining fuel elements and fuel-element clusters are salvaged and packaged into pipe containers which are sent to ANL, Idaho (ANL-ID), where they are maintained in recoverable fissile material storage.

The remaining debris is normally packaged as TRU-RH waste. Waste-drum packages have a maximum gross weight of 200 pounds and typically contain less than 10 grams of fissile materials. The surface radiation levels of the packages do not exceed 30 rem/h and are usually in the range of 1 to 15 rem/h.

Other than sorting and packaging, the TRU-RH wastes generated by the AGHCF do not usually require further treatments.

5.2 **List of Certifiable and Noncertifiable Waste Forms.** The wastes are certifiable, or will be made certifiable, using ANL-approved treatment procedures; thus, there are no identified noncertifiable waste forms.

5.2.1 If materials are found that do not meet the waste-form requirements of the WIPP-WAC during the sorting process, the materials will be segregated and will either be packaged as recoverable scrap, if appropriate, or they will be treated to conform to waste forms meeting the WIPP-WAC using treatment procedures prepared by the AGHCF Supervisor and reviewed and approved by the PFS/WMO Manager.

6.0 SPECIFIC CERTIFICATION PROCEDURES

6.1 **Introduction.** This section of the TRU-RH Certification Plan describes the methodology that is used to certify the waste and references ANL operational procedures or data forms (either by specific numbers or names) that are used to accomplish waste certification and the criteria to be satisfied (by the criteria number used in WIPP-WAC-158).

ANL-IL does not plan to canisterize the 30-gallon drum packages and intends to continue shipping the packages to an interim storage site for canisterization. ANL-IL will certify that the waste meets all of the WIPP-WAC to enable the shipped drums to be canisterized by the interim storage site without further processing.

6.2 **Waste Container Requirements (WAC-3.1 through 3.3).** TRU-RH waste must be packaged in canisters in order to meet the waste container requirements as specified by WAC-3.1, 3.2, and 3.3. As stated in 6.1, ANL-IL plans to ship the drums to a DOE interim storage site where the drums will be canisterized. With the exception of canisterization, ANL-IL will certify that the WIPP-WAC criteria have been met and the drums can be canisterized without additional processing. The following information is provided to show that the drum packages are durable and can be safely handled using a vacuum lift.

6.2.1 Test of the Double Alpha Containment Design for a Drum Package. A drum package design was tested (Appendix A of reference 1.1.10) for double-alpha containment if abusively handled. The package was found to pass the design requirements after being dropped onto its bottom edge from a height of 10 feet onto a concrete floor and then rolled off of a 3-1/2 ft. high loading dock onto a concrete driveway. This

test demonstrated that the drum will contain the waste and provide at least two alpha barriers during abusive handling.

6.2.1.1 The tested package had the same three levels of alpha containment as the TRU-RH Waste Package described in Section 4.2 and had a gross weight of 230 pounds (a normal TRU-RH Waste Package has a gross weight limit of 200 pounds). Lead bricks and glass quart-size jars full of water were placed in each of the metal cans.

6.2.2 As prescribed by 49 CFR.173-13, each drum stamped DOT 17H by the manufacturer must have passed a 7-psig pressure-leak test for five minutes. The 30-gallon drums have nominal outside dimensions of 19 inches in diameter by 29-inches high. Labeling will be performed using stencils and an enamel spray paint such as Krylon.

6.2.2.1 The 30-gallon drums can be safely lifted using a vacuum-lift with a 12 inch suction plate and a crane hoist. This has been successfully demonstrated at both ANL-IL and the Radioactive Waste Management Complex located at the INEL in Idaho during the handling of over 400, ANL TRU-RH drum-packages. Additionally, it has been documented in reference 1.1.10 that the vacuum lift can safely suspend a 30-gallon DOT 17H drum having a gross weight of 1000 pounds for five minutes after the power to the vacuum lift is shut off.

6.3 **Waste Form Requirements (WAC-4.1 through 4.5).** TRU-RH wastes generated in the AGHCF will meet the waste-form requirements as specified by WIPP-DOE-158, criteria 4.1 through 4.5.

Before any waste and scrap materials are removed from the AGHCF, all materials and items are sorted using the procedure titled "AGHCF Waste and Scrap Sorting Procedure," to segregate prohibited waste

forms identified by the WIPP-WAC from the materials to be packaged as waste.

Sorting is performed only by qualified personnel (recorded training and experience) familiar with the materials that are used in the AGHCF, the physical appearance of accountable materials, the prohibited waste forms and their appearances, and the waste documentation requirements. A second individual will physically verify that the waste meets the WIPP-WAC.

As required by the sorting procedure, a sorting diagram is used during the sorting process which identifies the prohibited waste forms and the segregation requirements. Prohibited waste forms are segregated into identified containers and are either treated to conform to the WIPP-WAC or packaged as recoverable scrap. Treatment of waste forms to meet the applicable WIPP-WAC are performed using treatment procedures that have been approved by the AGHCF supervisor.

Waste-package documentation for each waste package is required to be completed by the waste generator and submitted to the PFS/WMO Supervisor for review and approval prior to the waste being accepted by PFS/WMO. The documentation includes a Solid Radioactive Waste Disposal Requisition (PFS-195) and a Supplemental Sheet (PFS-196) which is a continuation of the PFS-195. The PFS-195 is required to be signed by the ANL-IL waste generator and submitted to the PFS/WMO Supervisor. Either the PFS/WMO Supervisor or the PFS/WMO QA Coordinator reviews the documentation to ensure that the wastes are certifiable and approves the documentation prior to the waste being accepted by PFS/WMO. The PFS-195 and PFS-196 data forms have four columns that are used to document the waste forms in packages. One column is used for each waste package. The PFS-195 has questions on the waste constituents in the package that must be answered either yes or no.

Any yes questions must be answered in the appropriate column on the PFS-195 form. These questions pertain to: (1) the amount of fines below 10 microns and 200 microns, (2) liquids or absorbed liquids, (3) pyrophorics, (4) pressurized vessels, (5) mixed wastes, (6) corrosives, and (7) special hazards. The PFS-195 is also used to provide the radionuclides and amounts in each waste package. The PFS-196 is used to: (1) provide a generic description on the contents of the package, (2) list accountable isotopes and amounts, and (3) explain any yes answers to the questions on the PFS-195.

6.4 **Immobilization (WAC-4.1).** Radioactive grindings and glovebox sweepings, (particulate waste), etc., of any appreciable quantity will be detected during the performance of the sorting procedure titled "AGHCF Waste and Scrap Sorting Procedure." Detected particulates will be collected and placed into identified small cans. Depending upon the activity of the particulates, they will either be placed into recoverable scrap or will be immobilized in epoxy resins. Ten years of operational experience has shown that TRU waste generated in the AGHCF that could be classified as particulate waste from grinding, sawing, etc., is extremely radioactive due to the fuel cladding and recoverable fuel content in the particulates. Particulates have therefore been collected and packaged as recoverable scrap--not as TRU-RH waste. Experience has also shown that because the activity of the fuel cladding is high, particulate waste is easily detected using radiation survey instruments. Even an amount less than 1% of the weight of the waste will produce a gamma radioactivity of greater than 30 R/h. Due to the accountability requirements for fissile materials, the operational policy of the AGHCF requires that any TRU-RH waste package that exceeds 30 R/h be opened and the contents resorted to locate and remove the high activity materials.

6.4.1 When the segregated radioactive particulate waste is not packaged as recoverable scrap, the particulates in the can will either be (1) immobilized using approved treatment procedures, or (2) sealed and packaged as part of the waste matrix provided they weigh less than .6 pound. The .6 pound is conservative and based upon one-weight-percent of a waste-matrix that has a minimum gross weight of 60 pounds.

6.5 **Liquid Wastes (WAC-4.2).** Free liquid wastes will be detected during the sorting procedure titled "AGHCF Waste and Scrap Sorting Procedure." Any free liquids detected will either be evaporated, or solidified in cement using procedures approved by the AGHCF supervisor and reviewed by the PFS/WMO Manager. The use of liquids in the AGHCF is limited.

6.6 **Pyrophoric Materials (WAC-4.3).** Pyrophoric materials greater than 1% of the waste matrix are not a common waste product in the AGHCF. Some of the fuel cladding is zircaloy which is pyrophoric under certain conditions. However, this cladding would be in gram amounts (much less than 1%) as particulate waste described in Section 6.4. Note: cladding materials are extremely radioactive and are easily detected using radiation-survey instruments. Even an amount less than 1% of the weight of the waste will produce a gamma radioactivity of greater than 30 R/h. Due to the accountability requirements for fissile materials, the operational policy of the AGHCF requires that any TRU-RH waste package that exceeds 30 R/h be opened and the contents resorted to locate and remove the high activity materials.

6.7 **Explosives and Compressed Gases (WAC-4.4).** Explosive materials and compressed gases are not a common waste product in the AGHCF. Compressed-gas containers would be detected during the performance of the sorting procedure titled "AGHCF Waste and Scrap Sorting Procedure." Any compressed gas container found will be punctured or the valve will be removed. Explosive items, or materials which include explosive chemical compounds, are prohibited in the facility.

The lid gaskets on the drum-packages are made of styrene-butadiene. Test results provided in reference 1.1.11 (drum D31703), show that with combustible materials contaminated with 32.4 grams of Pu-239, styrene-butadiene gaskets will: (1) vent gases produced from radiolytic decomposition, and (2) prevent drums from being pressurized to greater than 7 psig. The AGHCF drums containing combustible wastes will not exceed 25 grams of Pu-239, or the equivalent alpha curies. Gas generation from bacterial action is not a factor because the wastes are sealed in a 99% nitrogen atmosphere having a dew point of -45° C. ?

6.8 **Radioactive Mixed Waste (WAC 4.5).**

6.8.1 Hazardous chemicals listed in 40 CFR 261, Subparts C and D that exist as co-contaminants with transuranics will be listed and quantified. Hazardous chemicals that are not radioactive will not be placed into TRU waste packages. Note: Chemicals listed in Subpart D are not normally used in the facility that produces TRU-RH wastes.

6.8.2 Liquids will be detected during the sorting procedure titled "AGHCF Waste and Scrap Sorting Procedure" and will either be evaporated or solidified in cement. Corrosive liquids will be treated to be made noncorrosive prior to solidification. In addition, the waste is contained inside a 1/10-inch-thick polyethylene drum liner.

6.8.3 Sodium is removed during decladding and made nonreactive using alcohol. The alcohol is then absorbed and evaporated.

6.9 **Waste Package Weight (WAC-5.1).** TRU-RH waste-drum packages will have a maximum gross weight of 200 pounds.

6.9.1 Each waste package is assigned a unique identification number. After the drum is sealed, it is weighed and the weight is logged on the

PFS-195 data form. The scale is calibrated at least annually and this is documented for audit. Prior to PFS/WMO accepting the packages for interim storage in the shielded vaults, the PFS-195 data form is reviewed and approved by either the PFS/WMO Supervisor or the PFS/WMO QA Coordinator. The review includes checking that the gross weight of the package does not exceed a gross weight of 200 pounds. Waste packages are not picked up by PFS/WMO and placed into interim storage until the documentation has been reviewed and approved.

6.10 **Nuclear Criticality (WAC-5.2).** The 30-gallon TRU-RH Waste packages will not exceed the Pu-239 fissile equivalent of 100 grams. WOW

6.10.1 TRU-RH Waste Packages will normally contain less than ten grams of the fissile materials Pu-239 and U-235. Recoverable fuel-bearing scrap, examined specimens, and the remaining fuel elements and fuel-element clusters are packaged as recoverable materials and are placed into recoverable fissile material storage at ANL-ID.

6.10.2 The amount of fissile material that is contained in the TRU-RH waste is determined by accountability records. Documentation shows the amount, location, and dimensions of the fissile material in each of the fuel elements and fuel-element clusters taken into the AGHCF for examination. From this documentation, and from the known amounts of materials that are removed to prepare the samples, calculations are performed to determine how much fissile material was removed, how much was placed into recoverable containers, and how much was packaged as TRU-RH waste.

A gamma activity method is used as a cursory check for the calculation made for fissile materials. Cesium-137, a gamma emitter having a half-life of 30 years, is the major long half-life fission product in irradiated fuel. The fission yield of cesium-137 in uranium-235 and plutonium-239 is known and therefore the amount of uranium-235 and plutonium-239 in older reactor fuel can be roughly

determined by the amount of gamma activity emitted. Gamma measurements taken on 10-year old reactor fuel with known amounts of Pu-239 and U-235 have disclosed that the amount of Pu-239 and U-235 can be approximated from the amount of gamma activity. It was found that each 325 mr/h at one foot equals approximately one gram of fissile material. Newer reactor fuel using the gamma activity method would show higher amounts of fissile material since other fission products would be involved and the amount of Cesium would be more.

6.10.3 The fissile materials and amounts in a waste package are documented on the Solid Radioactive Waste Disposal Requisition (PFS-195).

The PFS-195 is submitted to the PFS/WMO Supervisor as part of the package documentation. Prior to accepting the packages for interim storage in the shielded vaults, the package documentation is reviewed and approved by either the PFS/WMO Supervisor or PFS/WMO QA Coordinator. The review includes checking that the amount of fissile materials in terms of Pu-239 equivalency does not exceed 100 grams. Waste packages are not picked up by PFS/WMO and placed into interim storage until the documentation is approved.

6.11 Pu-239 Equivalent Activity - PE-Ci (WAC-5.3). TRU-RH Waste packages from the AGHCF will contain less than 10 PE-Ci. This is based on the TRU radionuclides being Pu-239 containing 10% by weight of Pu-240, and the amount of Pu-239 in a package being limited to 100 grams. Therefore, 100 grams of Pu-239 (6.21 curies) + 10 grams of Pu-240 (2.26 curies) = 8.47 curies.

A typical TRU-RH waste package contains a maximum of approximately ten grams of Pu-239 and one gram of Pu-240 (less than one PE-Ci). TRU radionuclides and amounts in each package are documented on the

PFS-195 Solid Radioactive Waste Disposal Requisition. The PFS-195 is submitted to the PFS/WMO Supervisor as part of the package documentation. Prior to accepting the packages for interim storage in the shielded vaults, the package documentation is reviewed and approved by either the PFS/WMO Supervisor or PFS/WMO QA Coordinator. The review includes checking that the sum of fissile materials in terms of fissile Pu-239 equivalency does not exceed 100 grams. Waste packages are not picked up by PFS/WMO and placed into interim storage until the documentation is approved.

6.12 **Surface Dose Rate (WAC-5.4).** The TRU-RH Waste Packages will not exceed a maximum surface dose rate of 30 rem/h and the contribution by neutrons will be less than 20 mrem/h.

6.12.1 Each waste package is assigned a unique identification number. After the drum (TRU waste package) is sealed, a radiation survey is made of the drum and the results are documented on a TRU-RH Waste Package Radiation Survey form. The survey form is used to record the unique identification number of the drum, the neutron survey results, the radiation beta-gamma survey results at direct contact (at three locations on the sides, and over the top and bottom), at various distances from the sides, and alpha-beta-gamma smear results for removable surface contamination. The data form is also used to record the names and serial numbers of instruments used to make the survey and the date they were last calibrated, the date of the survey, and the signature of the OHS-HP technician who performed the survey, etc.

The radiation-data form is submitted to the PFS/WMO Supervisor as part of the package documentation. Prior to accepting the packages for interim storage in the shielded vaults, the package documentation is reviewed and approved by either the PFS/WMO Supervisor or the

PFS/WMO QA Coordinator. The review includes checking that direct gamma activity of the packages is less than 30 rem/h. Waste packages are not picked up by PFS/WMO and placed into interim storage until the documentation is approved.

6.13 Surface Contamination (WAC-5.5). TRU-RH waste packages will meet this criteria since the external surface of each package is surveyed for removable alpha, beta, and gamma contamination and any detectable contamination is removed.

6.13.1 Routine OHS-HP procedures require that any detectable contamination found on the exterior of a waste package be removed. If contamination is found, it is removed by the waste generator and resurveys are made by the OHS-HP technician until the contamination is removed. If a package cannot be decontaminated to below detectable levels, the waste will be repacked into new drums which will be surveyed as above.

6.13.2 The final results of the survey for loose activity is recorded on the TRU-RH Waste Package Radiation Survey form.

The survey form is used to record the unique identification number of the drum, the neuton survey results, the radiation beta-gamma survey results at direct contact (at three locations on the sides, and over the top and bottom), at various distances from the sides, and alpha-beta-gamma smear results for removable surface contamination. The data form is also used to record the names and serial numbers of instruments used to make the survey and the date they were last calibrated, the date of the survey, and the signature of the OHS-HP technician who performed the survey.

The radiation survey form is submitted to the PFS/WMO Supervisor as part of the package documentation. Prior to accepting the packages for interim storage in the shielded vaults, the package documentation is reviewed and approved by either the PFS/WMO Supervisor or PFS/WMO QA Coordinator. The review includes checking that removable activity for alpha is less than 100 dpm/100 cm^2 (50 picocuries/100 cm^2) and the removable activity for beta-gamma is less than 1000 dpm/100 cm^2 (450 picocuries per 100 cm^2). Waste packages are not picked up by PFS/WMO and placed into interim storage until the documentation is approved.

6.14 **Thermal Power (WAC-5.6).** Thermal power will be calculated and reported in the waste package shipment documentation. The major alpha-producing wastes will be Pu-239 and Pu-240 and the composite of these alpha wastes is typically in amounts below 10 grams and always below 110 grams (less than one watt). Gamma heat produced by the mixed fission products (maximum of 5 curies) is less than .03 watts.

6.14.1 The PFS-195 is used by the waste generator to list the major radionuclides and amounts of each (up to four radionuclides and amounts can be listed). The waste generator determines the radionuclides and amounts from calculation by knowing the amount of material (fuel) that was removed from the fuel elements and fuel-element clusters and the amount of the material that was placed into the waste package. Pu-239 and Pu-240 are the only significant TRU radionuclides in the fuel; Pu-240 is calculated to be 10% of the Pu-239 amount. Fission products associated with irradiated reactor fuel are beta/gamma emitters and are normally listed on the PFS-195 as MFP (for mixed fission products). The amount of fission products are determined by the gamma activity through the side of a package at a distance of one foot and are then converted into curies having a decay energy of one

Mev (million electron volts) using the formula R = 6CE. Where: R = Roentgen at 1 foot, C = Curies, and E = Energy in Mev per disintegration or when the Roentgen is known and the Curies are to be found: C = R/6E.

6.14.2 PFS-195 is submitted to the PFS/WMO Supervisor as part of the waste package documentation. Prior to accepting the waste packages for interim storage in the shielded vaults, the documentation is reviewed and approved by either the PFS/WMO Supervisor or PFS/WMO QA Coordinator. The review includes checking that the sum of fissile materials in terms of Pu-239 equivalency does not exceed 100 grams. Waste packages are not picked up by PFS/WMO and placed into interim storage if the Pu-239 fissile gram equivalency exceeds 100.

? Decay heat limit? Not PE-Ci?

6.15 **Gas Generation (WAC-5.7).** Although this criteria is applicable to TRU-RH waste canisters, the following information is supplied to satisfy requirement (ii) in the Certificate of Compliance for NRC licensed shipment casks regarding radiolytically generated combustible gas.

The TRU waste in a drum package (secondary container) is sealed inside of two metal cans that are heat sealed inside a .02-inch-thick polyvinylchloride (PVC) bag. The cans and bag are sealed within the nitrogen atmosphere of the AFHCF which contains less that 1% oxygen. A second .02-inch-thick PVC is heat sealed around the inner bag which provides additional assurance that the nitrogen atmosphere in the cans is not displaced with greater than 5% oxygen. The metal cans also serve as an alpha shield between the waste and the two PVC bags and other package components.

6.16 Labeling (WAC-5.8). Each waste package will be uniquely identified by an identification number. Since ANL-IL plans to ship the drum packages to an off-site canisterization facility or interim storage site, the waste packages will be identified by a unique number specified by that facility.

6.16.1 A data file on TRU-RH packages will be maintained by the waste generator and will be referred to when identification numbers are assigned to waste packages to assure that the numbers are kept unique.

6.16.2 The waste package identifier will be stenciled on the drum package as specified by the offsite canisterization facility or interim storage site.

6.17 **Data Package/Certification (WAC-5.9).** The TRU-RH waste package documentation submitted to the PFS/WMO Supervisor will be reviewed by PFS/WMO to ensure that the supplied information is complete and adequate for determining that the packages meet the criteria as specified in WIPP-DOE-158 and the requirements of this plan. The waste reviewer will be either the PFS/WMO Supervisor or PFS/WMO QA Coordinator, who will review the waste documentation prior to accepting the wastes for placement into the PFS/WMO shielded, interim-storage facility.

6.17.1 The documentation reviewed will include the Solid Radioactive Waste Disposal Requisition (PFS-195), its supplemental sheet (PFS-196); the Waste Package Radiation Survey data sheet, the Waste Package supplemental data sheet, and a copy of the Special Materials sign-off sheet (SPM-23).

This documentation when reviewed and approved will be adequate to certify that the waste in the packages meets the requirement of the WIPP-WAC. The package containers will be 30-gallon DOT 17H drums that will be labeled as stated in 6.16.

6.17.2 The certification statement will be signed by the PFS/WMO Supervisor, or as an alternate, the PFS/WMO QA Coordinator.

Rev. 04

TRU-RH CERTIFICATION PLAN

FOR

WASTE MANAGEMENT DEPARTMENT

Document No. J0306-0033-SA

PLANT FACILITIES AND SERVICES DIVISION

ARGONNE NATIONAL LABORATORY

ARGONNE, ILLINOIS

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	NOTIFICATION OF SPECIFICATIONS REVISION	
	Title TRU-RH Waste Certification Plan Waste Management Department	Page 1 of 35

*The document number as it appears on this page only shall be used to identify this document. The last two digits denote the revision number of this document (see Revision Authorization block below).

This document is fully representative of the Document No. only when the revision number on its pages correspond with those in the index below.

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1.0 PURPOSE, FEATURES, AND RESPONSIBILITIES

1.1 **Purpose and Requirements for Certification.** This plan is written for Argonne National Laboratory, Illinois site (ANL-IL), to comply with the WIPP-DOE-069 "TRU Waste Acceptance Criteria for the Waste Isolation Pilot Plant," by which transuranic, remote-handled waste will be accepted for emplacement at the Waste Isolation Pilot Plant (WIPP). Guidance for meeting these requirements has been provided by the following documents, which may be referred to in this plan by the following paragraph numbers:

1.1.1 WIPP-DOE-069, "TRU Waste Acceptance Criteria for the Waste Isolation Pilot Plant," as updated.

1.1.2 WIPP-DOE-158, "TRU Waste Certification Compliance Requirements for Remote-Handled Wastes for Shipment to the WIPP," as updated.

1.1.3 WIPP-DOE-120, "Quality Assurance Requirements for Certification of TRU Waste for shipment to the WIPP," as updated.

1.1.4 WIPP-DOE-157, "Data Package Format for Certified Transuranic Waste for the Waste Isolation Pilot Plant," as updated.

1.1.5 DOE Order 5820.2, "Radioactive Waste Management," (latest revision).

1.1.6 DOE Order 5700.6, "Quality Assurance," (latest revision).

1.1.7 ANL-J0306-0007SA, "Quality Assurance Plan for ANL Plant Facilities and Services, Waste Management Department," as updated.

1.1.8 "ANL-IL Waste Handling Procedures" manual, as updated.

1.1.9 ANL-M4000-0025-SA-01, "Safety Analysis Report for the Alpha-Gamma Hot Cell Facility (BLDG. 212)," dated November 1982.

1.1.10 ANL internal document, "Safety Analysis for Twenty Year Retrievable Storage of Intermediate Gamma Level Transuranic Waste," dated June 1, 1976. Written by W. D. Jackson (MST) on the waste and characteristics of the waste generated by the Alpha-Gamma Hot Cell Facility.

1.1.11 A. R. Kazanjian, et al., "Gas Generation Results and Venting Study for Transuranic Waste Drums," RFP-3739, September 23, 1985.

1.1.12 "Test Methods for Evaluating Solid Waste," November 1986, 3rd Revision, USEPA.

1.2 **Overview of Waste-Generation Operations.** The Alpha-Gamma Hot Cell Facility (AGHCF) generates waste classified as TRU-RH. The facility is located in Building 212 and is operated by the Materials and Components Technology Division.

The AGHCF is a kilocurie shielded hot-cell complex used for metallurgical examination of irradiated fast reactor fuel and for examinations of DOE-sponsored, light-water reactor fuel.

The hot cell has an 11 ft. by 32 ft. main working area with additional integral areas having six remote-control work stations. The hot cell has a high purity nitrogen atmosphere containing less than 1% oxygen. The hot cell is designed such that it can be operated for extended periods without personnel entry.

The TRU content and radioactive levels of both types of reactor fuel are such that the wastes out-loaded from the facility exceed the non-TRU limit of 100 nanoCurie per gram (nCi/g) and the contact-handled limit of 200 mrem/h at the package surface.

Recoverable, fuel-bearing debris from the facility is sorted from the waste and is shipped to recoverable storage located at the ANL site in Idaho (ANL-ID).

The TRU wastes are placed in metal cans inside the AGHCF and are bagged out, heat sealed and vented inside of a .02-inch-thick polyvinylchloride bag connected to the bagout port. Hence, the wastes inside of this bag are contained in the same nitrogen atmosphere as the AGHCF.

These shipments to recoverable storage also include high-level, gamma, non-fuel components of the test assemblies such as fuel cladding and encapsulation components (scrap materials). This destination for materials having high fissile content and/or gamma activity greater than 30 rem/h, precludes the necessity for placing such materials into the TRU-RH waste stream.

1.3 **Scope and Organization of the Certification Plan.** The following sections of this plan describe, with appropriate reference to documented controls and supporting data, various site-specific activities relating to the TRU-RH Waste Certification Program. Specifically, the Certification Plan uses the following format:

1.3.1 Section 2 outlines and illustrates, by organization chart, the ANL structure for waste generation, management responsibility and authorities, and the interfaces of the waste-generating, processing, and supporting organizations that participate in the TRU-RH Waste Certification Program.

1.3.2 Section 3 describes, in general, the data-collecting and archiving methods and records control.

1.3.3 Section 4 describes the waste containers and package components.

1.3.4 Section 5 describes the waste-generation and processing operation and lists certifiable forms of waste.

1.3.5 Section 6 describes the specific methodologies used to certify TRU-RH Waste Packages.

1.4 Responsibilities

1.4.1 The PFS/WM Manager has overall responsibility for the TRU-RH Waste Certification Program.

1.4.2 The AGHCF Facility Supervisor is responsible for assuring that procedures are followed when wastes are placed into each TRU-RH waste package and for having the contents of each package properly documented and traceable to the package.

1.4.3 The PFS/WM Supervisor is responsible for interim storage of the waste packages, shipment documentation, and shipments. Other responsibilities include:

Review and approval of the waste package documentation. Ascertains that TRU-RH waste packages meet the WIPP-WAC and the requirements of this plan, and signs the TRU-RH waste certification statement.

1.4.4 The PFS/WM QA Representative has responsibility for review of all QA and Certification activities and has "stop work" authority for any actions that are detrimental to providing certified waste packages. Other responsibilities and authorities include:

1. Participation with the Environment, Safety and Health/Quality Assurance (ESH/QA) Oversight audit of the TRU-RH waste generator(s) at least annually.

2. Review of the waste package documentation. Ascertains that TRU-RH waste packages meet the WIPP-WAC and the requirements of this plan.

3. Conducts quarterly assessments of Waste Management and waste activities and issues reports summarizing these assessments to Waste Management Manager.

2.0 WASTE GENERATION AND MANAGEMENT: ORGANIZATIONAL STRUCTURE AND INTERFACES

2.1 Infrastructure of the Organizational Chart

Laboratory Director

Associate Laboratory Director for Engineering Research

Division Director of Materials and Components Technology (MCT)

Section Manager of Irradiation Performance

Regulatory Compliance Officer of the AGHCF

Facility Supervisor of the AGHCF

Personnel assigned to the AGHCF

Chief Operations Officer

Director Environment, Safety and Health (ESH) Division

Associate Director, ESH Technical Support

Section Head Health Physics (HP)

Health Physicist (ESH)

Chief Technicians (ESH)

Technicians (ESH)

Director Plant Facilities and Services (PFS)

Manager Waste Management Department (WM)

QA Representative (WM)

Supervisor (WM)

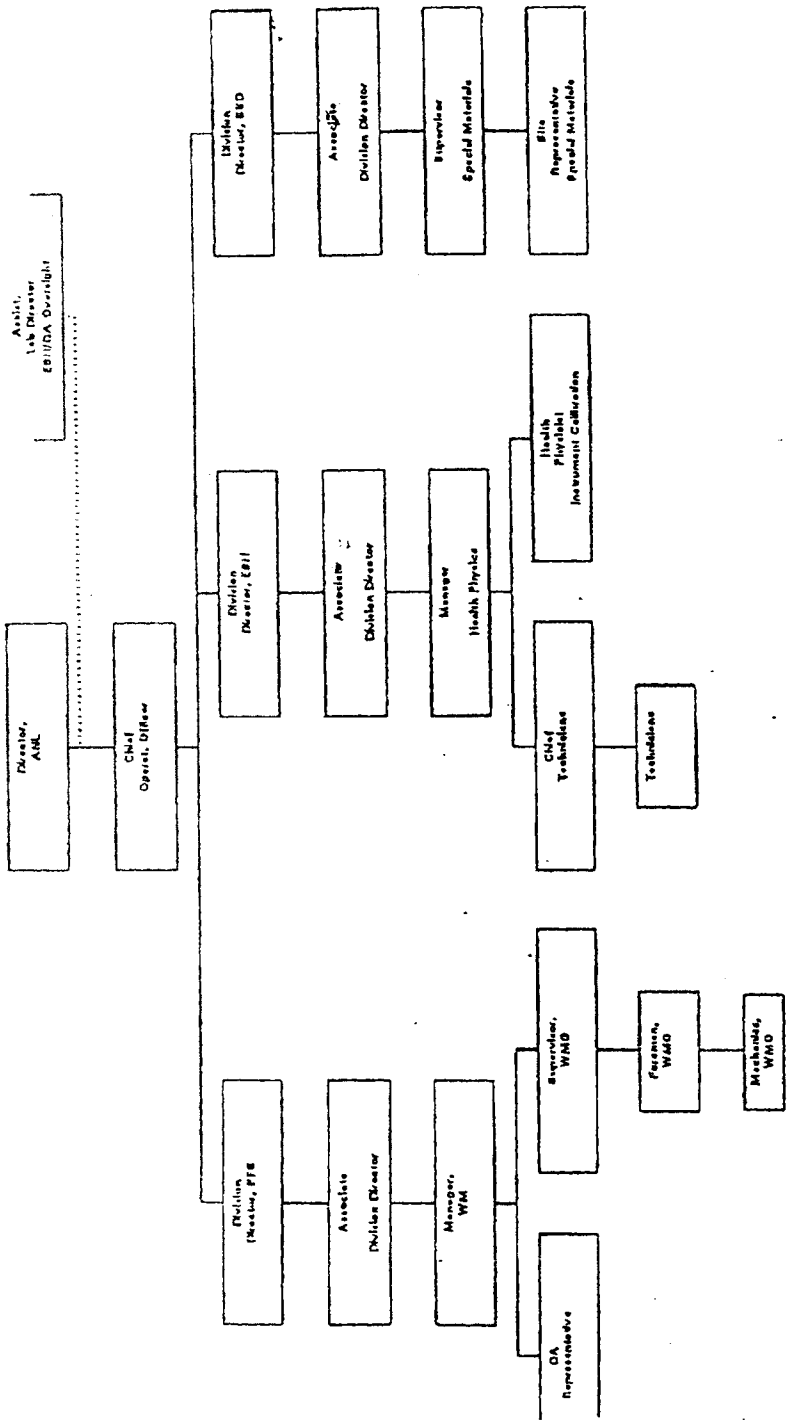
Foremen (WM)

Mechanics (WM)

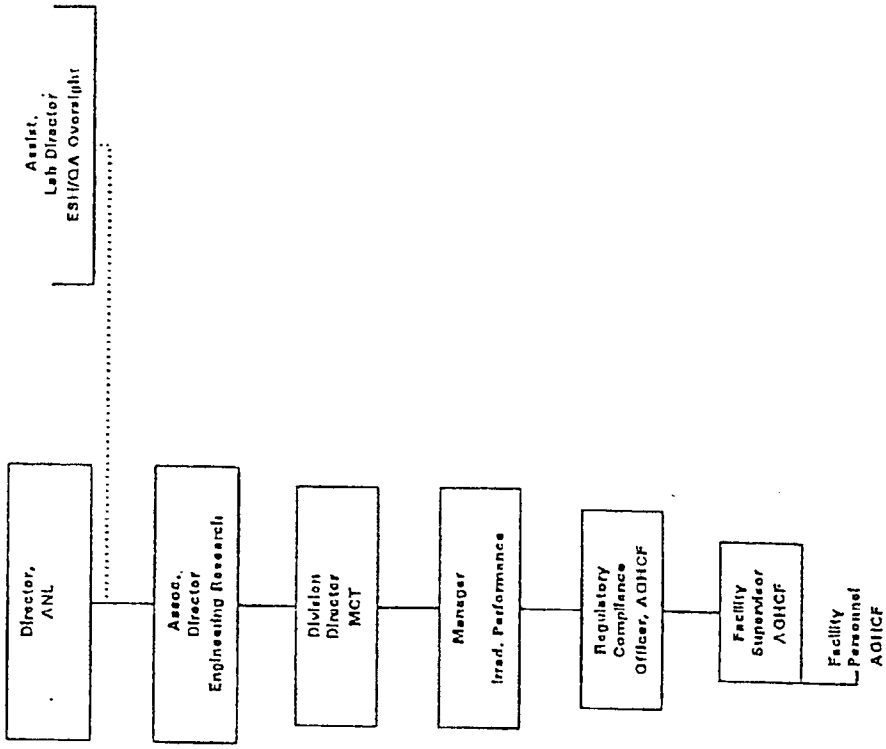
Director Support Services Division (SSD)

Supervisor Special Materials (SPM)

2.2 TRU Waste Management



2.3 TRU Waste Generation



3.0 DATA COLLECTION AND ARCHIVING

3.1 **Data Collection and Archiving.** Data collection and archiving are divided into four categories as shown in 3.2 through 3.5 below.

The Plant Facilities and Services Division, Waste Management Department QA Representative is responsible for maintaining procurement records for waste-package containers.

The AGHCF Facility Supervisor is responsible for maintaining procedures used to process the waste, calibration records for the weighing scale, and documentation on waste packages and waste package constituents.

The Occupational Health and Safety Division, Health Physics (OHS/HP) is responsible for maintaining the Health Physics computerized instrument-calibration file.

The Plant Facilities and Services Division, Waste Management Operations (PFS/WMO) Supervisor is responsible for maintaining the Radioactive Waste Disposal Requisitions and supplemental information and the waste shipment records.

3.2 **Waste Processing and Waste Packaging.** Waste processing and packaging data are collected and maintained by the AGHCF Facility Supervisor, and includes:

1. Completed waste processing and packaging procedures.

2. Waste-package contents documentation (includes accounting assay information on fissile materials).

3.3 **Radiation Survey Instrumentation Calibrations.** Calibration labels showing the calibration date and the date of the next calibration are affixed to each portable beta-gamma survey instrument. The non-portable alpha-beta survey instruments used for detecting removable activity are calibrated at the beginning of each work day using alpha and beta NIST traceable sources. The results are recorded by the ESH-HP technician who performed the check. The portable beta-gamma radiation survey instruments are calibrated at a minimum of every six months using sources directly traceable to the National Institute of Standards and Technology. The ESH-Dosimetry and Analytical Group personnel are responsible for instrument calibration and maintaining the calibration data.

3.4 **Weight Scale Calibration.** A calibration label showing the calibration date is affixed to the scale used to weigh the TRU-RH waste packages. The scale is calibrated at least annually using weights of known values. The calibration results are recorded on a data form traceable to the scale. The calibration record is maintained by the AGHCF Supervisor. Prior to usage, the accuracy of the scale is checked against a known weight.

3.5 **Waste Package and Shipping Documentation.** Waste package and shipping data which are collected and maintained by the PFS/WMO Supervisor include the following:

1. Waste Disposal Requisitions and supplemental information submitted by the waste generator. Supplemental information includes data sheets used for the radiation survey results, weight of package, package identification number, and a copy of the sign-off sheet for accountable materials completed by a site representative from the SSD-Special Materials (SSD-SPM) group.

2. Shipping documentation.
3. Waste-package certification statements.
4. Correspondence about waste and waste shipments.

4.0 DESCRIPTION OF CONTAINER AND COMPONENTS

4.1 **Description of Primary Container.** DOT specification 17H, 30-gallon drums are used as the container for TRU-RH wastes. Only 30-gallon drums having the markings as specified by 49 CFR 178.118-10 will be used by ANL-IL as TRU-RH waste containers. The lid gasket for the drums will meet the requirements of AEC Drawing P-14135. The TRU-RH Waste Packages are handled using a vacuum-lift device. Note: ANL-IL does not plan to canisterize the drums and intends to continue shipping the drum packages to an interim storage site for canisterization.

4.2 **Description of Package Components.** TRU-RH waste-drum packages have three alpha barriers. Internal metal waste cans are used to contain the waste, e.g., 7.5-gallon steel cans. These cans are lock ring closed and are bagged out of the facility. The metal cans provide an alpha shield between the wastes and the rest of the package. However, credit is not taken for the alpha barrier because the external surfaces of these cans are contaminated. These cans are closed and placed in an open top fiber drum in a nitrogen atmosphere.

The first alpha barrier is provided by a heat-sealed, .02-inch-thick polyvinylchloride (PVC) bag that is placed over the waste cans and fiber drum. The bagged cans are inserted into a 1/10-inch-thick polyethylene drum liner, and a 1/16-inch-thick polyethylene disc is installed on top of the liner. The drum liner, disc, fiber drum and the bagged-out, metal cans serve as puncture guards in the event the waste package is subjected to rough handling. This PVC bag is sealed in a nitrogen atmosphere.

The second barrier is provided by another .02-inch-thick PVC bag placed on the outside of the drum liner and disc, and is sealed in an air atmosphere. The bags contain vents.

The third barrier is provided by the DOT 17H drum, which is gasketed vented, and draw-bolted characteristic of DOT 17H drums. A serial-numbered tamper seal is spot welded across the drum's lock ring. The number on this seal corresponds with the high visibility serial number stenciled on the sides and top of the drum.

4.3 CONTAINMENT OF WASTES IN A NITROGEN ATMOSPHERE.

The AGHCF has a nitrogen atmosphere which contains less than 1% oxygen. The waste cans and the first bag-out bag have this same oxygen-free atmosphere since they are sealed within the AGHCF atmosphere.

Wastes are placed into cans which are closed inside of the AGHCF. A fiber drum is placed inside of the bag and the bag is attached to the bag-out port. The waste cans are passed through the port into the bag and the bag is heat-sealed closed above the fiber drum. See Items 1 and 2 in Figure 1.

TRU-RH package components are shown in Figure 1.

Figure 1 TRU-RH PACKAGE COMPONENTS

4.4 DESCRIPTION OF FIGURE 1 TRU-RH WASTE PACKAGE COMPONENTS

Item 1. Two 22-gauge steel waste cans with lock-ring latch cover clamp. These cans contain the TRU-RH waste and are transferred out of the facility through a bag-out waste chute into the Item 2 pouch. The cans are closed in a nitrogen atmosphere. Item 2 is sealed to the outside of the waste chute using a pouch-out procedure that prevents the outside of Item 2 from becoming contaminated during the transfer.

Item 2. The first .02-inch thick polyvinylchloride (PVC) vented pouch that is dielectrically heat sealed after Item 1 is inserted. The fiber drum is used to prevent collapse of the pouch when cans are inserted and also serves as a package puncture guard. This pouch is sealed in a nitrogen atmosphere.

Item 3. Polyethylene 1/10-inch-thick drum liner with the second .02-inch-thick PVC vented pouch over the outside.

Item 4. Puncture guard 1/16-inch-thick polyethylene disc. This disc is placed on top of the Item 2 pouch prior to dielectrically heat sealing the Item 3 pouch.

Item 5. DOT 17H, 30-gallon steel drum and cover. The drum cover has a styrene butadiene tubular o-ring gasket. The drum cover is sealed to the drum by the gasket and a steel, bolted lock-ring. The lock-ring bolt is torqued to 40 foot pounds and, after final closure, is provided with a serial-numbered tamper seal that is tack welded across the lock-ring lugs. The serial number corresponds to the high visibility serial number stenciled on the sides and top of the drum.

5.0 WASTE GENERATION AND TREATMENT

5.1 Description of TRU-RH Waste Generation. The Alpha-Gamma Hot Cell Facility (AGHCF) is used for destructive examination of irradiated fuel elements and fuel-element clusters which may involve cutting into--and through--irradiated fuel to obtain specimens of the materials to be examined. This is followed by extensive grinding and polishing of the specimens to prepare them for microscopic and electron-beam instrument examinations.

Note: The use of the term "scrap" in the following sections is for recoverable fuel-bearing materials that are placed into special canisters for storage and are not considered waste. Scrap is placed into recoverable fissile material storage at the ANL, Idaho site (ANL-ID).

All TRU waste and scrap originating in the AGHCF will be sorted in accordance with the procedure titled "AGHCF Waste and Scrap Sorting Procedure" to ensure that scrap is removed and that the only materials packaged as TRU-RH waste will be those that meet the waste-form requirements as specified in WIPP-DOE-069 and WIPP-DOE-158.

Scrap plus the examined specimens and the remaining fuel elements and fuel-element clusters are salvaged and packaged into pipe containers which are sent to ANL, Idaho (ANL-ID), where they are maintained in recoverable fissile material storage.

The remaining debris is normally packaged as TRU-RH waste. Waste-drum packages have a maximum gross weight of 200 pounds and typically contain less than 10 grams of fissile materials. The surface radiation levels of the packages do not exceed 30 rem/h and are usually in the range of 1 to 15 rem/h.

Other than sorting and packaging, the TRU-RH wastes generated by the AGHCF do not usually require further treatments.

5.2 **List of Certifiable and Non-Certifiable Waste Forms.** The wastes are certifiable, or will be made certifiable, using ANL-approved treatment procedures; thus, there are no identified non-certifiable waste forms.

5.2.1 If materials are found that do not meet the waste-form requirements of the WIPP-WAC during the sorting process, the materials will be segregated and will either be packaged as recoverable scrap, if appropriate, or they will be treated to conform to waste forms meeting the WIPP-WAC using treatment procedures prepared by the AGHCF Supervisor and reviewed and approved by the PFS/WM Manager.

6.0 SPECIFIC CERTIFICATION PROCEDURES

6.1 **Introduction.** This section of the TRU-RH Certification Plan describes the methodology that is used to certify the waste and references ANL operational procedures or data forms (either by specific numbers or names) that are used to accomplish waste certification and the criteria to be satisfied (by the criteria number used in WIPP-WAC-158).

ANL-IL does not plan to canisterize the 30-gallon drum packages and intends to continue shipping the packages to an interim storage site for canisterization. ANL-IL will certify that the waste meets all of the WIPP-WAC to enable the shipped drums to be canisterized by the interim storage site without further processing.

6.2 **Waste Container Requirements (WAC-3.1 through 3.3).** TRU-RH waste must be packaged in canisters in order to meet the waste container requirements as specified by WAC-3.1, 3.2, and 3.3. As stated in 6.1, ANL-IL plans to ship the drums to a DOE interim storage site where the drums will be canisterized. With the exception of canisterization, ANL-IL will certify that the WIPP-WAC criteria have been met and the drums can be canisterized without additional processing. The following information is provided to show that the drum packages are durable and can be safely handled using a vacuum lift.

6.2.1 Test of the Double Alpha Containment Design for a Drum Package. A drum package design was tested (Appendix A of reference 1.1.10) for double-alpha containment if abusively handled. The package was found to pass the design requirements after being dropped onto its bottom edge from a height of 10 feet onto a concrete floor and then rolled off of a 3-1/2 ft. high loading dock onto a concrete

driveway. This test demonstrated that the drum will contain the waste and provide at least two alpha barriers during abusive handling.

6.2.1.1 The tested package had the same three levels of alpha containment as the TRU-RH Waste Package described in Section 4.2 and had a gross weight of 230 pounds (a normal TRU-RH Waste Package has a gross weight limit of 200 pounds). Lead bricks and glass quart-size jars full of water were placed in each of the metal cans.

6.2.2 As prescribed by 49 CFR.178-13, each drum stamped DOT 17H by the manufacturer must have passed a 7-psig pressure-leak test for five minutes. The 30-gallon drums have nominal outside dimensions of 19 inches in diameter by 29-inches high. Labeling will be performed using stencils and an enamel spray paint such as Krylon.

6.2.2.1 The 30-gallon drums can be safely lifted using a vacuum-lift with a 12 inch suction plate and a crane hoist. This has been successfully demonstrated at both ANL-IL and the Radioactive Waste Management Complex located at the INEL in Idaho during the handling of over 400, ANL TRU-RH drum-packages. Additionally, it has been documented in reference 1.1.10 that the vacuum lift can safely suspend a 30-gallon DOT 17H drum having a gross weight of 1000 pounds for five minutes after the power to the vacuum lift is shut off.

6.3 **Waste Form Requirements (WAC-4.1 through 4.5).** TRU-RH wastes generated in the AGHCF will meet the waste-form requirements as specified by WIPP-DOE-158, criteria 4.1 through 4.5.

Before any waste and scrap materials are removed from the AGHCF, all materials and items are sorted using Procedure For Sorting Remote-Handled Tru Waste (AGHCF-Sort Rev. 0) to segregate prohibited waste forms identified by the WIPP-WAC from the materials to be packaged as waste, and logged on Waste Can Inventory Sheets.

Sorting is performed only by qualified personnel (recorded training and experience) familiar with the materials that are used in the AGHCF, the physical appearance of accountable materials, the prohibited waste forms and their appearances, and the waste documentation requirements. A second individual will physically verify that the waste meets the WIPP-WAC.

As required by the sorting procedure, a check list is used during the sorting process which identifies the prohibited waste forms and the segregation requirements. Prohibited waste forms are segregated into identified containers and are either treated to conform to the WIPP-WAC or packaged as recoverable scrap. Treatment of waste forms to meet the applicable WIPP-WAC are performed using treatment procedures that have been approved by the AGHCF supervisor.

Waste-package documentation for each waste package is required to be completed by the waste generator and submitted to the PFS/WMO Supervisor for review and approval prior to the waste being accepted by PFS/WM. The documentation includes a Solid Radioactive Waste Disposal Requisition (PFS-195) and a Supplemental Sheet (PFS-196) which is a continuation of the PFS-195. The PFS-195 is

required to be signed by the ANL-IL waste generator and submitted to the PFS/WMO Supervisor. The PFS/WMO Supervisor reviews the documentation to ensure that the wastes are certifiable and approves the documentation prior to the waste being accepted by PFS/WMO. The PFS-195 and PFS-196 data forms have four columns that are used to document the waste forms in packages. One column is used for each waste package. The PFS-195 has questions on the waste constituents in the package that must be answered either yes or no. Any yes questions must be answered in the appropriate column on the PFS-196 form. These questions pertain to: (1) the amount of fines below 10 microns and 200 microns, (2) liquids or absorbed liquids, (3) pyrophorics, (4) pressurized vessels, (5) mixed wastes, (6) corrosives, and (7) special hazards. The PFS-195 is also used to provide the radionuclides and amounts in each waste package. The PFS-196 is used to: (1) provide a generic description on the contents of the package, (2) list accountable isotopes and amounts, and (3) explain any yes answers to the questions on the PFS-195.

6.4 **Immobilization (WAC-4.1).** Radioactive grindings and glovebox sweepings, (particulate waste), etc., of any appreciable quantity will be detected during the performance of the sorting procedure titled "AGHCF Waste and Scrap Sorting Procedure." Detected particulates will be collected and placed into identified small cans. Depending upon the activity of the particulates, they will either be placed into recoverable scrap or will be immobilized in epoxy resins. Ten years of operational experience has shown that TRU waste generated in the AGHCF that could be classified as particulate waste from grinding, sawing, etc., is extremely radioactive due to the fuel cladding and recoverable fuel content in the particulates. Particulates have therefore been collected and packaged as recoverable scrap--not as TRU-RH waste. Experience has also shown that because the activity of the fuel cladding is

high, particulate waste is easily detected using radiation survey instruments. Even an amount less than 1% of the weight of the waste will produce a gamma radioactivity of greater than 30 R/h. Due to the accountability requirements for fissile materials, the operational policy of the AGHCF requires that any TRU-RH waste package that exceeds 30 R/h be opened and the contents resorted to locate and remove the high activity materials.

6.4.1 When the segregated radioactive particulate waste is not packaged as recoverable scrap, the particulates in the can will either be (1) immobilized using approved treatment procedures, or (2) sealed and packaged as part of the waste matrix provided they weigh less than 0.6 pound. The 0.6 pound is conservative and based upon one-weight-percent of a waste-matrix that has a minimum gross weight of 60 pounds.

6.5 **Liquid Wastes (WAC-4.2).** Free liquid wastes will be detected during the sorting procedure titled "AGHCF Waste and Scrap Sorting Procedure." Any free liquids detected will either be evaporated, or solidified in cement using procedures approved by the AGHCF supervisor and reviewed by the PFS/WM Manager. The use of liquids in the AGHCF is limited.

6.6 **Pyrophoric Materials (WAC-4.3).** Pyrophoric materials greater than 1% of the waste matrix are not a common waste product in the AGHCF. Some of the fuel cladding is zircaloy which is pyrophoric under certain conditions. However, this cladding would be in gram amounts (much less than 1%) as particulate waste described in Section 6.4. Note: cladding materials are extremely radioactive and are easily detected using radiation-survey instruments. Even an amount less than 1% of the weight of the waste will produce a gamma radioactivity of greater than 30 R/h. Due to the accountability requirements for fissile materials, the operational

policy of the AGHCF requires that any TRU-RH waste package that exceeds 30 R/h be opened and the contents resorted to locate and remove the high activity materials.

6.7 **Explosives and Compressed Gases (WAC-4.4).** Explosive materials and compressed gases are not a common waste product in the AGHCF. Compressed-gas containers would be detected during the performance of the sorting procedure titled "AGHCF Waste and Scrap Sorting Procedure." Any compressed gas container found will be punctured or the valve will be removed. Explosive items, or materials which include explosive chemical compounds, are prohibited in the facility.The lid gaskets on the drum-packages are made of styrene-butadiene. Test results provided, in reference 1.1.11 (drum D31703), show that with combustible materials contaminated with 32.4 grams of Pu-239, styrene-butadiene gaskets will: (1) vent gases produced from radiolytic decomposition, and (2) prevent drums from being pressurized to greater than 7 psig. The AGHCF drums containing combustible wastes will not exceed 25 grams of Pu-239, or the equivalent alpha curies. Gas generation from bacterial action is not a factor because the wastes are sealed in a 99% nitrogen atmosphere having a dew point of -45° C.

6.8 **Radioactive Mixed Waste (WAC 4.5).**

6.8.1 Hazardous chemicals listed in 40 CFR 261, Subparts C and D that exist as co-contaminants with transuranics will be listed and quantified. Hazardous chemicals that are not radioactive will not be placed into TRU waste packages. Note: Chemicals listed in Subpart D are not normally used in the facility that produces TRU-RH wastes. Methods used to quantify hazardous materials are found in SW-846, "Test Methods for the Evaluating of Solid Waste," USEPA, November 1986, 3rd Revision. See Reference 1.1.12

6.8.2 Liquids will be detected during the sorting procedure titled "AGHCF Waste and Scrap Sorting Procedure" and will either be evaporated or solidified in cement. Corrosive liquids will be treated to be made noncorrosive prior to solidification. In addition, the waste is contained inside a 1/10-inch-thick polyethylene drum liner.

6.8.3 Sodium is removed during decladding and made nonreactive using alcohol. The alcohol is then absorbed and evaporated.

6.9 **Waste Package Weight (WAC-5.1).** TRU-RH waste-drum packages will have a maximum gross weight of 200 pounds.

6.9.1 Each waste package is assigned a unique identification number. After the drum is sealed, it is weighed and the weight is logged on the PFS-195 data form. The scale is calibrated at least annually and this is documented for audit. Prior to PFS/WM accepting the packages for interim storage in the shielded vaults, the PFS-195 data form is reviewed and approved by the PFS/WMO Supervisor. The review includes checking that the gross weight of the package does not exceed a gross weight of 200 pounds. Waste packages are not picked up by PFS/WM and placed into interim storage until the documentation has been reviewed and approved.

6.10 **Nuclear Criticality (WAC-5.2).** The 30-gallon TRU-RH Waste packages will not exceed the Pu-239 fissile equivalent of 100 grams.

6.10.1 TRU-RH Waste Packages will normally contain less than ten grams of the fissile materials Pu-239 and U-235. Recoverable fuel-bearing scrap, examined specimens, and the remaining fuel elements and fuel-element clusters are packaged as recoverable materials and are placed into recoverable fissile material storage at ANL-ID.

6.10.2 The amount of fissile material that is contained in the TRU-RH waste is determined by accountability records. Documentation shows the amount, location, and dimensions of the fissile material in each of the fuel elements and fuel-element clusters taken into the AGHCF for examination. From this documentation, and from the known amounts of materials that are removed to prepare the samples, calculations are performed to determine how much fissile material was removed, how much was placed into recoverable containers, and how much was packaged as TRU-RH waste.

A gamma activity method is used as a cursory check for the calculation made for fissile materials. Cesium-137, a gamma emitter having a half-life of 30 years, is the major long half-life fission product in irradiated fuel. The fission yield of cesium-137 inuranium-235 and plutonium-239 is known and therefore the amount of uranium-235 and plutonium-239 in older reactor fuel can be roughly determined by the amount of gamma activity emitted. Gamma measurements taken on 10-year old reactor fuel with known amounts of Pu-239 and U-235 have disclosed that the amount of Pu-239 and U-235 can be approximated from the amount of gamma activity. It was found that each 325 mr/h at one foot equals approximately one gram of fissile material. Newer reactor fuel using the gamma activity method would show higher amounts of fissile material since other fission products would be involved and the amount of Cesium would be more.

6.10.3 The fissile materials and amounts in a waste package are documented on the Solid Radioactive Waste Disposal Requisition (PFS-195).

The PFS-195 is submitted to the PFS/WMO Supervisor as part of the package documentation. Prior to accepting the packages for interim storage in the shielded vaults, the package documentation is reviewed and approved by the PFS/WMO Supervisor. The review includes checking that the amount of fissile materials in terms of Pu-239 equivalency does not exceed 100 grams. Waste packages are not picked up by PFS/WMO and placed into interim storage until the documentation is approved.

6.11 **Pu-239 Equivalent Activity - PE-Ci (WAC-5.3).** TRU-RH Waste packages from the AGHCF will contain less than 10 PE-Ci. This is based on the TRU radionuclides being Pu-239 containing 10% by weight of Pu-240, and the amount of Pu-239 in a package being limited to 100 grams. Therefore, 100 grams of Pu-239 (6.21 curies) + 10 grams of Pu-240 (2.26 curies) = 8.47 curies.

A typical TRU-RH waste package contains a maximum of approximately ten grams of Pu-239 and one gram of Pu-240 (less than one PE-Ci). TRU radionuclides and amounts in each package are documented on the PFS-195 Solid Radioactive Waste Disposal Requisition. The PFS-195 is submitted to the PFS/WMO Supervisor as part of the package documentation. Prior to accepting the packages for interim storage in the shielded vaults, the package documentation is reviewed and approved by the PFS/WMO Supervisor. The review includes checking that the sum of fissile materials in terms of fissile Pu-239 equivalency does not exceed 100 grams. Waste packages are not picked up by PFS/WMO and placed into interim storage until the documentation is approved.

6.12 **Surface Dose Rate (WAC-5.4).** The TRU-RH Waste Packages will not exceed a maximum surface dose rate of 30 rem/h and the contribution by neutrons will be less than 20 mrem/h.

6.12.1 Each waste package is assigned a unique identification number. After the drum (TRU waste package) is sealed, a radiation survey is made of the drum and the results are documented on a TRU-RH Waste Package Radiation Survey form. The survey form is used to record the unique identification number of the drum, the neutron survey results, the radiation beta-gamma survey results at direct contact (at three locations on the sides, and over the top and bottom), at various distances from the sides, and alpha-beta-gamma smear results for removable surface contamination. The data form is also used to record the names and serial numbers of instruments used to make the survey and the date they were last calibrated, the date of the survey, and the signature of the ESH-HP technician who performed the survey, etc.

The radiation-data form is submitted to the PFS/WMO Supervisor as part of the package documentation. Prior to accepting the packages for interim storage in the shielded vaults, the package documentation is reviewed and approved by the PFS/WMO Supervisor. The review includes checking that direct gamma activity of the packages is less than 30 rem/h. Waste packages are not picked up by PFS/WMO and placed into interim storage until the documentation is approved.

6.13 **Surface Contamination (WAC-5.5).** TRU-RH waste packages will meet this criteria since the external surface of each package is surveyed for removable alpha, beta, and gamma contamination and any

detectable contamination is removed. Detectable contamination is determined using the equation for calculating Minimum Levels of Detectability (MLD) found in EPA 520/1-80-012 "Reporting of Environmental Radiation Data" by Colle et. al. 1980. The equation used is:

$$\text{MLD (pCi)} = \frac{4.66 \text{ background counting rate/count rate}}{2.22 \text{ (Counter efficiency)}}$$

6.13.1 Routine ESH-HP procedures require that any detectable contamination found on the exterior of a waste package be removed. If contamination is found, it is removed by the waste generator and resurveys are made by the ESH-HP technician until the contamination is removed. If a package cannot be decontaminated to below detectable levels, the waste will be repacked into new drums which will be surveyed as above.

6.13.2 The final results of the survey for loose activity is recorded on the TRU-RH Waste Package Radiation Survey form. The survey form is used to record the unique identification number of the drum, the neuton survey results, the radiation beta-gamma survey results at direct contact (at three locations on the sides, and over the top and bottom), at various distances from the sides, and alpha-beta-gamma smear results for removable surface contamination. The data form is also used to record the names and serial numbers of instruments used to make the survey and the date they were last calibrated, the date of the survey, and the signature of the ESH-HP technician who performed the survey.

The radiation survey form is submitted to the PFS/WMO Supervisor as part of the package documentation. Prior to accepting the packages for interim storage in the shielded vaults, the package

documentation is reviewed and approved by the PFS/WMO Supervisor. The review includes checking that removable activity for alpha is less than 100 dpm/100 cm^2 (50 picocuries/100 cm^2) and the removable activity for beta-gamma is less than 1000 dpm/100 cm^2 (450 picocuries per 100 cm^2). Waste packages are not picked up by PFS/WMO and placed into interim storage until the documentation is approved.

6.14 **Thermal Power (WAC-5.6).** Thermal power will be calculated and reported in the waste package shipment documentation. The major alpha-producing wastes will be Pu-239 and Pu-240 and the composite of these alpha wastes is typically in amounts below 10 grams and always below 110 grams (less than one watt). Gamma heat produced by the mixed fission products (maximum of 5 curies) is less than .03 watts.

6.14.1 The PFS-195 is used by the waste generator to list the major radionuclides and amounts of each (up to four radionuclides and amounts can be listed). The waste generator determines the radionuclides and amounts from calculation by knowing the amount of material (fuel) that was removed from the fuel elements and fuel-element clusters and the amount of the material that was placed into the waste package. Pu-239 and Pu-240 are the only significant TRU radionuclides in the fuel; Pu-240 is calculated to be 10% of the Pu-239 amount. Fission products associated with irradiated reactor fuel are beta/gamma emitters and are normally listed on the PFS-195 by radionuclide and amount in grams or curies. The amount of fission products are determined by the gamma activity through the side of a package at a distance of one foot and are then converted into curies having a decay energy of one Mev

(million electron volts) using the formula R = 6CE. Where: R = Roentgen at 1 foot, C = Curies, and E = Energy in Mev per disintegration or when the Roentgen is known and the Curies are to be found: C = R/6E.

6.14.2 PFS-195 is submitted to the PFS/WMO Supervisor as part of the waste package documentation. Prior to accepting the waste packages for interim storage in the shielded vaults, the documentation is reviewed and approved by the PFS/WMO Supervisor. The review includes checking that the sum of fissile materials in terms of Pu-239 equivalency does not exceed 100 grams. Waste packages are not picked up by PFS/WMO and placed into interim storage if the Pu-239 fissile gram equivalency exceeds 100.

6.15 **Gas Generation (WAC-5.7).** Although this criteria is applicable to TRU-RH waste canisters, the following information is supplied to satisfy requirement (ii) in the Certificate of Compliance for NRC licensed shipment casks regarding radiolytically generated combustible gas.

The TRU waste in a drum package (secondary container) is sealed inside of two metal cans that are heat sealed inside a .02-inch-thick polyvinylchloride (PVC) bag. The cans and bag are sealed within the nitrogen atmosphere of the AFHCF which contains less that 1% oxygen. A second .02-inch-thick PVC is sealed around the inner bag which provides additional assurance that the nitrogen atmosphere in the cans is not displaced with greater than 5% oxygen. The metal cans also serve as an alpha shield between the waste and the two PVC bags and other package components.

6.16 Labeling (WAC-5.8). Each waste package will be uniquely identified by an identification number. Since ANL-IL plans to ship the drum packages to an off-site canisterization facility or interim storage site, the waste packages will be identified by a unique number specified by that facility.

6.16.1 A data file on TRU-RH packages will be maintained by the waste generator and will be referred to when identification numbers are assigned to waste packages to assure that the numbers are kept unique.

6.16.2 The waste package identifier will be stenciled on the drum package as specified by the offsite canisterization facility or interim storage site.

6.17 Data Package/Certification (WAC-5.9). The TRU-RH waste package documentation submitted to the PFS/WMO Supervisor will be reviewed by PFS/WMO to ensure that the supplied information is complete and adequate for determining that the packages meet the criteria as specified in WIPP-DOE-158 and the requirements of this plan. The waste reviewer will be the PFS/WMO Supervisor, who will review the waste documentation prior to accepting the wastes for placement into the PFS/WMO shielded, interim-storage facility.

6.17.1 The documentation reviewed will include the Solid Radioactive Waste Disposal Requisition (PFS-195), its supplemental sheet (PFS-196); the Waste Package Radiation Survey data sheet, the Waste Package supplemental data sheet, and a copy of the Special Materials sign-off sheet (SPM-23).

This documentation when reviewed and approved will be adequate to

certify that the waste in the packages meets the requirement of the WIPP-WAC. The package containers will be 30-gallon DOT 17H drums that will be labeled as stated in 6.16.

6.17.2 The certification statement will be signed by the PFS/WMO Supervisor.

Attachment 2 - CCP Records Transmittal/Receiving Form

CCP Central Records/Records Custodian, 4021 National Parks Highway - MS: GSA 203, Carlsbad, New Mexico 88220

Telephone Number: 505-234-7523, 505-234-7233, 505-234-7617
Fax Number: 505-234-7014

☒ Original Record
☐ Fax Record
☐ Electronic Record

Attn:	Records Custodian	From:	Kevin Peters
Ship to:	CCP Central Records/ CCP Records Custodian	Site:	Argonne National Laboratory-East RH-TRU Waste
	4021 National Parks Highway - MS GSA 203	Company:	Technical Specialists, LLC
	Carlsbad, NM 88220	Telephone Number:	303-980-0543
		Date Sent:	3-24-06
Telephone Number:	505-234-7523		

Document Number	Title/Description	Record Date	Total Pages
P009	Attachment 3 - Acceptable Knowledge Source Document Summary for CCP-AK-INL-500 and CCP-AK-ANLE-500	3/22/2006	5
	TRU-RH Waste Certification Plan for Waste Management Operations		70
	N/A		

Comments
None

Acceptance/Rejection Signature and Date

Records Accepted ☒ Christal Ingram (Signature) C. Ingram (Printed Name) 5-1-06 (Date)

Records Rejected ☐ _____ Signature _____ Printed Name _____ Date

Reason for Rejection: _____

Re-submittal: _____ Signature _____ Printed Name _____ Date

P.01

TRANSACTION REPORT

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FOR: CCP RECORDS 15052347014

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Fax Number: 505-234-7014

☒ Original Record
☐ Fax Record
☐ Electronic Record

Attn:	Records Custodian	From:	Kevin Peters
Ship to:	CCP Central Records/ CCP Records Custodian	Site:	Argonne National Laboratory-East RH-TRU Waste
	4021 National Parks Highway - MS GSA 203	Company:	Technical Specialists, LLC
	Carlsbad, NM 88220	Telephone Number:	303-980-0543
		Date Sent:	3-24-06
Telephone Number:	505-234-7523		

Document Number	Title/Description	Record Date	Total Pages
P009	Attachment 3 - Acceptable Knowledge Source Document Summary for CCP-AK-INL-500 and CCP-AK-ANLE-500	3/22/2006	5
	TRU-RH Waste Certification Plan for Waste Management Operations		70
	N/A		

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Attachment 3 - Acceptable Knowledge Source Document Summary

Waste Stream Number(s): AERHDM, ID-ANLE-S5000

Site(s): Idaho National Laboratory	**Source Document Tracking Number: P055**
Acceptable Knowledge Documentation Type: ☑ TRU Waste Management Program Information ☑ Waste Stream-Specific Information ☑ Supplemental Information	**Category:** ☐ C - Correspondence ☐ D - Discrepancy Resolution ☑ P - Published Documents ☐ U - Unpublished Documents

Title of Source Document: Waste Handling Procedures

Source Document Reference Information (author(s), document and revision number, date, publisher): C. L. Cheever, Manager, Waste Management Operations, n/a, n/a, 9/18/1986

AK # [a]	Source Doc. Page # [b]	AK Information Summary
WS11, S2	Section IA	TRU waste is contaminated with alpha-emitting transuranic radionuclides (U-233 and radionuclides with atomic numbers of 93 and above) with half-life greater than 20 years and in concentrations greater than 100 nCi/g (1E-7 Ci/g). The PFS-WMO will determine if a waste receptacle that contains TRU nuclides be packaged as TRU or non-TRU. RH-TRU are packaged so that dose rate at the surface is > 200mrem/h but not > 30 rem/h.
S16	Section IB 1.3.2	TRU waste is to be contained inside rigid receptacles of sufficient integrity that they remain sealed during handling and transport. TRU waste will be confined inside a metal 5-gallon paint can (PC-5) meeting DOT 37A-60 specifications or in a 30- or 55-gallon drum meeting DOT 17C or 17H specifications. PFS-WMO must approve any alternative containment prior to use.
PR8, S16	3.1	TRU packing requirements are specified in WIPP-DOE-069, WIPP-DOE-114, and WIPP-DOE-158, and the ANL-IL TRU waste Certification Plans. RH-TRU packaging will be performed by PFS-WMO personnel.
S16	5.1	TRU waste must be segregated from non-TRU and sorted into combustible and noncombustible before placing into receptacles. TRU waste exceeding 200 mrem/h at the surface requires shielding to meet the requirements or be packaged as RH. The only approved TRU-RH waste packaging is used at the AGHCF located in Building 212. The segregation and sorting requirements are specific responsibility of the Waste Generator; OHS-HP will visually verify adherence to sorting to the extent practicable as the receptacles are sealed. PFS-WMO will maintain the segregation in bin packaging. Waste marked TRU by the Waste Generator will be classified as non-TRU by PFS-WMO if it is determined that the TRU Ci content is < 100 nCi/g.
PR8	Section 1D--2.0 through 2.5	TRU waste are shipped offsite to DOE storage and disposal facilities. Waste must meet facility WAC. TRU waste packages are placed in interim storage for subsequent shipment to WIPP. Packages must be certified as meeting WIPP-WAC. TRU WAC--Immobilize powders, ashes, and similar particulates. No liquid TRU. TRU will contain no explosives or compressed gases. TRU waste will contain no chemical waste, unless it exists as a co-contaminant with transuranics. TRU contaminated corrosive materials shall be neutralized, rendered noncorrosive, or packaged in a manner to ensure container adequacy. Waste Generator will identify the presence and amounts of any hazardous materials.
PR8, WS12	2.6 through 2.7.5	RWMC TRU requirements.--Radioactive waste containing biological, pathogenic, or infectious material shall be treated to prevent bacterial action or formation of free liquids. Toxins shall be

Attachment 3 - Acceptable Knowledge Source Document Summary (continued)

Site(s): Idaho National Laboratory			Source Document Tracking Number: P055
AK # [a]	Source Doc. Page # [b]	AK Information Summary	
		neutralized. Chelating organic material shall be treated to eliminate interaction with radionuclides. Combinations of spontaneous combustible materials shall not be placed in same container. Free liquids are prohibited. Shall not mix with TRU waste: lead, radioactive sources, gas cylinders, large stainless or carbon steel objects.	
PR4	Appendix A	Radioactive Waste Disposal Requisition Forms (PFS-195, PFS-196, and PFS-199) with instructions for their completion.	
WS12	Appendix B	EPA Hazardous Wastes	
		Keywords: TRU, packing specifications, combustibles, noncombustibles, AGHCF, WIPP-WAC, powders, liquids, explosives, gases, corrosives, hazardous materials, biological agents, chelating materials, lead, PFS-195, PFS-196, PFS-199	

Source Document Data Limitations (if any):

1. General ANL waste management procedure, not AGHCF specific.

Acceptable Knowlege Expert:

D. B. Becker for K. Peters / DBBecker Date: 3/22/2006
Print /Sign

[a] Obtain from Acceptable Knowledge Documentation Checklist
[b] For microfilm or microfiche, identify box, tape, reel number and location.

P055

WASTE HANDLING PROCEDURES

ARGONNE NATIONAL LABORATORY
ARGONNE, ILLINOIS SITE

SEPTEMBER 18, 1986

PREPARED BY: C. L. CHEEVER
MANAGER, WASTE MANAGEMENT OPERATIONS

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ACKNOWLEDGEMENTS

Acknowledgement is made for input by Ralph Ditch and Larry Boing (PFS-WMO); for previous work on the manual done by William Kline (PFS-WMO); preparation for printing by Marilyn Suffern and Janet Bormet, and for comments by reviewers.

REFERENCE MANUALS AND PUBLICATIONS

The following list of manuals and publications are applicable to various phases of waste handling and should be referred to in connection with these procedures as the need arises.

1. ANL Policy Manual

2. ANL-E Health and Safety Manual

3. ANL Special Materials Users Guide

4. ANL Supply Policy and Procedures Manual

5. Laboratory Waste Disposal Manual, Manufacturing Chemists Association, Current Edition

6. Manual of Hazardous Chemical Reactions, NFPA #491M, National Fire Protection Association, Current Edition

7. N. Irving Sax, Dangerous Properties of Industrial Materials, Van Nostrand Reinhold Publishing Co., Current Edition

8. The Condensed Chemical Dictionary, Van Nostrand Reinhold Publishing Co., Current Edition

9. The Merck Index, Merck and Co., Tenth Edition

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200 and 800 Area SPM Rep	J. M. Frogge	2-7388 Page Boy 144-322
300 and East Areas SPM Reps	L. H. Berkes	2-6068 Page Boy 144-321
	K. R. Ziech	2-6068 Page Boy 144-325

FOREWORD

These procedures, which are part of the Argonne National Laboratory's Policy Manual,* supersede all previous procedures which have been issued. New radioactive waste acceptance criteria established for the Department of Energy disposal sites and regulations under the EPA Resource Conservation Recovery Act (RCRA), and the Toxic Substances Control Act (TSCA) have necessitated changes in this manual. Substantial changes have been made since issuance of the last written procedures; therefore, the material contained herein should be carefully reviewed by all individuals involved in waste handling.

Close adherence to the procedures described in this document should result in the identification and segregation of wastes into appropriate categories; minimize the amount of actual waste generated, and allow for maximum volume reduction which in turn will reduce storage space and disposal costs. Waste Generators are responsible for the proper disposition of the wastes they produce.

These procedures apply to most routine waste produced in moderate quantities. Unusual waste problems or situations involving the production of large quantities of wastes should be brought to the attention of the Plant Facilities and Services Division Waste Management Operations Manager for consideration at an early stage in the planning.

*See "Reference Manuals" in Volume I of the Policy Manual.

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SECTION I

PROCEDURES FOR HANDLING RADIOACTIVE WASTES
ARGONNE NATIONAL LABORATORY - ILLINOIS SITE

SECTION IA
INTRODUCTION, RESPONSIBILITIES, TERMS AND DEFINITIONS

1.0 INTRODUCTION

1.1 Waste Handling Procedures are established, reviewed, and revised as appropriate. They are included as part of the Laboratory's Policy Manual. This section applies to most radioactive wastes produced in moderate quantities. Projects anticipating unusual waste problems or producing large or unique quantities of waste shall be brought to the attention of the Waste Management Operations Manager at an early stage in the planning by the Waste Generator.

1.2 The actual onsite handling of radioactive wastes involves the waste generator, Occupational Health and Safety - Health Physics (OHS-HP), - Special Materials (OHS-SPM), and Plant Facilities and Services Division - Waste Management Operations (PFS-WMO). **Waste Generators shall have the primary responsibility for the wastes they produce**; with the support groups providing the necessary services, guidance, and surveillance. **Waste Management Operations will have the primary handling responsibility after the waste is properly contained, labeled, and documented..**

1.3 Safety at the Laboratory is the responsibility of all employees; adherence to these procedures will contribute toward the fulfillment of that obligation. The ANL-Illinois Health and Safety Manual contains the applicable Laboratory Safety Policy which must be followed.

2.0 RESPONSIBILITIES

2.1 **Line responsibility** for compliance with these procedures extends through Laboratory Management--Division Management and Supervisors--to each employee. All are charged with minimizing waste volumes through (1) foresighted advanced planning, (2) the design of the facilities and equipment, and (3) the control of work methods.

2.2 The **Director of Plant Facilities and Services (PFS)**, under the Chief Operations Officer, has the responsibility of establishing and maintaining a waste management program for ANL-Illinois. The purpose of the program is to develop, direct, evaluate, and enforce all waste handling and disposal requirements with the ultimate goal being that of protecting personnel onsite, the general public, and the environment from potentially hazardous materials.

2.3 The **Waste Management Operations (WMO) Manager**, who reports to the Director of Plant Facilities and Services Division, has the responsibility of directing the waste management program for ANL-Illinois. Administration and reporting requirements for the control of all radioactive, hazardous, and other special wastes handled at the Laboratory are coordinated by the Waste Management Operations Manager.

The duties of the Manager of PFS-WMO include (but are not limited to) the following:

2.3.1 Prepare and review waste handling procedures, for ANL-Illinois on a continuing basis and revise them whenever regulatory requirements necessitate change or when technical improvements permit more efficient and/or safer methods of operation.

2.3.2 Maintain on a continuing basis an awareness of the waste-handling and processing problems arising within the Laboratory.

2.3.3 Apprise Laboratory Management of the status and needs of waste management programs.

2.3.4 Provide guidance to Waste Generators and other pertinent groups and keep them abreast of changes which may affect their methods of operation.

2.3.5 Coordinate and/or prepare reports and other information as required or requested by DOE and other outside organizations in the field of waste management.

2.3.6 Maintain on a continuing basis knowledge of pertinent regulations and disposal-site criteria regarding radioactive waste.

2.3.7 Procure appropriate outlets for ANL-Illinois wastes.

2.3.8 Advise Laboratory Management concerning policies on radioactive and other hazardous waste materials, as appropriate.

2.3.9 Assure that necessary training of Waste Generators is provided for the proper handling of radioactive and other hazardous wastes.

2.4 **Divisional Waste Management Representatives** provide coordination and communication within the Division on radioactive, hazardous, and other hazardous wastes by:

2.4.1 Disseminating information on waste handling procedures to the appropriate Divisional employees.

2.4.2 Communicating information on special waste problems or needs to appropriate support groups.

2.4.3 Acting as coordinator of efforts to improve Divisional waste management activities.

2.4.4 Serving as Divisional contact for development of specific waste handling procedures and for training of personnel.

2.5 **Waste Generators** have the primary responsibility for the wastes that they produce. Guidance is available from those people shown on the "Contacts" list provided at the front of this manual. Specific responsibilities include:

2.5.1 Planning ahead to keep the volume of radioactive wastes to a minimum.

2.5.2 Maintaining knowledge of pertinent waste handling procedures such as through review of information in this Waste Handling Procedures Manual.

2.5.3 Planning for proper handling of waste production by including the following considerations:

(1) Levels of Radioactivity
(2) Physical and Chemical State
(3) Isotope Identification and Quantity
(4) Volume and the Means to Minimize Quantities Generated
(5) Segregation
(6) Schedule of Production
(7) Containment and Shielding Requirements - Containment techniques must be employed which will prevent the exterior of the primary receptacle from becoming contaminated with transferable radioactivity or other hazardous materials during all phases of waste handling and will keep exposures as low as reasonably achievable (ALARA). Lead cannot be used as shielding material for offsite disposal of non-TRU radioactive wastes.
(8) Documentation and Labeling.

(9) Storage Requirements
(10) Nuclear Criticality Safety and other Radiation Safety Aspects
(11) Industrial Safety Aspects
(12) Fire Safety Aspects

2.5.4 Discussing the foregoing during the planning stage with the Waste Management Operations Manager when waste production quantities are large or waste problems are unique.

2.5.5 Informing OHS-HP, OHS-SPM, and PFS-WMO of intended waste production that is nonroutine in nature.

2.5.6 Segregating wastes by keeping transuranic (TRU) waste separate from non-TRU waste, combustibles separate from noncombustibles, and low-level wastes (equal to or less than 200 mrem/h) separate from intermediate-level wastes (greater than 200 mrem/h)

2.5.7 Placing radioactive wastes into acceptable receptacles assuring that all segregation requirements are met.

2.5.8 Providing all the information about the waste as requested on the PFS-195 and PFS-196, or PFS-199 waste disposal requisition. (See Appendix A for copies of the requisitions, instructions for their completion, and definitions of terms used.)

2.5.9 Arranging for PFS-WMO to load the shipping container when the shipping container is also the primary receptacle.

2.5.10 Requesting radiation surveys of filled receptacles by contacting OHS-HP.

2.5.11 Sealing of filled waste receptacles with assistance as required from OHS-HP to assure that no materials are added after the Waste Disposal Requisition documentation is completed.

2.5.12 Labeling of sealed waste containers with the serial number of the Waste Disposal Requisition (and column number for the PFS-195).

2.5.13 Obtaining OHS-SPM approval when waste contains accountable nuclear materials.

2.5.14 Providing the PFS-195 and PFS-196, or PFS-199 forms to OHS-HP after the Waste Generator sections of the forms have been completed and signed.

2.6 **Occupational Health and Safety-Health Physics (OHS-HP):** OHS-HP is responsible for the radiological aspects in handling wastes including the following:

2.6.1 Keeping abreast of radioactive wastes produced and informing the Waste Generator, PFS-WMO, OHS-SPM, and others of waste problems.

2.6.2 Informing other sections in OHS when nonradiological problems are recognized in the course of handling waste.

2.6.3 Providing guidance as required.

2.6.4 Through observation, verifying that Waste Generators are complying with the radioactive waste segregation requirements.

2.6.5 Performing necessary radiation and receptacle surveys and continually reviewing all solid radioactive waste collection locations to determine proper primary containment.

2.6.6 Assisting Waste Generators in sealing waste receptacles as required.

2.6.7 Instructing Waste Generators to request timely removal of radioactive wastes from work areas.

2.6.8 Completing information on a PFS-172 label and attaching it to the receptacle.

2.6.9 Submitting completed waste disposal requisitions to Waste Management Operations.

2.7 **Occupational Health and Safety-Special Materials Control and Accountability Group (OHS-SPM):** OHS-SPM is responsible for approving disposal of accountable materials, including the following:

2.7.1 Providing guidance and advice on limits of fissionable, source, and other accountable materials that may be classified as expendable wastes.

2.7.2 Approving PFS-195 and PFS-196, or PFS-199 forms and preparation of Special Materials accountability documents when disposal of accountable materials are involved.

2.7.3 Assuring that the amounts of accountable materials shown on the PFS-195 and 196, or PFS-199 agree with the amounts shown on the SPM-23 form. When not in agreement, instructing the Waste Generator to correct the PFS-195 and PFS-196, or PFS-199.

2.7.4 Reviewing waste-shipment documentation and preparing and distributing 741 forms.

2.7.5 Performing the assay for U-235 and Pu-239 content in solid radioactive waste receptacles.

2.7.6 Providing the assay results on the PFS-195 form when the "TRU" box is marked on this form.

2.8 **Plant Facilities and Services Division-Waste Management Operations (PFS-WMO):** PFS-WMO has the responsibility for handling radioactive waste after the receptacle has been filled, sealed, and its contents properly documented as well as the following:

2.8.1 Providing guidance as required, including procedures for waste confinement and documentation.

2.8.2 Delivering primary waste receptacles to the Waste Generator. Delivering appropriately labeled secondary receptacles as requested by OHS-HP.

2.8.3 Loading all wastes that are to be placed directly into a shipping container.

2.8.4 Reviewing the information on the waste disposal requisitions for adequacy and requesting additional information about the waste as necessary.

2.8.5 Collecting waste which is properly contained and adequately documented and described on a waste-disposal requisition.

2.8.6 Assuring that waste receptacles have been labeled so that their contents can always be identified with the supporting waste-disposal requisition.

2.8.7 Delivering solid-waste receptacles to SPM-NDA for appropriate assay measurements.

2.8.8 Baling compactible solid low level radioactive waste which is safe for volume reduction.

2.8.9 Maintaining operating procedures for waste handling, treatment, and disposal.

2.8.10 Maintaining segregation aspects for each waste package.

2.8.11 Assuring that approved waste containers are used for waste packages.

2.8.12 Assembling waste packages.

2.8.13 Weighing and labeling waste packages.

2.8.14 Keeping records so that the contents of each waste package can be readily identified and traced to the related waste disposal requisition.

2.8.15 Keeping records as evidence that the waste packages and their contents are in compliance with the waste acceptance criteria for the waste disposal or storage sites.

2.8.16 Certifying, when appropriate, that waste packages and their contents meet the waste disposal and storage site waste acceptance criteria.

2.8.17 Arranging for temporary onsite storage of waste packages.

2.8.18 Arranging for secondary shipping containers as required.

2.8.19 Arranging for shipment of waste packages to a waste storage or disposal site.

2.8.20 Assuring that shipments of radioactive wastes meet Federal and other applicable regulations.

3.0 TERMS AND DEFINITIONS

3.1 Absorbed Liquids

Liquids that have been absorbed into an absorbent material (e.g., vermiculite, etc.) with sufficient absorbent to absorb at least twice the volume of the liquid.

3.2 Accountable Radioactive Material

Accountable radioactive materials are those materials which require an OHS-SPM representative's review and signature approval for disposal accountability.

Accountable Radionuclides

Americium 241	Curium 246	Tritium
Americium 243	Neptunium 237	Uranium Isotopes
Berkelium 249	Plutonium Isotopes	
Californium 246	Thorium Isotopes	

3.3 Biological Material

Materials derived directly from living organisms that size reduce, produce liquids, or produce gases during decomposition.

3.4 Capital Equipment and Sensitive Items

Capital Equipment or Sensitive Items are items which are assigned ANL or CSI numbers.

3.5 Class of Radioactive Waste

Radioactive wastes are either classified as transuranic (TRU) or nontransuranic (non-TRU). TRU wastes are U-233

and radionuclides having atomic numbers 93 and above. If the waste contains TRU radionuclides, the Waste Generator is to mark the "TRU" box on the waste disposal form. If the waste does not contain TRU radionuclides, the Waste Generator is to mark "non-TRU." Note: PFS-WMO will determine if the waste is to be packaged as TRU or non-TRU based upon the radionuclides and quantity provided by the Waste Generator on the waste-disposal requisitions. (Also see TRU and non-TRU Waste.)

3.6 **Combustible Materials**

Combustible materials are those materials that will sustain combustion in atmospheric air when exposed to an ignition source of 1475°F for a period of 5 minutes. Materials such as paper, non-fire-retardant plastics, rubber gloves, rags, plastic or rubber shoe covers or garments, plastic or rubber tubing, and wood are combustibles.

3.7 **Compressed Gas**

Compressed gases are those materials defined as such by 49 CFR 173, Subpart G. Any vessel that could contain compressed gases must be permanently vented prior to placement into a waste receptacle. This includes aerosol cans, gas cylinders, and other sealed vessels. Aerosol cans must be punctured and drained, gas cylinders must be vented and have the valve removed, and other vessels must have a visible opening.

3.8 **Corrosive Material**

Corrosive materials are those defined as such by 49 CFR 173, Subpart F. Corrosive materials are materials that have a severe corrosion rate on steel. Corrosive materials normally have either a high or low pH.

3.9 **Dempster Boxes**

Dempster boxes are large steel boxes used for deposit of solid, nonhazardous trash that is placed into the ANL sanitary landfill.

3.10 **Explosive Materials**

Explosive materials are those defined as such by 49 CFR 173, Subpart C.

3.11 **Fines (Particulates)**

Fines are powders, dusts, glovebox sweepings, etc., that can easily be dispersed in air.

3.12 **Flammable Gas**

Any gas that will burn in normal concentrations of oxygen in the air.

3.13 **Flammable (Ignitable) Liquid**

Any liquid having a flash point below 140°F.

3.14 **Flammable Solid**

Any solid capable of causing fire through friction, absorption of moisture or spontaneous chemical changes under standard temperature and pressure conditions.

3.15 **Free Liquid**

Liquid that is not absorbed in a host material (e.g., vermiculite or diatomaceous earth) such that it could spill or drain from its containment.

3.16 **Gaseous Radioactive Waste**

Any radioactive waste which is **gaseous at all times** under normal storage and handling conditions.

3.17 **Immobilized Materials**

Materials that are fixed in a matrix such as glass, ceramic, cement, concrete, etc.

3.18 **Liquid Radioactive Waste**

Any radioactive waste which is in a liquid state at standard temperature and pressure.

3.19 **Non-TRU Waste (nontransuranic)**

Radioactive waste whose transuranic content (U-233 and radionuclides with atomic numbers of 93 and above) is equal to or less than 100 nCi/g (1E-7 curies/gram).

3.20 **Poison A or Poison B Materials**

Poisons A or B are those materials defined as poisons by the DOT in 49 CFR 173, Subpart H. Note: The waste acceptance criteria of the radioactive waste disposal sites have replaced the term "Poisons A and B with the term "Radioactive Mixed Waste." See definition of Radioactive Mixed Waste.

3.21 **Primary Waste Receptacle** (See waste receptacle)

3.22 **Prohibited Materials in Waste Packages**

Prohibited materials are those waste forms that must not be included in a waste package. See Waste Acceptance Criteria in Sections ID (Solid Radioactive Waste), and IE (Liquid Radioactive Waste).

3.23 **Pyrophoric Materials**

Materials that will ignite spontaneously in dry or moist air at temperatures below 130°F, or that may ignite spontaneously under the ambient conditions of shipment or storage.

3.24 **Radioactive Mixed Waste**

Radioactive mixed waste (often called mixed waste) is radioactive waste that also contains hazardous waste that is regulated by the EPA under RCRA (Resource Conservation and Recovery Act). The RCRA materials are listed in 40 CFR 261, Subparts C and D. (See questionnaire located in Appendix B to determine whether a waste is regulated under RCRA.)

3.25 **Routine Pickups**

Routine pickups are removals of solid radioactive waste by PFS-WMO that do not need special handling requirements, have been sealed in standard PFS-WMO approved receptacles that contain less than 5 grams of fissile materials, and have a maximum radiation reading of 200 mrem/h at the surface.

3.26 **Secondary Waste Receptacle**

Any nondisposable receptacle, usually made of metal, which holds the primary waste receptacle until the primary receptacle is removed for disposal.

3.27 **Sludges**

Sludges are wet precipitates, resins, evaporator residues, or other solid or semisolid materials containing liquids.

3.28 **Solid Radioactive Waste**

Any dry radioactive waste **which remains a solid at all times** under storage, handling, and shipping conditions. Solids resulting from the solidification of liquids must not emit potentially hazardous vapors nor contain any freestanding liquids. (Temperature extremes of -40°F to 150°F may occur during transportation and storage.)

3.29 **Transuranic Waste (TRU)**

Without regard to source or form, radioactive waste that is contaminated with alpha-emitting transuranic radionuclides (U-233 and radionuclides with atomic numbers of 93 and above) with a half-life greater than 20 years and in concentrations greater than 100 nCi/g (1E-7 Curies/gram).

Note: PFS-WMO will determine if a waste receptacle that contains TRU nuclides is to be packaged as TRU or non-TRU based upon the radionuclides and amounts provided on the waste disposal requisition by the Waste Generator.

3.30 **Transuranic - Contact Handled (TRU-CH)**

Transuranic waste materials that are packaged in such a way that the maximum dose equivalent rate at the surface of the waste package is not greater than 200 mrem/h.

3.31 **Transuranic - Remote Handled (TRU-RH)**

Transuranic waste materials that are packaged such that the dose equivalent rate at the surface of the waste package is greater than 200 mrem/h but not greater than 30 rem/h (as practiced at ANL-IL).

3.32 **Waste Container**

A waste container is the disposable containment (shipment) vessel for waste materials, including any integral liner or shielding materials that are intended for emplacement at the WIPP or a burial site.

3.33 **Waste Package**

A waste package is the waste material (receptacles and contents), any liner material, and the waste container that is intended to be handled and emplaced at a radioactive waste disposal site.

3.34 **Waste Receptacle**

A waste receptacle is a PFS-WMO approved disposable waste receptacle used by the Waste Generators to hold their radioactive wastes. Examples of waste receptacles are TV cartons, Blickman can inserts (metal pails and fiber drums), and 30- or 55-gallon metal drums.

3.35 **WIPP**

Acronym for Waste Isolation Pilot Plant. The WIPP is a repository (2100 feet underground) in a salt formation in New Mexico which has been constructed by DOE for emplacement of TRU waste packages.

SECTION IB

RADIOACTIVE SOLID AND LIQUID WASTE CONTAINMENT, SPECIAL TREATMENT, AND SEGREGATION REQUIREMENTS

1.0 WASTE CONTAINMENT

Waste Generators are responsible for containing their radioactive wastes in accordance with requirements in this manual. It must be done in a manner which will ensure that the contents can be transported and stored without contamination or other hazard to personnel or property until processing and final disposition can be accomplished. The generator is reminded that radioactive accountable materials may not be disposed of without Special Materials approval; such aspects must be discussed with them in advance.

Liquid radioactive waste must be collec ed in appropriate receptacles for pickup and proper disposal by PFS-WMO. Waste Generators anticipating large quantities of liquid waste, or unique problems, should make adequate plans for containment including discussions with the Waste Management Operations Manager in advance of actual production.

1.1 Rejection of Improperly Contained Waste

PFS-Waste Management Operations (PFS-WMO) may reject any waste containers that are unacceptable for safe containment or transport. Acceptable containers for radioactive liquid and solid wastes are shown in Appendix C. The containers must be in good condition.

PFS-WMO must certify that the contents of shipping containers meet the acceptance criteria of the offsite waste receiver and must load and otherwise prepare containers for shipment. Except in unique circumstances and with the express knowledge and written approval of Waste Management Operations, **Waste Generators shall not directly load shipment containers.**

1.2 Large Quantities

Waste Generators anticipating large quantities of radioactive wastes should contact the Waste Management Operations Manager well in advance of actual production of their wastes to plan how they will be handled.

1.3 Primary Receptacles

1.3.1 Size and Procurement

All radioactive waste must be contained in the proper radioactive waste receptacles by the generator. See Appendix C which contains a description and photographs of approved radioactive waste receptacles. These receptacles will be delivered by PFS-WMO and may be requested by contacting Health Physics (OHS-HP). If waste cannot be accommodated in the existing receptacles, the waste dimensions must be modified.

Secondary (shielding and nonshielding) receptacles are procured by the Waste Generator's division. Certain secondary receptacles become the property of PFS-WMO and are under their control.

1.3.2 Transuranic (TRU) Solid Waste Receptacles

All TRU waste must be contained inside rigid receptacles of sufficient integrity so that it remains sealed during handling and transport. This will consist of TRU waste being confined inside a metal 5-gallon paint can (PC-5) meeting DOT 37A-60 specifications or in a 30- or 55-gallon drum meeting DOT 17C or 17H specifications. Should the use of these receptacles be impractical, PFS-WMO must approve any alternative containment prior to its use.

1.3.3 Non-TRU Solid Waste Receptacles (less than 200 mrem/h)

All non-TRU waste must be contained and sealed in a manner which will assure that loose contamination is confined and does not leak out. The receptacles considered adequate are TV cartons and fiber drums that are sealed with tape. The metal containers used for TRU wastes are also acceptable but are not desirable for wastes that are compactible. Wastes placed into shipping containers (bins) must either be in one of the above receptacles or as a minimum, be placed inside 8-mil poly bags or plastic sheeting sealed with tape.

1.3.4 Non-TRU Solid Waste Receptacles (greater than 200 mrem/h)

Wastes having radioactive levels greater than 200 mrem/h at the surface of a receptacle must be sealed in one of the following metal receptacles: (1) 5-gallon paint can, 5-PC, meeting DOT 37A-60 specification, or (2) 30- or 55-gallon drum meeting DOT 17C or 17H specification.

1.4 Liquid Radioactive Waste Containment

Receptacles for the collection and containment of liquid radioactive waste are available from PFS-WMO and may be requested through Health Physics. Photographs of available receptacles for liquid radioactive waste appear in Appendix C.

1.4.1 The safe processing of liquid radioactive waste requires the separation of liquids containing organic compounds and materials from liquids containing inorganic compounds and materials. **The generator should never mix organic and inorganic waste during initial collection or at a later date. Wastes that do not meet this criterion will require expensive processing.**

1.5 **Labeling of Solid and Liquid Waste Receptacles**

The PFS-172 labels are to be completed and applied to the receptacle by OHS-HP. The PFS-172 labels are to identify the receptacle with the Waste Disposal Requisition serial number (and receptacle number from the PFS-195). The requisition number must include either the RS or RL suffix and for RS requisitions must also be followed by a "-" and the column used to document the receptacle. Examples: RL 2235, or RS 2235-1, RS 2235-2, RS 2235-3, etc. Radiation information must also be completed on the PFS-172 form in addition to the building number, room number, and date sealed. The PFS-172 label is shown in Appendix D.

2.0 SECONDARY RECEPTACLE REQUIREMENTS AND LABELING

Secondary solid waste receptacles are normally used in those work areas where radioactive waste is generated on a routine basis. Their purpose is: (1) to protect the primary receptacle from damage, (2) to make it convenient to place wastes into the receptacle, (3) to prevent the dispersal of contamination to the surrounding areas, and (4) to provide an added degree of fire safety. The use of primary receptacles without secondaries must have the concurrence of OHS-HP.

2.1 **Secondary Waste Receptacle Labeling**

All secondary solid waste receptacles must be permanently marked with the appropriate segregation label, (TRU or non-TRU, combustible or noncombustible) radiation hazard symbols, and the words "Caution, Radioactive Materials." Secondaries not labeled in this manner should be returned to PFS-WMO in exchange for units with the proper markings. The segregation labels are shown in Appendix D.

2.2 **Nontransuranic Secondary Receptacles**

Blickman Cans and TV Carton secondaries (as pictured in Appendix C) are authorized non-TRU secondary receptacles. In order to segregate non-TRU waste, it will be necessary to maintain receptacles for combustibles and noncombustibles at each waste-collection location. Secondary recep-

tacles will be delivered by PFS-WMO and may be requested through OHS-HP.

2.3 Transuranic Secondary Receptacles

The Blickman Cans (as pictured in Appendix C) are authorized transuranic secondary receptacles. In order to segregate TRU waste, it will be necessary to maintain both combustible and noncombustible receptacles at each waste-collection location. Secondary receptacles may be requested through OHS-HP and will be delivered by PFS-WMO. The 55-gallon drum when used with the special lid that has been properly labeled and equipped with a handle may be used for bagged-out glovebox waste and other similar waste and does not require a secondary.

3.0 FINAL PACKAGING (PFS-Waste Management Operations Only)

3.1 Transuranic Packaging Requirements

The requirements for the packaging of TRU waste are those specified by the Waste Isolation Pilot Plant in documents WIPP-DOE-069, WIPP-DOE-114, and WIPP-DOE-158, and the ANL-IL TRU Waste Certification Plans. TRU waste will be packaged in the ANL-M4 bin or 30- or 55-gallon drums meeting the requirements for a DOT 7A container. Packaging of contact-handled TRU waste (less than 200 mrem/h at the package surface) shall be performed by PFS-WMO personnel only. Packaging of remote-handled TRU waste shall be performed by PFS-WMO personnel, or by the waste generation personnel identified in the ANL-IL Remote-Handled TRU Waste Certification Plan. Prior to filling, each container shall be inspected to assure that it is dry and undamaged and meets all appropriate standards. After filling, but before the cover is bolted down, the gasket must be inspected and repaired or replaced, if necessary, to obtain an adequate seal. Each container shall be weighed, labeled, surveyed for direct radiation level and for loose contamination and have a tamper-seal affixed. These actions shall be documented.

3.2 Nontransuranic Packaging Requirements

Documenting and packaging of waste into shipment bins is to be performed only by PFS-WMO. Non-TRU waste will normally be packaged into an Argonne M-3A bin. Every effort must be made to ensure that the integrity of the waste package is maintained. Compactible waste will be volume reduced and wrapped in 8-mil plastic before being loaded. Combustible waste may not be mixed with that which is noncombustible and packages must be positioned and/or shielded in such a manner that radiation readings on the outside surface of the bin do not exceed 200

mrem/h. Prior to filling, each bin shall be inspected to assure that it is dry, undamaged, and meets all appropriate standards. After filling, but before the cover is bolted down, the gasket must be inspected and repaired, if necessary, to obtain an adequate seal. Each bin shall then be weighed, numbered, appropriately labeled, surveyed as to radiation intensity, smeared for contamination, and have a tamper seal affixed. These actions shall be documented.

4.0 SPECIAL TREATMENT OR CONTAINMENT REQUIREMENTS

Due to their physical or chemical nature, some wastes may require special treatment or containment before being placed into a waste receptacle. Any waste that will decompose, react, or otherwise produce free liquids, gas, or the formation of substances which could lead to spontaneous combustion, explosion (or similar hazardous occurrences) must be treated to render them safe during handling, transport, storage, and disposal. This type of waste must be documented by answering "yes" to the appropriate questions on the PFS-195 form. Any treatments performed by the Waste Generator must have prior approval by PFS-WMO except for biological materials in 4.1 below.

4.1 Animal Carcasses

Animal carcasses and other biological materials containing radioactivity shall be treated with sufficient preservatives, such as slaked lime and desiccants or absorbents, to prevent bacterial action which could cause gas buildup or the formation of free liquids. These wastes shall be sealed in a plastic bag prior to placing them into a receptacle.

The question "Biological Material" must be answered on the PFS-195 form and the treatment stated on the PFS-196 form.

4.2 Incompatible Materials

Wastes which are incompatible with one another or could react with a receptacle must be kept separate and contained during all phases of waste handling.

5.0 SEGREGATION

Segregation of radioactive waste into appropriate categories is very important because: (1) radioactive waste disposal is governed by the most restrictive limits, (2) radioactive waste should be disposed of in the smallest volume feasible, and (3) radioactive waste that contains

prohibited waste forms, not accepted by a waste disposal site, **must be kept to an absolute minimum** and stored in separate containers.

Keeping the amount of waste at the lowest volume that is feasible includes: (1) planning ahead to avoid having excess amounts of materials contaminated with radioactivity, (2) keeping containers, wrappings, etc., from becoming contaminated. For example, boxes containing gloves and tissues, etc., could be disposed of as trash if they are not allowed to become contaminated, and (3) certain materials that become contaminated can be torn and folded and solid objects can be placed flat in a receptacle rather than at an angle. However, glass should not be broken unless the broken glass is contained inside of puncture guards such as cardboard cartons or metal cans, etc., before it is placed into a receptacle.

Keeping the amount of waste that contains a prohibited waste form not accepted by a waste disposal site to an absolute minimum includes: (1) knowing what waste forms are prohibited, (2) planning ahead to keep prohibited waste forms out of the radioactive waste stream, and (3) keeping prohibited waste segregated from acceptable waste by placing it into its own identified receptacle. Prohibited waste forms are shown in the Waste Acceptance Criteria for solid radioactive waste located in Section 1D of this manual; also see Special Treatment or Containment Requirements in Paragraph 4 of this section.

Planning and proper segregation will allow for the most economical processing and ultimate disposal. Expensive repackaging or processing may be avoided. Final disposal costs are based on the volume and category of radioactive waste.

5.1 Transuranic Waste (TRU)

TRU waste must be segregated from non-TRU waste and sorted as to combustible and noncombustible when it is placed into receptacles. TRU waste exceeding 200 mrem/h at the surface of the receptacle requires shielding to meet the packaging requirements for TRU-CH (contact handled) wastes; otherwise, it must be packaged as TRU-RH (Remote Handled) waste. Note: Presently, the only approved TRU-RH waste packaging is used at the Alpha Gamma Hot Cell Facility located in Building 212.

The segregation and sorting requirements are the specific responsibility of the Waste Generator; OHS-HP will visually verify adherence to sorting to the extent practicable as the receptacles are sealed. PFS-WMO will maintain the segregation in bin packaging. Waste marked TRU by the Waste Generator will be classified as non-TRU by PFS-

WMO if it is determined that the TRU curie content is less than 100 nCi/g.

5.2 **Nontransuranic Waste**

Combustible material must be separate from noncombustibles. Proper segregation of wastes will allow for compaction, thereby reducing the volume of radioactive waste shipped offsite with resulting cost savings.

5.3 **Prohibited Waste Forms**

Prohibited waste forms are shown in the Waste Acceptance Criteria for solid radioactive waste located in Section 1D and 1E of this manual. Note: This includes lead for waste packages that have a TRU curies content of less than 100 nCi/g. Any prohibited waste form generated must be segregated into its own receptacle and documented on its own PFS-195 or PFS-199 waste disposal requisition. Note: Costs incurred by PFS-WMO to treat prohibited waste forms or to remove prohibited waste from nonsegregated receptacles are charged to the Waste Generator.

5.4 **Trash Disposal**

Items and materials which have been surveyed and determined to be free from detectable radioactive contamination (clean) should not be placed into a radioactive waste receptacle. Clean trash that is not listed elsewhere as a hazardous material can be disposed of by burial in the ANL Sanitary Landfill. Note: Liquids are prohibited from being placed into the trash receptacles. Free liquids are a prohibited waste form at the ANL Sanitary Landfill.

5.4.1 **Dempster Boxes**

To prevent radioactive materials from inadvertently being mixed with the trash in Dempster boxes serving areas using radioactive materials, the boxes are kept locked with keys under the sole control of Health Physics. Appropriate radiation surveys by Health Physics are performed on all materials from these areas prior to the waste being placed into the Dempster box.

6.0 **DISPOSAL OF CAPITAL EQUIPMENT AND SENSITIVE ITEMS CONTAMINATED WITH RADIOACTIVITY**

The disposal of all Capital Equipment or Sensitive Items (items with, or assigned, ANL or CSI numbers) contaminated with radioactivity requires compliance with the procedures found in the Supply Policy and Procedure Manual. Your Divisional Property Representative must be notified prior to the disposal of all such material and should be consulted whenever problems or questions arise.

SECTION IC

GASEOUS RADIOACTIVE WASTE DISPOSAL

1.0 RESPONSIBILITY

The collection, containment, and disposal of gaseous radioactive waste is the responsibility of the Waste Generator. Waste Generators must consider the following during the original design of a facility and/or the planning of a particular experiment which will generate gaseous waste:

Isotopes involved
Quantities to be generated
Means planned for containment
Methods planned for disposal or release

The Waste Generator is responsible for notifying OHS-HP, of planned gaseous waste production and for supplying any information about the waste that is required.

2.0 CONTAINMENT

Radioactive gaseous waste must be contained in an appropriate holdup or containment system designed for gas containment.

Holdup or containment equipment, as well as, special equipment for monitoring gaseous radioactive waste discharges, must be provided by the generator.

3.0 DISPOSAL

3.1 **Planned Controlled Release:** A planned release of radioactive gaseous waste must be approved by OHS-HP and may involve holdup for decay of short half-life materials or controlled release through adsorbers or scrubbers.

Planned controlled release to the atmosphere is a common method of disposal for gaseous radioactive waste. It is essential that an evaluation be made to determine that such planned controlled releases are done in a manner to minimize the potential radiation exposure to "as low as reasonably achievable" and to assure that the pertinent concentration guides are not exceeded as specified in DOE Order 5480.1, Chapter XI, "Requirements for Radiation Protection." These guides appear in Appendix E.

Health Physics will approve and monitor such releases as appropriate and keep the generators informed of the monitoring results.

4.0 PROCEDURE FOR DISPOSAL OF GASEOUS RADIOACTIVE WASTE

The procedures for handling and disposal of gaseous radioactive wastes are outlined below. The format designates the proper sequence of actions required to carry out each disposal procedure.

	Personnel	Responsibility
4.1	Waste Generator	Plans for the proper handling (capture, reaction, and/or release) and ultimate disposal of gaseous radioactive waste prior to its production, and:
4.2	Waste Generator	Determines facilities and equipment required for handling gaseous radioactive waste.
4.3	Waste Generator	Requests assistance in planning for disposal of gaseous radioactive waste from OHS-HP and OHS-IH and/or PFS-WMO as appropriate.
4.4	Waste Generator	Obtains instrumentation required to properly monitor the handling of radioactive gaseous waste.
4.5	OHS-HP	Provides advice and assistance to the Waste Generator and pertinent individuals in the planning for disposal of gaseous radioactive waste with respect to: -Isotope(s) involved -Production rates and volumes -Disposal rates and disposal times -Concentration Guide values -Reaction or treatment methods -Monitoring methods -Protective measures and equipment -Alarms and emergency measures
4.6	OHS-HP	Requests and coordinates assistance from others as required, e.g., OHS-IH, ER-Atmospheric Physics, and PFS-WMO.

	Personnel Involved	Responsibility
4.7	**OHS-IH**	Provides, as requested, information and assistance in planning and evaluating the ventilation and reaction facilities proposed for use in controlling the gaseous radioactive waste and associated toxics, if present.
4.8	**Atmospheric Physics**	Provides, upon request, information regarding pertinent meteorological aspects involved in the control of gaseous radioactive waste.
4.9	**PFS-WMO**	Provides information and assistance in the planning, installation, replacement, disposal of filters or reaction media, and disposal of the containers if necessary.
4.10	**Waste Generator**	Arranges for use of appropriate facilities and installation of equipment necessary to control the gaseous radioactive waste and:
4.11	**Waste Generator**	Procures, stocks, and arranges for construction of initial and replacement filters and/or reaction materials.
4.12	**Waste Generator**	Prepares documented emergency procedures as required.
4.13	**OHS-HP**	Assists in the procurement, evaluation, installation, and operation of monitoring systems and alarms, and:
4.14	**OHS-HP**	Tests monitoring equipment upon completion of installation.
4.15	**OHS-HP**	Reviews emergency procedures.
4.16	**Waste Generator**	Informs OHS-HP of the planned time of operation and the production of gaseous radioactive waste.
4.17	**OHS-HP**	Monitors as appropriate during disposal of gaseous radioactive waste.
4.18	**OHS-HP**	Keeps Waste Generators informed as appropriate of levels of gaseous radioactive waste being disposed of with respect to current Concentration

	Personnel Involved	Responsibility
		Guides (CG) and, if necessary, recommends additional measures to comply with CG restrictions as stated in the current edition of DOE Order 5480.1, "Requirements for Radiation Protection," as appropriate. See Appendix E for Concentration Guides.
4.19	**OHS-HP**	Records and furnishes the appropriate data for use in reporting The disposal of gaseous radioactive waste, as required by DOE.

SECTION ID

SOLID RADIOACTIVE WASTE ACCEPTANCE CRITERIA

All solid radioactive wastes are shipped offsite to radioactive waste storage and disposal facilities that are owned by the Department of Energy. In order for wastes to be accepted at a disposal/storage site, the waste documentation and the waste packages must meet site waste acceptance criteria. When the acceptance criteria are satisfied, non-TRU waste packages are normally buried, whereas TRU waste packages are placed in interim storage for subsequent shipment to the Waste Isolation Pilot Plant (WIPP). Generally, the acceptance criteria are similar between disposal sites; however, different sets of criteria are used for TRU and non-TRU wastes.

In order for TRU waste packages to be accepted by the WIPP, the packages must be certified as meeting the WIPP-Waste Acceptance Criteria (WIPP-WAC). A Certification Plan for Transuranic-Contact Handled (TRU-CH) waste and a QA Plan, written by PFS-WMO, has been approved by the WIPP-WAC Certification Committee (WIPP-WACCC) and the State of New Mexico. The Certification and QA plans specify the methods and actions that will be used to certify that TRU waste packages meet the WIPP-WAC. The WIPP-WACCC has given PFS-WMO the authority to certify designated TRU-CH wastes provided that the requirements specified by the plans are fulfilled.

1.0 RADIOACTIVE WASTE MANAGEMENT COMPLEX (RWMC), INEL IDAHO, ACCEPTANCE CRITERIA FOR NON-TRU WASTE

1.1 Non-TRU wastes shall be segregated from TRU wastes.

1.2 Combustible wastes shall be segregated from noncombustible wastes to the extent practicable.

1.3 Tritium-contaminated waste will be evaluated by the waste disposal site on a case-by-case basis.

1.4 Liquids must be immobilized. When absorbents such as vermiculite are used, at least twice as much absorbent must be used as is needed to assure complete absorption.

1.4.1 Corrosive liquid waste must be treated to obtain a pH in the range of 4 to 10.

1.5 The following materials are prohibited:

1.5.1 Materials that are not considered radioactive.

1.5.2 Free liquids (liquids that are not immobilized).

1.5.3 Vessels pressurized to greater than 7 psig. Disposal of aerosol cans requires that the cans be vented, drained, and have a visible opening.

1.5.4 Radioactive wastes containing biological, pathogenic, or infectious materials unless treated with sufficient preservatives and desiccants to prevent bacterial action, significant gas buildup (7 psig, maximum), or the formation of free liquids.

1.5.5 Chelating organic material, unless treated to eliminate the potential for interaction with radionuclides to form stable complexes which may increase the mobility of the radionuclides.

1.5.6 Radioactive gases that are filtered or collected unless in a solid form so that decomposition or environmental heat will not result in the release of radioactive gases.

1.5.7 Hazardous (RCRA) wastes as defined by 40 CFR 261 Subparts C and D, or mixed waste (radioactive wastes contaminated with hazardous wastes). (See RCRA waste in Appendix B.)

(1) This includes hazardous wastes listed by name or the characteristic of being ignitable, reactive, pyrophoric, corrosive, or EP toxic.

(2) EP toxic includes lead. Lead is EP toxic if an extraction procedure sample contains greater than 5 mg lead/L from a representative sample of the waste.

Note: There are other waste acceptance criteria that are not listed here which are applicable to PFS-WMO and are available from PFS-WMO upon request. These criteria include requirements for shipping, documentation, containment, fissile material limits, radiation limits, package size and weights, labeling, certification, and quality assurance.

2.0 ACCEPTANCE CRITERIA FOR TRU WASTE

The ANL-IL Waste Certification and QA Plans specify the responsibilities, training, procedures, waste management and QA measures used to certify waste packages.

2.1 Immobilization

Powders, ashes, and similar particulate waste materials shall be immobilized if more than 1 weight (wt) % of the waste matrix in each package is in the form of particles below 10 microns in diameter, or if more than 15 wt % is in the form of particles below 200 microns in size.

The purpose of this criterion is to reduce: (1) the quantity of potential respirable fines and (2) the dispersibility of radioactive materials, in the event of container failure. Immobilization by mixing with Envirostone or cement is an option.

2.2 Liquid Waste

TRU waste shall not be in free liquid form. Minor liquid residues remaining in well drained bottles, cans, and similar containers are acceptable. The purpose for this criterion is to reduce the dispersibility of radionuclide materials in the event of waste container failure.

Note: PFS-WMO will determine if radioactive wastes are to be packaged as TRU or non-TRU based upon the gross weight of the full waste receptacle and the amount of radionuclides it contains. If the waste is non-TRU, it must not contain liquid in any amount. If the waste is TRU, only minor free liquid residues in well drained containers are acceptable.

2.3 Pyrophoric Materials

Pyrophoric materials, other than radionuclides, shall be rendered safe by mixing with chemically stable material (e.g., concrete, glass, etc.) or processed to remove their hazardous properties. No more than 1% by weight of the waste in each package may be pyrophoric forms of radionuclides, and these shall be generally dispersed in the waste.

The purpose for this criterion is to reduce the possibility of fire originating from spontaneous combustion.

2.4 Explosives and Compressed Gases

TRU waste shall contain no explosives or compressed gases as defined by 49 CFR 173, Subparts C and G.

The purpose for this criterion is to reduce the personnel risk from possible explosions and the potential release of contamination in the event of waste container failure.

2.5 Radioactive Mixed Waste

TRU waste shall contain no chemical waste, unless it exists as a co-contaminant with transuranics. Waste packages containing reactive material shall be identified with the appropriate DOT label. TRU contaminated corrosive materials shall be neutralized, rendered noncorrosive, or packaged in a manner to ensure container adequacy through the design lifetime. Hazardous materials

to be reported are listed in 40 CFR 261, Subparts C and D.

The Waste Generator must identify the presence and amounts of any hazardous materials listed in Appendix B. Non-TRU wastes containing Appendix-B hazardous materials are classed as Mixed Wastes.

The purpose for this criterion are: (a) to ensure that operating personnel are aware of potential hazards in the event of a waste container failure and (b) to preclude the possibility of container failure through the potential retrieval period because of attack by corrosive materials.

2.6 **Surface Dose Rate**

TRU contact handled (TRU-CH) waste packages shall have a maximum surface dose equivalent rate at any point no greater than 200 mrem/h. Neutron contributions of greater than 20 mrem/h to the total package dose rate shall be reported separately in the data package.

The purpose for this criterion is to control the radiological exposure to operating personnel.

2.7 **Additional TRU Waste Acceptance Criteria:** These criteria are to meet the Radioactive Waste Management Complex, (RWMC) INEL, Idaho requirements.

2.7.1 Radioactive waste containing biological, pathogenic, or infectious material shall be treated with sufficient preservatives and desiccants to prevent bacterial action, or the formation of free liquids. Toxins produced by the biological, pathogenic, or infectious agents shall be neutralized. Treatment of these agents and toxins shall be identified in the quality assurance plan and shipping documents.

2.7.2 Chelating organic material shall be treated to eliminate the potential for interaction with radionuclides forming stable complexes which may increase the mobility of the radionuclides. Treatment of these materials shall be identified in the quality assurance plan and the shipping documents.

2.7.3 Combinations of materials that could lead to spontaneous combustion (strong oxidants in combination with solidified oil, greases, solvents, or other materials) shall not be placed in the same waste receptacle. Fuel and oxidizers shall be placed in separate waste receptacles.

2.7.4 Transuranic waste containing free liquids are prohibited. Waste packages having the potential for liquid to be present shall have an absorbent and/or stabilizer added and mixed to ensure total immobilization of potential liquids.

2.7.5 The following criteria is for TRU waste packages that cannot be certified as meeting the WIPP-WAC because of known prohibited constituents, unknown properties, improper packaging, etc. Uncertified waste packages may be processed by shredding the container and its contents.

The following shall not be intermixed in individual containers (receptacles) with other waste:

(1) Lead, such as lead bricks, lead gloves, lead aprons.

(2) Radioactive sources imbedded in lead bricks.

(3) Gas cylinders, unless verification shows the cylinder has been vented and any valves have been removed.

(4) Carbon or stainless steel having dimensions larger than the following (length of these materials is not important):

- 1.25-inch diameter round bar.
- 1-inch square bar.
- 3/4-inch bar by 1.5-inch wide.
- 1/2-inch bar by 2-inch wide.
- 3/8-inch bar by 2.5-inch wide.
- Pipe with .25-inch wall thickness or diameter greater than 5 inches.
- 1/4 inch plate by 2 feet square.
- Plexiglas, glass, or Benelex thicker than two inches.

3.0 SOLID RADIOACTIVE WASTE DISPOSAL REQUISITIONS

The Solid Radioactive Waste Disposal Requisition (form PFS-195) and its Supplemental Sheet (form PFS-196) is used to assist in providing essential information about the radioactive waste and its containment receptacle to PFS-WMO. The information is needed in order to assure that the radioactive waste complies with: (1) the applicable requirements for safe handling and onsite temporary-storage, (2) the Federal shipping requirements, and (3) the waste acceptance criteria for the radioactive waste storage and disposal facility where the waste will be shipped.

The PFS-195 form has four numbered columns (1-4) that are divided into eight sections (1-8). Each column is to be used to document the waste in one receptacle and the sections are to be completed by individuals as indicated on the form. The Supplemental Sheet (PFS-196 form) is a continuation of section four. The requisition serial number, including the RS suffix, and column number is used to provide a unique identification for a receptacle and its contents. The term "receptacle" is used to avoid confusion with the term "container" which means the outermost disposable containment vessel for waste materials, including any integral liners or shielding materials, that are intended to be emplaced at a disposal facility. As an example, a bin is a container, whereas Blickman can inserts and TV cartons are receptacles.

The instructions for completing the PFS-195 and PFS-196 forms are provided in Appendix A. The instructions designate the individuals who are to supply the information, the information that is to be provided, and the sequence for supplying the information.

3.1 **The Waste Generator Sections** are to be completed by an individual (Waste Generator) who is cognizant about the radionuclides and amounts and forms of wastes in the receptacle. It is recommended that when more than one individual is using a receptacle, a clipboard be used to log the waste forms and the radionuclides and amounts placed into the receptacle.

3.1.1 For receptacles that are to be packaged as TRU waste (greater than 100 nCi/g as determined by PFS-WMO), the Waste Generator must also be on record as attending an annual class on documenting TRU waste. This class is presented by the PFS-WMO Manager; only those individuals who have been instructed will be considered authorized by PFS-WMO to sign a PFS-195 form as the Waste Generator. TRU waste will only be accepted from individuals on the authorization list.

3.1.2 If the waste receptacle contains TRU radionuclides in any amount, the Waste Generator is to mark the TRU box on the PFS-195 form.

The radionuclides (elements and isotopes) and amounts in a receptacle must be provided. Normally listing up to four radionuclides having the highest radioactivity (curies) is adequate. If additional radionuclides and amounts are thought to be significant, list them in Section A on the PFS-196 form. Long half-life and highly radiotoxic nuclides are more significant than short half-life and low radiotoxicity nuclides. List the TRU radionuclides first followed by any significant non-TRU radionuclides. Use Appendix F, Table of Isotopes, to deter-

mine half-life, which radionuclides are TRU, and which have the highest curie amount.

4.0 PROCEDURE FOR DISPOSAL OF SOLID RADIOACTIVE WASTE

The procedure for handling and disposal of solid radioactive wastes is outlined below. The format designates the proper sequence of actions required to carry out the disposal procedure.

	Personnel Involved	Responsibility
4.1	Waste Generator	Plans for the proper handling of waste prior to its production and performs the following:
4.2	Waste Generator	Consults with PFS-WMO on containment requirements for waste that will not fit into standard waste receptacles.
4.3	Waste Generator	Consults with OHS-HP on shielding requirements.
4.4	Waste Generator	Arranges through own Division for use or procurement of shielded secondary receptacle if needed.
4.5	Waste Generator	Fills waste receptacle (in accordance with segregation requirements) with solid radioactive waste only.
4.6	Waste Generator	Assures that nonradioactive waste is excluded.
4.7	Waste Generator	Segregates waste forms that are not acceptable from wastes that are acceptable. Places the unacceptable waste into its own receptacle that is labeled to show that it contains this waste form.
4.8	Waste Generator	Seals waste receptacle.
4.9	Waste Generator	Completes Section 1 though 4 on the PFS-195 form including the Supplemental Sheet PFS-196 form.
4.10	Waste Generator	Signs the PFS-195 form.
4.11	Waste Generator	Notifies OHS-HP of full receptacle(s) and requests a radiation survey of wastes.

	Personnel Involved	Responsibility
4.12	**Waste Generator**	If accountable radioactive materials are involved, provides PFS-195 form and PFS-196 form to OHS-SPM for approval.
4.13	**Waste Generator**	If Capital Equipment or Sensitive Items are involved, notifies Divisional Property Representative prior to disposal.
4.14	**Divisional Property Representative**	Takes appropriate action to comply with the Supply Policy and Procurement Manual procedures when Capital Equipment or Sensitive Items are involved. Notifies the Waste Generator when disposal is approved or other action is required.
4.15	**OHS-SPM**	Reviews all PFS-195 and PFS-196 forms that show accountable radionuclides, approves or disapproves of disposal, and performs the following:
4.16	**OHS-SPM**	If disapproved, holds the PFS-195 and PFS-196 and arranges with the Waste Generator for holding of the receptacle until problems are resolved.
4.17	**OHS-SPM**	If approved, assures that the radionuclide(s) and amount(s) of accountable materials provided on the PFS-195 and PFS-196 forms are in agreement and are the same as recorded on the SPM-23 form. Signs the PFS-195, attaches a copy of the SPM-23, and returns the PFS-195, PFS-196, and SPM-23 forms to the Waste Generator.
4.18	**OHS-HP**	Performs a radiation survey on the receptacle, records on the PFS-195 form the maximum activity detected at contact.
4.19	**OHS-HP**	Records the type of receptacle.
4.20	**OHS-HP**	Checks that detectable loose contamination on the receptacle is removed prior to signing the PFS-195 forms.

	Personnel Involved	Responsibility
4.21	OHS-HP	Checks the PFS-195 and PFS-196 forms for completeness of information including required signatures.
4.22	OHS-HP	Signs the PFS-195 form.
4.23	OHS-HP	Completes the information on a PFS-172 tag and attaches it to the receptacle.
4.24	OHS-HP	Sends the PFS-195 and PFS-196 forms, and a copy of the SPM-23 form, if applicable, to PFS-WMO.
4.25	PFS-WMO	Reviews the PFS-195 and PFS-196 forms (documentation) to assure that the waste is adequately documented and the required signatures are provided. For wastes that will require packaging as TRU waste, assures that the Waste Generator is on the approval list for documenting TRU waste and that the waste is in the correct type of receptacle. PFS-WMO also performs the following:
4.26	PFS-WMO	If the review indicates that information is missing, or that the waste is in the wrong type of receptacle, the documentation may be returned to the Waste Generator with a message describing the inadequacy and the requirements for acceptance of the waste.
4.27	PFS-WMO	If the review indicates that the documentation is acceptable and the waste is in the correct receptacle, the receptacle is scheduled for pickup.
4.28	PFS-WMO	Checks to determine that the receptacle is satisfactory and sealed, and that the PFS-172 tag agrees with the serial number of the PFS-195 form. If the receptacle is inadequate or the tag does not agree with the serial number, the receptacle is not picked up, and the inadequacy is reported to the PFS-WMO Supervisor for resolution with the Waste Generator.

	Personnel Involved	Responsibility
4.29	**PFS-WMO**	Transports waste receptacles to Building 306 for SPM-NDA assay.
4.30	**SPM-NDA**	Assays the receptacles for fissile material content and returns the receptacles to PFS-WMO. Any discrepancy found between the amounts shown on the PFS-195 form and the amounts detected by the assay are reported to OHS-SPM for resolution with the Waste Generator, and the receptacle is red tagged until the discrepancy is resolved.
4.31	**SPM-NDA**	Records positive assay results for Pu-239 and U-235 on the PFS-195 forms marked TRU. NDQ may be used for "no detectable quantity."
4.32	**SPM-NDA**	Places receptacles with no fissile material discrepancy in a designated area of Building 306.
4.33	**SPM-NDA**	Sends a monthly summary report of assay activities to the WMO Manager.
4.34	**PFS-WMO**	Weighs receptacles containing TRU radionuclides, determines which receptacles are to be packaged as TRU, and performs the following:
4.35	**PFS-WMO**	Maintains waste segregation requirements.
4.36	**PFS-WMO**	Bales compactible/combustible wastes as appropriate.
4.37	**PFS-WMO**	Places receptacles into shipping containers. Weighs and labels packages and prepares package documentation.
4.38	**PFS-WMO**	Arranges for shipment of waste packages to a radioactive waste storage and/or disposal facility and prepares shipment documentation.
4.39	**PFS-WMO**	Certifies waste packages meet the Waste Acceptance Criteria of the storage and/or disposal facility and the DOT transportation requirements.

	Personnel Involved	Responsibility
4.40	PFS-WMO	Ships waste packages and maintains waste package and shipment documentation.
4.41	OHS-HP	Performs radiation surveys of waste packages and shipments. Results are recorded on data forms.
4.42	OHS-HP	Ensures that instruments used for surveys are in good working order and have been calibrated within six months.
4.43	OHS-HP	Maintains a survey instrument calibration log.

SECTION IE

LIQUID RADIOACTIVE WASTE DISPOSAL

Free Liquid Wastes are prohibited from being sent to a Department of Energy Radioactive Waste Storage and Disposal Facility. Free liquids are those which have not been immobilized (can drain or spill from their containment).

Note: Hoses, vials, vessels, etc., containing liquids are not to be placed into Solid Radioactive Waste Receptacles (TV cartons, Blickman can inserts, etc.) Immobilization of liquid radioactive wastes must be performed by PFS-WMO. The only exception is aqueous liquid residuals from drained bottles, hoses, etc., which may be immobilized by the Waste Generator.

Immobilized liquids or liquid residues that are sent to a DOE Radioactive Waste Storage and Disposal Facility as Solid Wastes must meet the Waste Acceptance Criteria of that facility.

1.0 WASTE ACCEPTANCE CRITERIA FOR TREATED non-TRU LIQUID WASTES

1.1 Corrosive Liquids must be treated to obtain a pH of 4 to 10.

1.2 Liquids must be immobilized. When absorbents such as vermiculite are used, twice as much absorbent as is needed must be used to assure immobilization.

2.0 WASTE ACCEPTANCE CRITERIA FOR TREATED TRU LIQUID WASTES

A TRU waste certification program must be instituted and followed as specified by the ANL-IL TRU Waste Certification and QA Plans. The plans specify the responsibilities, training, procedures, waste management and QA measures that will be used to certify waste packages. The plans are approved by the Waste Isolation Pilot Plant Project Office (WPO) and the Waste Acceptance Criteria Certification Committee (WACC) and the program is subject to audits by the WACC, DOE-CH, and the ANL-IL Quality Assurance Office.

2.1 **Liquid Waste**

TRU waste shall not be shipped in free liquid form. Minor liquid residues remaining in well drained bottles, cans, and similar containers are acceptable.

Note: PFS-WMO will determine if radioactive wastes are to be packaged as TRU or non-TRU based upon the gross weight of the solid waste receptacle and the radionuclides and quantity it contains. Therefore, unless the Waste Generator is certain that the solid waste receptacle will contain sufficient TRU radionuclides and quantities to cause

it to be packaged as TRU waste, the waste must not contain free liquids in any amount. Free liquids are prohibited in non-TRU waste. TRU liquid wastes must be documented on a PFS-199 Liquid Radioactive Waste Disposal Requisition and be treated and immobilized by PFS-WMO using approved procedures. See Appendix A for a copy of a PFS-199 form and instructions for its completion.

3.0 LIQUID RADIOACTIVE WASTE DISPOSAL REQUISITION

The Liquid Radioactive Waste Disposal Requisition (form PFS-199) is available from the OHS-HP offices. The PFS-199 is used to provide essential information about a liquid waste to allow determination of immobilization or solidification methods. Any radioactive liquid wastes which include organic, inorganic, or hazardous waste as defined by 40 CFR 261, Subparts C and D, are to be documented on the PFS-199 form. This includes scintillation counting fluids that contain small amounts of radionuclides. Many of the scintillation cocktail fluids are hazardous wastes because they have the characteristic of being ignitable (flash point below 140°F) or contain solvents listed in Subpart D.

Note: **Organic scintillation fluids must not be absorbed (e.g., into vermiculite).**

The PFS-199 form is to be used to document the contents of one receptacle or more than one receptacle of **identical** solutions.

3.1 **Sections 1 and 2** are to be completed by an individual (Waste Generator) having cognizance of the liquid, chemical composition, and the radionuclides and amounts.

3.1.1 For treated and immobilized liquid wastes that are to be packaged as TRU wastes (TRU content greater than 100 nCi/g as determined by PFS-WMO), the Waste Generator must be on record as having participated in an annual training class on TRU waste. Only those individuals who have received this instruction will be considered authorized by PFS-WMO to sign a PFS-199 form as the Waste Generator. TRU waste will only be accepted from individuals on the authorization list.

4.0 LIQUID RADIOACTIVE WASTE DISPOSAL PROCEDURES

The procedures for handling and disposal of liquid radioactive wastes are outlined below. The format designates the proper sequence of actions required to carry out the disposal procedure.

	Personnel Involved	Responsibility
4.1	Waste Generator	Plans for proper handling of liquid waste prior to its production and is to determine the containment needs for safe handling.
4.2	Waste Generator	Consults with PFS-WMO to determine proper containment of the liquid for safe handling. Note: PFS-WMO has receptacles of various sizes available for use.
4.3	Waste Generator	Consults with OHS-HP on shielding needs, if applicable.
4.4	Waste Generator	After carefully considering possible chemical reactions and potentially hazardous mixtures, fills and seals the liquid waste container.
4.5	Waste Generator	Completes Sections 1 and 2 on the PFS-199 form.
4.6	Waste Generator	Labels container with Serial Number of PFS-199 form, e.g., RL 1531.
4.7	Waste Generator	Notifies OHS-HP of a full liquid waste container and requests a radiation survey of the container.
4.8	Waste Generator	Signs the PFS-199 form and provides Payroll Number, telephone number, and date signed.
4.9	Waste Generator	If accountable radionuclides are in the liquid, provides the PFS-199 form to OHS-SPM for review and approval.
4.10	OHS-SPM	If accountable radionuclides are in the liquid, approves or disapproves of disposal.
4.11	OHS-SPM	If disapproved, holds the PFS-199 and arranges with the Waste Generator for safe storage of the receptacle until problems are resolved.

	Personnel Involved	Responsibility
4.12	**OHS-SPM**	If approved, signs the PFS-199 form, provides SPM-23 form, Payroll Number, date signed, and attaches a copy of the SPM-23 to the PFS-199, and returns the PFS-199 to the Waste Generator.
4.13	**OHS-HP**	Performs survey of liquid waste receptacle and records surface reading and contamination results on the PFS-199 form. NDQ, for no detectable quantities, may be used if no contamination is detected.
4.14	**OHS-HP**	Checks the PFS-199 form for completeness of information, including required signatures, and has any missing information added.
4.15	**OHS-HP**	Signs the PFS-199 form, and provides Payroll number, and date of survey.
4.16	**OHS-HP**	Completes the information on a PFS-172 label and affixes the label on the liquid waste container.
4.17	**OHS-HP**	Sends the PFS-199 form and a copy of the SPM-23 form, if applicable, to PFS-WMO.
4.18	**PFS-WMO**	Reviews the PFS-199 form to assure that the liquid is adequately documented and the required signatures are provided. Ensures that the Waste Generator is on the authorized list for documenting TRU wastes.
4.19	**PFS-WMO**	If the review discloses that more information is needed, the PFS-199 form may be returned to the Waste Generator with a message describing the inadequacy and the requirements that must be fulfilled for acceptance of the liquid.
4.20	**PFS-WMO**	Determines proper treatment and disposal requirements.
4.21	**PFS-WMO**	If the review finds that the documentation is acceptable, the liquid

	Personnel Involved	Responsibility
		waste receptacle is scheduled for pickup.
4.22	PFS-WMO	Checks to determine that the liquid waste receptacle is sealed and adequate for safe handling of the liquids, and checks that the PFS-172 tag agrees with the Serial Number of the PFS-199 form. If the receptacle is found to be inadequate, or the tag does not agree with the Serial Number, the receptacle is not picked up and is reported to the PFS-WMO Supervisor for resolution with the Waste Generator.
4.23	PFS-WMO	Transports acceptable and properly tagged liquid waste receptacles to Building 306 for treatment or processing of the liquids.
4.24	PFS-WMO	Treats liquids, except scintillation liquids, to an acceptable solid form for shipment.
4.25	PFS-WMO	Scintillation liquids are normally packaged and stored until shipped to a hazardous waste disposal facility for incineration.
4.26	PFS-WMO	Provides the documentation and reporting requirements as required for treatment, disposal, or shipment for disposal.
4.27	OHS-HP	Performs radiation surveys as required for safe handling and treatment of wastes, and surveys waste shipments. Results are recorded on data forms and shipment documentation.

APPENDIX A

RADIOACTIVE WASTE DISPOSAL

REQUISITION FORMS

(PFS-195, PFS-196, and PFS-199)

WITH INSTRUCTIONS FOR THEIR COMPLETION

SOLID RADIOACTIVE WASTE DISPOSAL REQUISITION RS № 04253

Sec. 1

Div ☐☐☐☐

Bldg ☐☐☐☐

Class: TRU ☐ Non-TRU ☐

Type: Combustible ☐ Non-Combustible ☐

(only one class & type on requisition)

Sec. 2 Receptacle Number	1	2	3	4
A. Room Number				
B. Secondary Container Identification				
C. Volume % organic 0 to 100 %				
D. Compactible? check if yes	☐	☐	☐	☐
E. Accountable Materials? check if yes	☐	☐	☐	☐
No. (explain yes answers in supplement)	Yes No	Yes No	Yes No	Yes No
1. Fines: > 200 grams below 200 microns?	☐ ☐	☐ ☐	☐ ☐	☐ ☐
2. Fines: > 10 grams below 10 microns?	☐ ☐	☐ ☐	☐ ☐	☐ ☐
3. Liquids or Absorbed Liquids?	☐ ☐	☐ ☐	☐ ☐	☐ ☐
4. Pyrophorics?	☐ ☐	☐ ☐	☐ ☐	☐ ☐
5. Pressurized vessels?	☐ ☐	☐ ☐	☐ ☐	☐ ☐
6. Poisons A or B?	☐ ☐	☐ ☐	☐ ☐	☐ ☐
7. Corrosives?	☐ ☐	☐ ☐	☐ ☐	☐ ☐
8. Biological Material?	☐ ☐	☐ ☐	☐ ☐	☐ ☐
9. Sludges?	☐ ☐	☐ ☐	☐ ☐	☐ ☐
10. Special Hazards? or Mixed Waste?	☐ ☐	☐ ☐	☐ ☐	☐ ☐
Sec. 3 Radionuclides & Quantity				
1A Element & Isotope				
1B Quantity - Specify gram(g) or Curie(C)	E	E	E	E
2A Element & Isotope				
2B Quantity - Specify gram(g) or Curie(C)	E	E	E	E
3A Element & Isotope				
3B Quantity - Specify gram(g) or Curie(C)	E	E	E	E
4A Element & Isotope				
4B Quantity - Specify gram(g) or Curie(C)	E	E	E	E

Sec. 4 One supplemental sheet is to be completed for each requisition.

The above sections and the attached supplement are complete and accurately describe the waste in the receptacles listed.

Cost Code _____ Signature of Generator _____ Payroll # _____ Phone# _____ Date _____

Sec. 5 OHS	Direct Radiation mR/h				
	Receptacle Type				

Survey performed by: _____ Signature of Surveyor _____ Payroll # _____ Date _____

Sec. 6 SPM

I have been notified of accountable materials listed on this requisition.

SPM 23 # _____ Signature of Representative _____ Payroll # _____ Date _____

Sec. 7 NDA	PU239 Assay results grams				
	U 235 Assay results grams				

Assay performed by: _____ Signature of Assayer _____ Payroll # _____ Date _____

Sec. 8 WMO	Shipping Container S/N				
	Gross Weight of Receptacle Pounds				
	Total Curies in Sec. 3 Total Ci	E	E	E	E
	Total Alpha Curies Alpha Ci	E	E	E	E
	Total TRU Curies TRU Ci	E	E	E	E
	TRU nano Curies/gram nCi/g	E-09	E-09	E-09	E-09
	Reviewed by Initials				

FFS-103 (6-85) White - WMO, Canary - Generator, Pink - OHS GPO 1988-886-388

SOLID RADIOACTIVE WASTE DISPOSAL REQUISITION

RS

SUPPLEMENTAL SHEET

(one required for each requisition)

The number placed in the upper corner of this supplement must match the number of the Solid Radioactive Waste Disposal Requisition used to document your waste. The sections of this form are to supply additional information about the waste in each receptacle listed on the requisition.

Receptacle No.	Section A: Provide physical (generic) description of waste (e.g., rags, paper, glassware, plastics, steel, etc.). Items over one cubic foot are to include a description (e.g., vacuum pump, electrical motor, furnace, HEPA filter, ductwork, etc.)	Section B: If "Accountable Materials" was marked "yes," list materials and provide weight for each. Otherwise, mark this section "NA" for not applicable.	Section C: If any of Section 2 questions (1-10) were marked "yes," provide the "yes" question number and explain the constituent. Otherwise, mark this section "NA" for not applicable.
1			
2			
3			
4			

PFS 198 (3 84)

White WMO, Canary Generator, Pink OHS

☆U.S. GOVERNMENT PRINTING OFFICE: 1984-756-011

INSTRUCTIONS FOR COMPLETING SECTIONS 1-7 ON PFS-195 AND PFS-196 REQUISITIONS

Sections 1 through 4 on the Solid Radioactive Waste Disposal Requisition (PFS-195) and its supplemental sheet (PFS-196) are to be completed by an individual who is cognizant of the waste and its constituents. The PFS-196 is a continuation of Section 4 on the PFS-195. Both the PFS-195 and PFS-196 must be completed as a set in order for the documentation to be acceptable.

The PFS-195 has four vertical (receptacle) columns numbered 1-4, and the PFS-196 has four horizontal (receptacle) rows numbered 1-4. Each of the four numbers is to be used to document the contents of one receptacle. For example, if one receptacle is to be documented, use column 1 and row 1, two receptacles use columns 1 and 2 and rows 1 and 2, etc. If more than four receptacles are to be documented, an additional PFS-195 and PFS-196 must be used.

Section 1

Division and Building: Provide the symbols used to identify your division and the building number where the waste is located.

Class: If the waste in the receptacle(s) to be documented on the PFS-195 and PFS-196 contains TRU (Transuranic, elements with atomic numbers greater than 92 and U-233), place an X in the "TRU" square; otherwise, place an X in the "Non-TRU" square. If the TRU square is marked, all receptacles to be documented on a PFS-195 must contain at least one TRU radionuclide. If the non-TRU square is marked, no receptacle is to contain TRU nuclides.

Note: When the TRU square is marked, the TRU radionuclide(s) and quantity must be listed in Section 3. PFS-WMO will determine if the receptacle(s) will be packaged as TRU (TRU content greater than 100 nanocuries per gram) or as non TRU waste based upon the quantity of TRU provided in Section 3 and the weight of the receptacle, determined in Section 8 by PFS/WMO.

TYPE: If the waste in the receptacle(s) contains combustible waste, mark the "Combustible" square; otherwise, mark the Non-Combustible square. If the Combustible square is marked, all receptacles must contain combustible waste; likewise, if the Non-Combustible square is marked, all receptacles must contain non-combustible wastes.

Section 2

Room Number: Provide the room number where the receptacle is located.

Secondary Container Identification: Provide the identification number (ID/N) of the Blickman can, metal TV carton overpack, drum lid, etc. If the ID/N is not available, place a piece of tape on the secondary container and mark a letter A through Z, and use the letter A-Z as the secondary container identification. Note: it should be ascertained that the same letter designation was not used for other secondary containers in the room.

INSTRUCTIONS FOR COMPLETING SECTIONS 1-7 ON PFS-195 AND PFS-196 REQUISITIONS

(Section 2 cont.)

VOLUME % ORGANIC: Estimate the percent of waste in the receptacle that is organic. Use a whole number 1-100 to represent %.

Compactible: If the waste in the receptacle is compactible, mark the "yes" square; otherwise, leave blank to represent not compactible.

Accountable Materials: If the receptacle contains accountable materials that must be accounted for by Special Materials, place an X in the yes square and list the materials and amounts in Section C of the PFS-196; otherwise, leave blank to represent no accountable materials. (See the list of accountable materials provided on the "Definitions for Terms Used on the SRW Requisition."

Waste Constituents questions 1-10:

All questions 1-10 must be answered either yes or no. (See "Waste Form Questions 1-10 on PFS-195 Data Form.")

Section 3:

Radionuclides and Quantity: Up to four sets of information can be provided for radionuclides and quantities. A set contains a number (1-4) followed by an A and B. The A part of a set is to list the element and isotope. For example, Pu-239, U-235, and Co-60 is an acceptable way to list an element and its isotope; however, Pu, U, and Co are not acceptable because the isotopes are not provided.

If the TRU class is marked in Section 1, the TRU radionuclides are to be listed first in decreasing order in respect to their curie quantity, followed by any non-TRU radionuclides in decreasing order in respect to their curie quantity.

If the non-TRU class is marked in Section 1, the radionuclides should be listed in decreasing order in respect to their curie quantity.

The quantity of a radionuclide is to be provided using (E) scientific notation with the letter E representing the number 10. For example .005 would be listed as 5.0E-3, 5.0 as 5.0E+0, 50 as 5.0E+1, etc. The sign (+ -) which follows the E must be provided.

The unit of the quantity must be provided and is to be placed into the box provided to the right of the quantity. A capital "C" is to be used to represent curies, and a small "g" is to be used to represent grams. It is important to use a small g because the capital G can be misread as a c when it is written.

INSTRUCTIONS FOR COMPLETING SECTIONS 1-7 ON PFS-195 AND PFS-196 REQUISITIONS

Section 4

One PFS-196 must be completed for each PFS-195. The PFS-196 is a continuation of the PFS-195. Each horizontal column on the PFS-196 represents the same receptacles as on the PFS-195.

Place the serial number of the PFS-195 into the RS boxes at the top of the PFS-196 and follow the instructions provided at the beginning of each of the three sections (A-C).

When the information required on the PFS-195 (Sections 1-4) and PFS-196 (A-C) is complete, sign your name and provide your payroll number, phone number, date signed, and the cost code to be used to charge your waste in Section 4.

If no accountable materials are in the receptacles, proceed to step 1 below.

If accountable materials are in the receptacles, submit the PFS-195 and PFS-196 to the PFS/Special Materials representative in your area. After the representative reviews the accountable materials, signs the PFS-195 (Section 6), attaches a copy of the SPM-23, and returns the signed Section 6 to you:

1. Retain the canary copy of the PFS-195 and PFS-196 as your record.

2. Provide the original and pink (OHS) copies of the PFS-195 and PFS-196, (and copy of SPM-23 form if applicable) to the Health Physics Technician in your Area.

Section 5

This section is to be completed by a Health Physics Technician. For each receptacle documented, record the results of the highest beta/gamma level detected at direct contact with the survey instrument. Allowances do not need to be made for the distance between the instrument's sensor and the receptacle.

For each receptacle documented, provide the type of receptacle. Examples: 5PC (5 gallon metal pail), 5FD (5 gallon fiber Drum), TV (TV carton), 55 drum (55 gallon metal drum), etc.

When Section 5 information has been provided, sign your name and fill in the payroll number and the date of the survey.

1. Retain the Pink copies of the PFS-195 and 196 as your record.

2. Submit the completed WMO copies of the PFS-195 and 196, and the SPM-23 copy (if applicable) to: WMO Supervisor, Building 306.

INSTRUCTIONS FOR COMPLETING SECTIONS 1-7 ON PFS-195 AND PFS-196 REQUISITIONS

Section 6

This section is to be completed by a SPM Representative when accountable materials are being disposed. Check that the amount of radioactive accountable materials identified in Section 3 of the PFS-195 agrees with the amount provided in Section B of the PFS-196.

If this section is required, sign your name, and provide your payroll number and date signed.

1. Attach a copy of the SPM-23 form to the PFS-195 and 196.

2. Return the PFS-195 and 196 to the Waste Generator.

Section 7

This section is to be completed by the NDA Assayer for wastes that have been classified, in Section 1, as TRU. For each receptacle documented, provide the amount of Pu-239 or U-235 detected. If none is detected, write NDQ for no detectable quantities.

When the infomation has been supplied, sign your name, and provide your payroll number and date of assay.

Definitions for Terms Used on the Solid Radioactive Waste Disposal Requisitions

Accountable Materials:

Americium 241	Lithium 6
Americium 243	Neptunium 237
Berkelium 249	Osmium
Beryllium	Palladium
Boron-10	Plutonium Isotopes
Californium 252	Platinum
Curium 246	Rhodium
Deuterium	Silver
Gallium	Stable Separated Isotopes
Gold	Thorium Isotopes
Hafnium	Tritium
Heavy Water	Uranium Isotopes
Iridium	Zirconium

Absorbed Liquids: Liquids that have been absorbed into rags, paper tissue, vermiculite, etc.

Biological Material: Materials from living organisms that produce gases or liquids during decomposition.

Combustible: Materials that will sustain combustion in atmospheric air when exposed to an ignition source of 1475° F for a period of 5 minutes.

Corrosives: Materials that will greatly weaken or destroy steel receptacles in a relatively short time. Corrosive materials normally have either a low or high pH.

Fines: Powders, dusts, glovebox sweepings, etc.

Mixed Waste: Radioactive waste that also contains any of the hazardous waste constituents that are identified in 40 CFR 261. Note: Lead is a hazardous waste constituent.

Noncompactible: Materials that are not readily compactible when a force of 20 psig is applied: Examples are most metals, blocks of plastic, pipe, concrete, rocks, glassware etc.

Organic: Materials derived from plant or animal life. Examples are paper, rags, wood, most plastics, etc.

Poisons A or B: Toxic materials that are defined as Poisons A or B by 49 CFR 172.101.

Definitions for Terms Used on the Solid Radioactive Waste Disposal Requisitions

Pressurized Vessels: A container that is pressurized with a gas to greater than 7 psig, or is capable of being pressurized with a gas to greater than 7 psig. This includes areosol cans, gas cylinders, sealed pipes, etc.

Pyrophorics: Materials that will ignite spontaneously in dry or moist air at temperatures below 130° F.

Receptacle: A container that is approved by WMO and used to confine radioactive waste. Examples of receptacles are TV cartons, fiber drums, five-gallon pails (TRU) and 55-gallon drums (TRU).

Secondary Container: A container that is used to hold and protect a waste receptacle, e.g., Blickman can.

Special Hazards: Explosive items or materials that include any selected chemical compound, mixture, or device that has the primary purpose to function by explosion, i.e., with substantial instantaneous release of gases and heat. See 49 CFR subpart C for a further definition of explosive materials.

Also materials that require special handling for safety reasons.

Sludges: A soft mud, slush, or mire that contains materials which may corrode a steel receptacle. Also see corrosives.

TRU Waste: Radioactive waste containing U-233 or radionuclides having atomic numbers 93 and above. Note: PFS-WMO will determine whether this class of waste will be packaged as TRU waste (greater than 100 nanocuries per gram) or as non-TRU based upon the quantity of radionuclides provided in Section 3 on the PFS-195 form and the gross weight of the receptacle obtained by PFS-WMO in Section 8.

LIQUID RADIOACTIVE WASTE DISPOSAL REQUISITION RL 00330

Sec. 1

Div ☐☐☐☐ Class: Type:

Bldg ☐☐☐☐ TRU ☐ Flammable ☐

Room ☐☐☐☐ Non-TRU ☐ Non-Flammable ☐

(only one class and type on a requisition)

Sec. 2

(only one vessel on each requisition unless all vessels contain identical solutions)

A. pH of solution ☐ amount of solution ☐

Sp.g. of solution ☐ amount units ☐

B. Only use this space if all vessels contain identical solutions.

number of vessels ☐

C. accountable materials? circle either

yes or no

D. Radionuclides and Quantity

E. List all chemicals in solution using generic names (no symbols) and one line per chemical.

F. Accountable Materials

Line	Isotope	Quantity	C or g	Chemical Name	Amount	U	Materials	g
1		|E| | |						
2		|E| | |						
3		|E| | |						
4		|E| | |						

The above sections are complete and accurately describe the liquid and its constituents.

Signature of Generator Payroll # Date Phone # Cost Code

Sec. 3

OHS.

Direct Radiation from Vessel mRem/h _____ Surface Contamination _____

Signature of Surveyor Payroll # Date

Sec. 4

SPM

I have been notified of accountable materials:

Signature of Representative Payroll # Date SPM 23 #

Sec. 5

Approved for waste pickup: _____ Signature of Supervisor Date

Waste Treatments:

☐ Absorption ☐ Solid Matrix

☐ pH adjustment ☐ Other _____

WMO

Picked up by: _____ Signature of Mechanic Payroll # Date WO #

Waste Treated by: _____ Signature of Mechanic Payroll # Date Batch #

PFS-199

WASTE GENERATOR'S INSTRUCTIONS FOR COMPLETING A PFS-199 DATA FORM (LIQUID RADIOACTIVE WASTE DISPOSAL REQUISITION)

Section 1

Div., Bldg., Room:

Provide your Division (Div), and Building (Bldg) and Room number where the waste is located. For DOE/NBL, use NBL for division.

Class:

If the liquid contains TRU nuclides, mark the TRU box; otherwise mark the non-TRU box. Note: If TRU is marked, the TRU nuclides and amounts must be shown in Section D.

Type:

If the liquid is flammable, mark the flammable box; otherwise, mark the nonflammable box.

Section 2

Subpart A

Provide the pH of solution

Provide the specific gravity of solution.

Provide the amount of solution in gallons (gals) or pounds (lbs).

Provide the amount of units (either gals or lbs)

Subpart B

Only use this subpart if more than one vessel is used to contain identical solutions including radionuclides and quantities; otherwise mark the box NA for not applicable.

Subpart C

If the solution contains accountable materials, circle "yes"; otherwise circle "no."

Subpart D (Radionuclides and Quantity)

Isotopes

Up to four radionuclides can be listed in lines 1-4. If TRU isotopes are in the solution, identify the TRU isotopes first in decreasing order according to curie amounts prior to listing non-TRU isotopes. For non-TRU isotopes, identify the isotopes in

WASTE GENERATOR'S INSTRUCTIONS FOR COMPLETING A PFS-199 DATA FORM (LIQUID RADIOACTIVE WASTE DISPOSAL REQUISITION)

Isotopes (cont.)

decreasing order according to the curie amounts. Both the element and isotope must be provided to be acceptable. For example, Pu-239 and Cs-137 are acceptable, but Pu and Cs are not because the isotope is not provided.

Quantity

Provide the quantity of each of the radionuclides using E (scientific notation) with the letter E representing the base 10. For example, .000005 (5 micro) would be listed 5.0E-06, .005 (5 mili) would be listed 5.0E-03, 5.0 would be listed 5.0E+00, and 50 would be listed 5.0E+01, etc.

C (curie) or g (gram)

Provide the quantity unit C for curie, or g for gram. Use the small letter g for grams because a capital G can be misread as a C. Either the quantity unit C or g must be provided to be acceptable.

Subpart E (chemicals and amounts in solution)

Chemical name

Using lines 1 through 4, list the chemicals in the solution using generic names (no symbols). Examples: nitric acid, sulfuric acid, vacuum pump oil, etc.

Note: If more than four chemicals are in the solution, use a sheet of paper to list the chemicals and amounts and attach the sheet to the PFS-199 form. When an additional sheet is used, write "see attached sheet," in line 1 of chemical name and leave lines 2, 3 and 4 blank. On the attached sheet, place the serial number of the PFS-199 at the top of the page (example RL 00131) and list the chemicals and amounts (one line per chemical and amount) in the same format as that required on the PFS-199.

Amount and U (amount units)

Provide the amount of the chemical in the solution and the amount unit. Examples: 10 grams would be shown as 10 g, 10 pounds would be shown as 10 lb, etc. The amount of chemical in percent of the solution is also acceptable and the unit is to be shown as percent (%). When percent is used, the total of all the chemicals must add up to 100%, and water will therefore be included as a chemical.

WASTE GENERATOR'S INSTRUCTIONS FOR COMPLETING A PFS-199 DATA FORM (LIQUID RADIOACTIVE WASTE DISPOSAL REQUISITION)

Subpart F (accountable materials and amounts in solution)

Materials and g (grams)

If the accountable materials question in Subpart C was answered yes, list the accountable materials, and the amounts in grams. If the accountable materials were listed as an isotope on a line in Subpart D, place a capital A on the same line in Subpart F. If the quantity of the accountable isotopes in Subpart D was shown in curies, the curies must be converted to gram units for Subpart F.

Signatures

Sign the PFS-199 (signature of generator), provide your payroll number, the date signed, phone number, and the cost code to be used for handling and treating the wastes. For DOE/NBL waste generators, use your film badge number for the payroll number.

If accountable materials are in the waste, forward the PFS-199 to the PFS-SPM representative in your area for review and signature. After the PFS-SPM signature is obtained, forward the signed PFS-199 and a copy of the SPM-23 form to the Health Physics office in your building.

WASTE GENERATOR'S INSTRUCTIONS FOR DOCUMENTING SCINTILLATION COCKTAIL VIALS CONTAINING RADIONUCLIDES

Note: These instructions are to be followed for documenting scintillation cocktail vials. Scintillation fluids in other containers are to be documented using the instructions titled "Waste Generator's Instructions For Completing a PFS-199 Data Form."

1. Use the Liquid Radioactive Waste Disposal Requisition (form PFS-199)

2. All Scintillation Cocktails documented on any PFS-199 must contain identical chemicals and amounts and identical radionuclides and amounts. Those with different chemicals and amounts and/or different radionuclides and amounts must be documented on another PFS-199.

3. The PFS-199 form is to be completed according to the instructions except for the following:

   Section A:

   Provide the amount of solution in each of the identical vials. Example: amount of solution "10", amount unit "mL"

   Section B:

   Provide the quantity (number) of identical vials being documented and write "scintillation cocktails" in space next to number box.

   Section D:

   Provide the Radionuclides and Quantity in each of the identical vials.

   Section E:

   Provide the names and amounts of chemicals in each of the identical vials.

APPENDIX B

EPA HAZARDOUS WASTES

or

RCRA WASTES

(As defined by 40 CFR 161, Subparts C and D)

The hazardous wastes identified in this Appendix are regulated by both the State of Illinois and the Federal Environmental Protection Agency (EPA) under the Resource Conservation and Recovery Act (RCRA). These wastes are commonly referred to as RCRA wastes.

Contents of Appendix B

1. Questionnaire for determining if a waste is RCRA regulated.
2. Excerpts from 40 CFR 161, Subparts C and D.

   Subpart C: Characteristics of Hazardous Waste

   Subpart D: List of Hazardous Waste

QUESTIONNAIRE FOR DETERMINING IF WASTE IS RCRA REGULATED
AS DEFINED BY 40 CFR 261, SUBPARTS C and D
Page 1 of 2

1.	Is the chemical pure (not spent or diluted and in original container)?	If no, go to step 3. If yes, go to step 2.
2.	Does chemical have a generic name listed in Table 3 or Table 4?	If no, go to step 3. If yes, write listed-waste-number in box A, then go to step 9.
3.	Is chemical a spent solvent used in degreasing and listed in Table 2 as F001?	If no, go to step 4. If yes, write F001 in box B, then go to step 9.
4.	Is chemical a spent solvent listed in Table 2 as F002, F003, F004 or F005?	If no, go to step 5. If yes, write the F-code in box B, then go to step 5.
5.	Is chemical a liquid, or liquid solution having a flash point below 140° F?	If no, go to step 5A. If yes, check box C, then go to step 6.
5A.	Is chemical a solid and under standard temperature and pressure capable of causing a fire through friction, absorption of moisture, or spontaneous chemical changes?	If no, go to step 5B. If yes, check box C, then go to step 6.
5B.	Is chemical a flammable gas?	If no, go to step 5C. If yes, check box C, then go to step 6.
5C.	Is chemical an oxidizer such as a chlorate, permanganate, organic peroxide, or a nitrate that yields oxygen readily to stimulate the combustion of organic matter?	If no, go to step 6. If yes, check box C, then go to step 6.
6.	Is chemical aqueous with a pH less than 2 or greater than 12.5?	If no, go to step 7. If yes, check box D, then go step 7.
7.	Is chemical normally unstable and readily undergoes violent changes without detonation?	If no, go to step 7A. If yes, check box E, then go to step 8.
7A	Does chemical react violently with water?	If no, go to step 7B. If yes, check box E, then go to step 8.

QUESTIONNAIRE FOR DETERMINING IF WASTE IS RCRA REGULATED
AS DEFINED BY 40 CFR 261, SUBPARTS C and D
Page 2 of 2

7B. When mixed with water, does the chemical generate toxic gases, vapors, or fumes in quantities sufficient to present a health hazard to human life or the environment?	If no, go to step 7C. If yes, check box E, then go to step 8.
7C. Is chemical a cyanide or sulfide which, when exposed to a pH condition between 2 and 12.5, can generate toxic gases, vapors, or fumes in quantities sufficient to present a health hazard to human life or the environment?	If no, go to step 7D. If yes, check box E, then go to step 8.
7D. Is chemical capable of detonation or explosive reaction if it is subjected to a strong initiating source or if heated under confinement?	If no, go to step 7E. If yes, check box E, then go to step 8.
7E. Is chemical capable of detonation or explosive decomposition or reaction at standard temperature and pressure?	If no, go to step 7F. If yes, check box E, then go to step 8.
7F. Is chemical a forbidden explosive as defined in 49 CFR 173.53 or 173.88?	If no, to to step 8. If yes, check box E, then go to step 8.
8. Does the chemical contain any of the contaminants listed in Table 1 at a concentration equal to or greater than the respective values provided in the table?	If no, go to step 9. If yes, place the D code in box F, then go to step 9.
9. Do any of the boxes (A through F) contain information?	If no, the chemical <u>is not</u> RCRA regulated If yes, the chemical <u>is</u> RCRA regulated as per the code(s) shown in the box(s).

QUESTIONNAIRE RESULTS

CHEMICAL IS RCRA REGULATED IF ANY OF THE BOXES CONTAIN INFORMATION

A	B	C	D	E	F
Listed Waste	Spent Solvent	D001	D002	D003	EP Toxic
☐	☐	☐	☐	☐	☐

EXCERPTS FROM 40 CFR 261, SUBPART C

CHARACTERISTICS OF A HAZARDOUS WASTE

A waste is defined as hazardous if it exhibits any one or any combination of the following characteristics:

Characteristic of Ignitability

A waste exhibits the characteristic of ignitability if a representative sample of the waste has any of the following properties:

1. It is a liquid, other than an aqueous solution containing less than 24 percent alcohol by volume, and has a flash point less than 140°F, as determined with an appropriate Closed Cup Flash Point Tester.

2. It is not a liquid and is capable, under standard temperature and pressure, of causing fire though friction absorption of moisture or spontaneous chemical changes and, when ignited, burns so vigorously and persistently that it creates a hazard.

3. It is an ignitable compressed gas as defined in 49 CFR 173.300 and as determined by the test methods described in that regulation or equivalent test methods.

4. It is an oxidizer as defined in 49 CFR 173.151.

Characteristic of Corrosivity

A waste exhibits the characteristic of corrosivity if a representative sample of the waste has either of the following properties:

1. It is aqueous and has a pH less than or equal to 2 or greater than or equal to 12.5, as determined by a pH meter using either an EPA test method or an equivalent test method.

EXCERPTS FROM 40 CFR 261, SUBPART C (continued)

2. It is a liquid and corrodes steel (SAE 1020) at a rate greater than 6.35 mm (0.250 inch) per year at a test temperature of 130°F.

Characteristic of Reactivity

A waste exhibits the characteristic of reactivity if a representative sample of the waste has any of the following properties:

1. It is normally unstable and readily undergoes violent change without detonating.

2. It reacts violently with water.

3. It forms potentially explosive mixtures with water.

4. When mixed with water, it generates toxic gases, vapors or fumes in a quantity sufficient to present a danger to human health or the environment.

5. It is a cyanide or sulfide bearing waste which, when exposed to pH conditions between 2 and 12.5 can generate toxic gases, vapors or fumes in a quantity sufficient to present a danger to human health or the environment.

6. It is capable of detonation or explosive reaction if it is subjected to a strong initiating source or if heated under confinement.

7. It is readily capable of detonation or explosive decomposition or reaction at standard temperature and pressure.

8. It is a forbidden explosive as defined in 49 CFR 173.51, or a Class A explosive as defined in 49 CFR 173.53 or a Class B explosive as defined in 49 CFR 173.88.

EXCERPTS FROM 40 CFR 261, SUBPART C (continued)

Characteristic of EP Toxicity

A waste exhibits the characteristic of EP toxicity if, using EPA test methods or equivalent, the extract from a representative sample of the waste contains any of the contaminants listed in Table 1 at a concentration equal to or greater than the respective value given in that Table. Where the waste contains less than 0.5 percent filterable solids, the waste itself, after filtering, is considered to be the extract for the purposes of this section.

2. A waste that exhibits the characteristic of EP toxicity, but is not listed as a hazardous waste in Subpart D, has the EPA Hazardous Waste Number specified in Table 1 which corresponds to the toxic contaminant causing it to be hazardous.

Table 1

MAXIMUM CONCENTRATION OF CONTAMINANTS
FOR THE CHARACTERISTIC OF EP TOXIC

EPA Hazardous Waste Number	Contaminant	Maximum Concentration (milligrams per liter)
D004	Arsenic	5.0
D005	Barium	100.0
D005	Cadmium	1.0
D007	Chromium	5.0
D008	Lead	5.0
D009	Mercury	.2
D010	Selenium	1.0
D011	Silver	5.0
D012	Endrin (1,2,3,4,10,10-hexachloro-1,7-epoxy-1,4,4a,5,6,7,8,8a-octahydro-1,4-endo, endo-5,8-dimethylano-naphthalene)	.02
D013	Lindane (1,2,3,4,5,6-hexa-chlorocyclohexane, gamma isomer)	.4
D014	Methoxychlor (1,1,1-Trichlor-2,2-bis p-methoxyphenyl ethane)	10.0
D015	Toxaphene ($C_{10}H_{10}Cl_8$, Technical chlorinated camphene, 67-69 percent chlorine)	.5
D016	2,4-D (2,4-Dichlorphenoxyacetic acid)	10.0
D017	2,4,4-TP Silvex (2,4,5-Trichlorophenoxypropionic acid)	1.0

40 CFR 261, SUBPART D

LISTS OF HAZARDOUS WASTE

40 CFR 261.30

a. A waste is a hazardous waste if it is listed in this Subpart.

b. The basis for listing the classes or types of wastes listed in this Subpart is indicated by employing one or more of the Hazard Codes:

Ignitable Waste	(I)
Corrosive Waste	(C)
Reactive Waste	(R)
EP Toxic Waste	(E)
Acute Hazardous Waste	(H)
Toxic Waste	(T)

c. Each hazardous waste listed in this Subpart is assigned an EPA Hazardous Waste Number which precedes the name of the waste.

40 CFR 261, Subpart D (continued)

Table 2

HAZARDOUS WASTES FROM NONSPECIFIC SOURCES

40 CFR 261.31

EPA Hazardous Waste Number	Hazardous Waste	Hazard Code
F001	The following spent halogenated solvents used in degreasing: tetrachlorethylene, trichloroethylene, methylene chloride, 1,1,1-trichloroethane, carbon tetrachloride, and chlorinated fluorocarbons; and sludges from the recovery of these solvents in degreasing operations.	(T)
F002	The following spent halogenated solvents: tetrachloroethylene, methylene chloride, trichloroethylene, 1,1,1-trichloroethane, chlorobenzene, 1,1,2,-trichloro-1,2,2-trifluoroethane, ortho-dichlorobenzene, and trichlorofluoromethane; and the still bottoms from the recovery of these solvents.	(T)
F003	The following spent non-halogenated solvents: xylene, acetone, ethyl acetate, ethyl benzene, ethyl-ether, methyl isobutyl ketone, n-butyl alcohol, cyclohexanone, and methanol; and the still bottoms from the recovery of these solvents.	(I)
F004	The following spent non-halogenated solvents: cresols and cresylic acid, and nitrobenzene; and the still bottoms from the recovery of these solvents.	(T)
F005	The following spent non-halogneated solvents: toluene, methyl ethyl ketone, carbon disulfide, isobutanol,and pyridine; and the still bottoms from the recovery of these solvents	(I,T)
F027	Discarded unused formulations containing tri-, tetra-, or pentachlorophenol or discarded unused formulations containing compounds derived from these chlorophenols. (This listing does not include formulations containing Hexachlorophene synthesized from prepurified 2,4,5-trichlorophenol as the sole component)	(H)

40 CFR 261, Subpart D (continued)

DISCARDED COMMERCIAL CHEMICAL PRODUCTS, OFF-SPECIFICATION SPECIES, CONTAINER RESIDUES, and SPILL RESIDUES THEREOF

Waste chemicals having the generic name listed in the following Tables 3 and 4 are regulated by RCRA. The chemicals listed in Table 3 (with the letter P) are identified as acute hazardous wastes (H) (40 CFR 161.33e). The chemicals that are listed in Table 4 (with the letter U) are identified as toxic wastes (T) (40 CFR 161.33f).

In addition to the waste chemicals listed in Tables 3 and 4; the following materials associated with those chemicals are also regulated:

1. Any container, or inner liner removed from a container, that has been used to hold an acute hazardous chemical (chemicals listed in Table 3 - assigned numbers beginning with the letter P), until the container or inner liner has been emptied and triple rinsed using a solvent capable of removing the chemical.

2. Any residue or contaminated soil, water or other debris resulting from the cleanup of a spill of the chemicals identified with either the letter P or U (chemicals listed in Tables 3 and 4).

TABLE 3

ACUTE HAZARDOUS WASTES

40 CFR 261.33e

(chemicals assigned EPA Hazardous Waste Numbers
beginning with the letter P)

Hazardous Waste No.	Substance
P023	Acetaldehyde, chloro-
P002	Acetamide, N-(aminothioxomethyl)-
P057	Acetamide, 2-fluoro-
P058	Acetic acid, fluoro-, sodium salt
P066	Acetimedic acid, N-[(methylcarbamoyl)oxy]thio-, methyl ester
P001	3-(alpha-acetonylbenzyl)-4-hydroxycoumarin and salts, when present at concentrations greater than 0.3%
P002	1-Acetyl-2-thiourea
P003	Acrolein
P070	Aldicarb
P004	Aldrin
P005	Allyl alcohol
P006	Aluminum phosphide
P007	5-(Aminomethyl)-3-isoxazolol
P008	4-Aminopyridine
P009	Ammonium picrate (R)
P119	Ammonium vanadate
P010	Arsenic acid
P012	Arsenic (III) oxide
P011	Arsenic (V) oxide
P011	Arsenic pentoxide
P012	Arsenic trioxide
P038	Arsine, diethyl-
P054	Aziridine
P013	Barium cyanide
P 24	Benzenamine, 4-chloro-
[illegible] 77	Benzenamine, 4-nitro-
P028	Benzene, (chloromethyl)-
P042	1,2-Benzenediol, 4-[1-hydroxy-2-(methylamino)ethyl]-
P014	Benzenethiol
P028	Benzyl chloride
P015	Beryllium dust
P016	Bis(chloromethyl) ether
P017	Bromoacetone
P018	Brucine
P021	Calcium cyanide
P123	Camphene, octachloro-
P103	Carbamidoselenoic acid
P022	Carbon bisulfide
P022	Carbon disulfide
P095	Carbonyl chloride
P033	Chlorine cyanide
P023	Chloroacetaldehyde
P024	p-Chloroaniline
P026	1-(o-Chlorophenyl)thiourea
P027	3-Chloropropionitrile
P029	Copper cyanides
P030	Cyanides (soluble cyanide salts), not elsewhere specified
P031	Cyanogen
P033	Cyanogen chloride
P036	Dichlorophenylarsine
P037	Dieldrin
P038	Diethylarsine
P039	0,0-Diethyl S-[2-(ethylthio)ethyl] phosphorodithioate
P041	Diethyl-p-nitrophenyl phosphate
P040	0,0-Diethyl O-pyrazinyl phosphorothioate
P043	Diisopropyl fluorophosphate
P044	Dimethoate
P045	3,3-Dimethyl-1-(methylthio)-2-butanone, 0-[(methylamino) carbonyl] oxime
P071	0,0-Dimethyl 0-p-nitrophenyl phosphorothioate
P082	Dimethylnitrosamine
P046	alpha, alpha-Dimethylphenethylamine
P047	4,6-Dinitro-o-cresol and salts
P034	4,6-Dinitro-o-cyclohexylphenol
P048	2,4-Dinitrophenol
P020	Dinoseb
P085	Diphosphoramide, octamethyl-
P039	Disulfoton
P049	2,4-Dithiobiuret
P109	Dithiopyrophosphoric acid, tetraethyl ester
P050	Endosulfan
P088	Endothall

Note: Complete P & U lists are included [illegible]

APPENDIX D

LABELS FOR RADIOACTIVE WASTE

Labels

CAUTION
RADIOACTIVE WASTE

TYPE: Comb _____ Non-Comb _____
TRU _____ Non-TRU _____
Comp _____ Non-Comp _____
Liquid _____ Solid _____

RADIATION: _____ mrem/h direct
Bldg. _____ Room _____ Date _____
Req. #: RS _____ RL _____
Receptacle # _____

PFS-172 (8-86)

Labels

COMBUSTIBLE-TRU

SOLID RADIOACTIVE WASTE (SRW)
TRANSURANIC

ITEMS CONTAMINATED WITH URANIUM-233 OR
ELEMENTS WITH ATOMIC NO. 93 OR ABOVE
AT GREATER THAN **100 nCi/g**

NO LIQUIDS

ANL-357 (7-81)

NON-COMBUSTIBLE-TRU

SOLID RADIOACTIVE WASTE (SRW)
TRANSURANIC

ITEMS CONTAMINATED WITH URANIUM-233 OR
ELEMENTS WITH ATOMIC NO. 93 OR ABOVE
AT GREATER THAN **100 nCi/g**

NO LIQUIDS

ANL-356 (7-81)

Labels

COMBUSTIBLE-NON-TRU

SOLID RADIOACTIVE WASTE (SRW)
NON-TRANSURANIC

DO NOT PUT ITEMS CONTAMINATED WITH URANIUM-233
OR ELEMENTS WITH ATOMIC NO. 93 OR ABOVE
AT GREATER THAN **100 nCi/g INTO THIS CONTAINER**

NO LIQUIDS

ANL 358 (7-81)

NON-COMBUSTIBLE-NON-TRU

SOLID RADIOACTIVE WASTE (SRW)
NON-TRANSURANIC

DO NOT PUT ITEMS CONTAMINATED WITH URANIUM-233
OR ELEMENTS WITH ATOMIC NO. 93 OR ABOVE
AT GREATER THAN **100 nCi/g INTO THIS CONTAINER**

NO LIQUIDS

ANL-470 (7-81)

APPENDIX E

MAXIMUM PERMISSIBLE CONCENTRATIONS (MPC)

ABOVE BACKGROUND

OF RADIONUCLIDES IN AIR AND WATER

APPENDIX F

Isotope Listing

Includes isotope, half-life,[1] specific activity in Ci/g,[2] and transport group.[3]

Element	Radionuclide	Half-Life	Specific Activity (Ci/g)
Actinium (89)	Ac^{227}	21.773 y	72.9
	Ac^{228}	6.13 h	2.24×10^{6}
Americium (95)	Am^{241} (TRU)[4]	433 y	3.43
	Am^{243} (TRU)	7370 y	2.00×10^{-1}
Antimony (51)	Sb^{122}	2.68 d	3.99×10^{5}
	Sb^{124}	60.2 d	1.75×10^{4}
	SB^{125}	2.7 y	1.06×10^{3}
Argon (18)	Ar^{41}	1.83 h	4.18×10^{7}
Arsenic (33)	As^{73}	80.3 d	2.23×10^{4}
	As^{74}	17.78 d	9.93×10^{4}
	As^{76}	26.3 h	1.57×10^{6}
	As^{77}	38.8 h	1.05×10^{6}
Astatine (85)	At^{211}	7.21 H	2.06×10^{6}
Barium (56)	Ba^{131}	12.0 d	8.30×10^{4}
	Ba^{133}	10.7 y	2.52×10^{2}
	Ba^{140}	12.79 d	7.29×10^{4}
Berkelium (97)	Bk^{249}	.88 y	1.63×10^{3}
Beryllium (4)	Be^{7}	53.3 d	3.50×10^{5}
Bismuth (83)	Bi^{206}	6.243 d	1.02×10^{5}
	Bi^{207}	38 y	45.5
	Bi^{210}	5.01 d	1.24×10^{5}
	Bi^{212}	60.60 m	1.46×10^{7}
Bromine (35)	Br^{82}	35.34 h	1.08×10^{6}
Cadmium (48)	Cd^{109}	453 d	2.64×10^{3}
	Cd^{115m}	44.8 d	2.53×10^{4}
	Cd^{115}	53.4 h	5.10×10^{5}
Calcium (20)	Ca^{45}	165 d	1.76×10^{4}
	Ca^{47}	4.536 d	6.12×10^{5}
Californium (98)	Cf^{249} (TRU)	351 y	4.09
	Cf^{250} (TRU)	13.1 y	1.08×10^{2}
	Cf^{252} (TRU)	2.64 y	5.37×10^{2}
Carbon (6)	C^{14}	5730 y	4.46
Cerium (58)	Ce^{141}	32.5 d	2.85×10^{4}
	Ce^{143}	33 h	6.64×10^{5}
	Ce^{144}	284 d	3.19×10^{3}

[1] Table of Isotopes, 7th ed., C. M. Lederer and V. S. Shirley. J. Wiley and Sons, Inc., N.Y., 1978
[2] Calculated.
[3] 49CFR 173.390
[4] (TRU) Transuranium Nuclide.

APPENDIX G

BASIC STORAGE

PRECAUTIONS FOR CLASSES OF CHEMICALS

AND EXAMPLES OF EACH CLASS

ACIDS

Acetic Acid	Nitric Acid
Benzoic Acid	Nitrous Acid
Chloroacetic Acid	Perchloric Acid
Chromic Acid	Phenol
Hydrobromic Acid	Phosphoric Acid
Hydrobromous Acid	Phosphorous Acid
Hydrochloric Acid	Propionic Acid
Hydrochlorous Acid	Sulfamic Acid
Hydrofluoric Acid	Sulfanilic Acid
Hydroiodic Acid	Sulfuric Acid
Iodic Acid	Sulfurous Acid

STORAGE PRECAUTIONS (ACIDS)

Store large bottles of acids on low shelf or in acid cabinets.

Segregate oxidizing acids from organic acids, flammable and combustible materials.

Segregate acids from bases and active metals such as sodium potassium, magnesium, etc.

Segregate acids from chemicals which could generate toxic gases upon contact such as sodium cyanide, iron sulfide, etc.

Use bottle carriers for transporting acid bottles.

Have spill-control pillows or acid neutralizers available in case acid spills.

BASES

Ammonium Hydroxide	Calcium Hydroxide
Bicarbonates, Salts of*	Potassium Hydroxide
Carbonates, Salts of**	Sodium Hydroxide

*Potassium bicarbonate, sodium bicarbonate, etc.
**Calcium carbonate, sodium carbonate, etc.

STORAGE PRECAUTIONS (BASES):

Segregate bases from acids

Store solutions of inorganic hydroxides in polyethylene containers.

Have spill-control pillows or caustic neutralizers available for caustic spills.

FLAMMABLES

SOLIDS

Benzoyl Peroxide
Calcium Carbide
Phosphorous, Yellow
Picric Acid

GASES

Acetylene
Ammonia
Butane
Carbon Monoxide
Ethane
Ethyl Chloride
Ethylene
Ethylene Oxide
Formaldehyde
Hydrogen
Hydrogen Sulfide
Methane
Propane
Propylene

LIQUIDS

Acetaldehyde
Acetone
Acetyl Chloride
Allyl Alcohol
Allyl Chloride
N-Amyl Acetate
N-Amyl Alcohol
Benzene
N-Butyl Acetate
N-Butyl Alcohol
N-Butylamine
Carbon Disulfide
Chlorobenzene
Cyclohexane
Diethylamine
Diethyl Carbonate
p-Dioxane
Ethanol
Ethyl Acetate
Ethyl Acrylate
Ethylamine
Ethyl Benzene
Ethylene Dichloride
Ethyl Ether
Ethyl Formate
Furan
Gasoline
Heptane
Hexane
Hydrazine
Isobutyl Alcohol
Isopropyl Acetate
Isopropyl Alcohol
Isopropyl Ether
Mesityl Oxide
Methanol
Methyl Acetate
Methyl Acrylate
Methylal
Methyl Butyl Ketone
Methyl Ethyl Ketone
Methyl Formate
Methyl Isobutyl Ketone
Methyl Methacrylate
Methyl Propyl Ketone
Morpholine
Naptha
Nitromethane*
Octane
Piperidine
Propanol
Propyl Acetate
Propylene Oxide
Pyridine
Styrene
Tetrahydrofuran
Toluene
Turpentine
Vinyl Acetate
Xylene

*Most nitrohydrocarbons are flammable

Additional info was included.
JRW 8/31/01

APPENDIX K

EXAMPLES OF NONCOMPATIBLE CHEMICALS

This appendix provides examples of noncompatible hazardous materials. The listing provided is by no means complete but does contain some of the more dangerous noncompatible mixtures. Contact Waste Management Operations prior to mixing chemicals for disposal purposes.

EXAMPLES OF NONCOMPATIBLE CHEMICALS

(This list is not complete, nor are all noncompatible mixtures shown)

CHEMICAL	KEEP OUT OF CONTACT WITH:
Alkaline metals, such as powdered aluminum or magnesium, sodium, potassium, etc.	Carbon tetrachloride or other chlorinated hydrocarbon, carbon dioxide, the halogens, or caustics.
Acetic Acid	Chromic acid, nitric acid, hydroxyl compounds, ethylene glycol, perchloric acid, peroxides, permanganates.
Ammonia, Anhydrous	Mercury (in manometers, for instance), chlorine, calcium hypochlorite, iodine, bromine, hydrofluoric acid anhydrous.
Ammonium Nitrate	Acids, metal powders, flammable liquids, chlorates, nitrites, sulfur, finely divided organic or combustible materials.
Aniline	Nitric Acid, hydrogen peroxide.
Bromine	Same as for chlorine.
Benxoyl Peroxide	Acids; sources of heat or impact
Carbon, Activated	Calcium hypochlorite and all oxidizing agents (sodium chlorate).
Copper	Acetylene, hydrogen, peroxide.
Chlorates	Ammonium salts, acids, metal powders, sulfur, finely divided organic or combustible materials.
Chromic Acid (Chromium Trioxide)	Acetic acid, naphthalene, acetone, camphor, glycerine, turpentine, alcohols and flammable liquids in general.
Chlorine	Ammonia, acetylene, butadiene, butane, methane, propane (or other petroleum gases), hydrogen, sodium carbide, turpentine, benzene finely divided metals.
Chlorine Dioxide	Ammonia, methane, phosphine, hydrogen sulfide.
Cumene Hydroperoxide	Acids--organic or inorganic.
Flammable Liquids	Ammonium nitrate, chromic acid, hydrogen peroxide, nitric acid, sodium peroxide and the halogens.
Fluorine	Isolate from everything.
Hydrocyanic Acid	Nitric acid, alkalis.
Hydrogen Peroxide	Copper, chromium, iron, most metals or their salts, alcohols, acetone, organic materials, aniline, nitromethane, any flammable liquid, combustible materials.

CHEMICAL	KEEP OUT OF CONTACT WITH:
Hydrofluoric	Ammonia, aqueous or anhydrous.
Hydrogen Sulfide	Fuming nitric acid, oxidizing gases.
Hydrocarbons (Butane, propane, benzene, gasoline, turpentine, etc.)	Fluorine, chlorine, bromine, chromic acid, sodium peroxide.
Iodine	Acetylene, ammonia (aqueous or anhydrous), hydrogen.
Mercury	Acetylene, fluminic acid, ammonia
Nitric acid (concentrated)	Acetic acid, aniline, chromic acid, hydrocyanic acid, hydrogen sulfide, flammable liquids (acetone) flammable gases, sawdust, organics.
Oxalic acid	Silver, mercury.
Perchloric Acid	Acetic anhydride, bismuth and its alloys, alcohol, paper, wood.
Potassium	Carbon tetrachloride, carbon dioxide, water.
Potassium Chlorate	Sulfuric and other acids.
Potassium Perchlorate (See also Chlorates)	Sulfuric and other acids.
Potassium Permanganate	Glycerine, ethylene glycol, benzaldehyde, sulfuric acid.
Silver	Acetylene, oxalic acid, tartaric acid, fulminic acid, ammonium compounds.
Sodium	Carbon tetrachloride, carbon dioxide, water, acid chlorides.
Sodium Peroxide	Ethyl or methyl alcohol, glacial acetic acid, acetic anhydride, benzaldehyde, carbon disulfide, glycerine, ethylene glycol, ethyl acetate, methyl acetate, furfural.
Sulfuric acid	Potassium chlorate, potassium perchlorate, potassium permanganate (or such compounds with similar light metals, as sodium, lithium, etc.)
Tri Ethyl Borane	Air.
Water	Acid chlorides, strong acids, such as PCl_3, $POCl_3$ sulfuric, fuming sulfuric, sulfam.

Attachment 2 - CCP Records Transmittal/Receiving Form

CCP Central Records/Records Custodian, 4021 National Parks Highway - MS: GSA 203, Carlsbad, New Mexico 88220

Telephone Number: 505-234-7523, 505-234-7233, 505-234-7617
Fax Number: 505-234-7014

☒ Original Record
☐ Fax Record
☐ Electronic Record

Attn:	Records Custodian	From:	Kevin Peters
Ship to:	CCP Central Records/ CCP Records Custodian	Site:	Argonne National Laboratory-East RH-TRU Waste
	4021 National Parks Highway - MS GSA 203	Company:	Technical Specialists, LLC
	Carlsbad, NM 88220	Telephone Number:	303-980-0543
		Date Sent:	3-21-06
Telephone Number:	505-234-7523		

Document Number	Title/Description	Record Date	Total Pages
P055	Attachment 3 - Acceptable Knowledge Source Document Summary for CCP-AK-INL-500 and CCP-AK-ANLE-500	3/22/2006	2
	Waste Handling Procedures	9/18/1986	89
	N/A		

Comments
None

Acceptance/Rejection Signature and Date

Records Accepted ☒ Katie Chester (Signature) Katie Chester (Printed Name) 5-1-06 (Date)

Records Rejected ☐ _____ Signature _____ Printed Name _____ Date

Reason for Rejection: _____

Re-submittal: _____ Signature _____ Printed Name _____ Date

P.01

TRANSACTION REPORT

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FOR: CCP RECORDS 15052347014

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Attn:	Records Custodian	From:	Kevin Peters
Ship to:	CCP Central Records/ CCP Records Custodian	Site:	Argonne National Laboratory-East RH-TRU Waste
	4021 National Parks Highway - MS GSA 203	Company:	Technical Specialists, LLC
	Carlsbad, NM 88220	Telephone Number:	303-980-0543
		Date Sent:	3-29-06
Telephone Number:	505-234-7523		

Document Number	Title/Description	Record Date	Total Pages
P055	Attachment 3 - Acceptable Knowledge Source Document Summary for CCP-AK-INL-500 and CCP-AK-ANLE-500	3/22/2006	2
	Waste Handling Procedures	9/18/1986	89
	N/A		

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PAGE

Attachment 3 - Acceptable Knowledge Source Document Summary

Waste Stream Number(s): AERHDM, ID-ANLE-S5000

Site(s): Idaho National Laboratory	**Source Document Tracking Number:** P412
Acceptable Knowledge Documentation Type: ☑ TRU Waste Management Program Information ☑ Waste Stream-Specific Information ☑ Supplemental Information	**Category:** ☐ C - Correspondence ☐ D - Discrepancy Resolution ☑ P - Published Documents ☐ U - Unpublished Documents

Title of Source Document: Remote Handled Transuranic Waste Sorting and Packaging

Source Document Reference Information (author(s), document and revision number, date, publisher): ANL, AGHCF-OPS-302, Revs. 0 and 2, 07/09/2001 and 03/29/2005

AK # [a]	Source Doc. Page # [b]	AK Information Summary
PR8, WS2, WS5, WS8, WS9, WS10, WS12, S16	Throughout	This procedure addresses RH TRU waste sorting and packaging. The purpose is to outline the requirements that must be met to ensure that prohibited waste forms are not packaged as TRU waste and that the allowable limits for conditional waste forms are not exceeded. Typical waste consists of rags, tissues, grinding papers, old equipment, etc., generated inside the hot-cell or shielded gloveboxes and contaminated. This procedure covers the waste can preparation and packaging. RH TRU waste shall be processed and packaged for removal from the AGHCF as set forth in the ANL TRU-RH Waste Certification Plan, Document No. J0306-0033-SA. Training records for sorting personnel are maintained, and personnel are responsible to ensure that prohibited TRU waste forms are not placed into the TRU waste cans. A sorting flowchart is provided in this procedure. The following is a list of prohibited items outlined in this procedure: - Fines - Powders, ashes, and similar particulate waste materials shall be immobilized if more than 1 wt% of the waste matrix in each package is in the form of particles below 10 microns, or if more than 15 wt% is in the form of particles below 200 microns in diameter. - Liquids and corrosive liquids - Must not contain liquids in a free form. Liquids must be immobilized. Liquids having a pH below 2 and above 12.5 must be treated to adjust the pH to between 2 and 12.5 before they are immobilized. Treatment consists of evaporation or by mixing with a solidification agent such as portland cement, Aquaset, Petroset, etc. Liquids other than aqueous wastes, a test must be made with a nonradioactive copy of the liquid and the solidification agent to assure that the liquid will be immobilized. - Pyrophoric materials - Zircaloy in any form, lithium, sodium, and NaK are all to be considered pyrophoric materials. Lithium, sodium, and NaK must be passivated with alcohol and the alcohol evaporated. Zircaloy is normally sorted as scrap. Zircaloy must not be disposed of as waste until an adequate treatment method to render it safe for packaging has been tested and documents.

Attachment 3 - Acceptable Knowledge Source Document Summary (continued)

Site(s): Idaho National Laboratory		Source Document Tracking Number: P412
AK # [a]	**Source Doc. Page # [b]**	**AK Information Summary**
		- Pressure Containers - Aerosol cans, gas cylinders, or other vessels which could be pressurized must be permanently vented. RCRA hazardous waste shall be packaged in separate waste containers and the inventory sheet shall clearly state that the can contains mixed waste. Examples include metallographic mounts containing silver paste such as Dynaloy 325A, heavy metals including lead, cadmium, silver, barium, chromium, mercury, selenium, and arsenic, AGHC first stage HEPA filters. RH-TRU waste will be separated into combustible and noncombustible categories. Combustible containers will be identified by spray painting 4 in. green equilateral triangles in three places on the sides. Waste placed in each 7-gal. waste can will be inventoried by material and physical description. The inventory by class shall be estimated to the nearest 10% of the can volume. All waste packaging shall be videotaped. Each can shall bear a serial ID # which shall be written on the Waste Can Inventory Sheet (AGHCF-DS0001) together with the percentage inventory. The Waste Can Inventory Sheet must be completely filled out an designed-off before the can leaves the packaging work station.
WS8, WS9	Throughout	Chemicals/materials portland cement Aquaset Petroset alcohol

Source Document Data Limitations (if any):

1. T. Bray indicated the the Aquaset, Petroset had not been used to date (C335)

Acceptable Knowlege Expert:

D. B. Becker for K. Peters / DBBecker Date: 3/29/2006
Print /Sign

[a] Obtain from Acceptable Knowledge Documentation Checklist
[b] For microfilm or microfiche, identify box, tape, reel number and location.

ANL-E-P412

AGHCF-OPS-302 Remote Handled Transuranic Waste Sorting & Packaging

1.0 SCOPE

Remotely Handled Transuranic Waste (RH-TRU) shall be processed and packaged for removal from the AGHCF as set forth in the ANL "TRU-RH Waste Certification Plan," Document No. J0306-0033-SA and this procedure. The purpose of this procedure is to outline the requirements that must be met to ensure that prohibited waste forms are not packaged as TRU waste and that the allowable limits for conditional waste forms are not exceeded.

Typical RH-TRU waste consists of rags, tissues, grinding papers, old equipment, etc., generated inside the hot-cell or shielded gloveboxes and contaminated with adventitious material. This procedure covers the waste can preparation and packaging.

2.0 RESPONSIBILITIES

2.1 AGHCF Manager

Assure that the conditions specified by this procedure are followed.

Assure that only qualified personnel are assigned the responsibility of sorting and are trained to understand the requirements specified by this procedure.

Maintain a training record for sorting personnel which provides evidence that the are qualified to perform the sorting.

2.2 Sorting Personnel:

Assure that only recognized materials or items are placed into the TRU waste cans.

Assure that the prohibited TRU waste forms identified in this procedure are not placed into the TRU waste cans.

Follow the sorting flowchart provided in this procedure.

Reviewed by: Wm Gallman Date 7/10/01
Approved by: J S Bray Date 7/10/01

2.3 Limitations

Sorting of waste and scrap must only be performed by qualified personnel who are familiar with the materials that are used in the AGHCF, the appearance of materials containing accountable materials, the prohibited waste forms and their appearance, the requirements of this proceudre, and the waste documentation requirements.

Prohibited waste forms in RH-TRU waste packages include those discussed in detail below.

2.4 Fines

Powders, ashes, and similar particulate waste materials shall be immobilized if more than 1 wt% of the waste matrix in each package is in the form of particles below 10 microns in diameter, or if more than 15 wt% is in the form of particles below 200 microns in diameter.

Fines are a conditional waste form. The AGHCF procedures do not require that sieve analysis of fines be made to determine particle sizes. Instead, unless the particle sizes are determined by sieve analysis and the actual waste-matrix weight is determined, all fines will be considered to have a particle size below 10 microns in diameter and 62 lbs will be used as the weight of the waste matrix in a typical drum package. One percent of a 62 lb waste matrix allows up to 0.62 lbs (280 grams) of fines below 10 microns in diameter per drum, or 140 grams of fines below 10 microns in diameter in each of the two waste cans.

Whenever sieve analysis is used to determine particle sizes and the waste-matrix weight is determined, the results must be documented to provide evidence that the particle sizes and amounts in a waste can do not exceed the waste acceptance criteria in listed above.

If a sieve analysis is not performed, fines are to be collected in a sealable container and must be weighed if packaged as TRU waste. If the weight of the fines exceeds 140 grams, they must be immobilized by mixing into epoxy, or similar matrix, before placement into the waste can. If the weight is less than 140 grams, the fines container is to be sealed before it is placed into the waste cans.

2.5 Liquids and corrosive liquids

TRU wastes must not contain liquids in a free form. Liquids must be immobilized. Liquids having a pH below 2 and above 12.5 must be treated to adjust the pH to between 2 and 12.5 before they are immobilized.

Liquids are to be treated either by evaporation or by mixing ith a solidification agent such as portland cement, Aquaset, Petroset, etc. For liquids other than aqueous wastes, a test must be made with a nonradioactive copy of the liquid and the solidification agent to assure that the liquid will be completely immobilized.

2.6 Pyrophoric materials

Pyrophoric materials shall be rendered safe by mixing with chemically stable materials such as concrete, glass, etc., or processed to remove the pyrophoric property.

Zircaloy in any form and sodium and NaK are all to be considered pyrophoric materials.

Sodium and NaK must be passivated with alcohol and the alcohol evaporated. Zircaloy is normally sorted as scrap. *Zircaloy must not be disposed of as waste until an adequate treatment method to render it safe for packaging has been tested and documented.*

2.7 Pressure Containers

Aerosol cans, gas cylinders, or other vessels which could be pressurized must be permanently vented.

The method of venting must be easily visible and the methods may include: puncturing or flattening the aerosol can; removing valves from gas cylinders; removing plugs, flanges, or caps from other types of vessels.

3.0 PROCEDURE

The RH-TRU shall be separated into combustible and noncombustible categories as described in the Safety Analysis. Waste packages containing combustible materials shall be identified by spray painting 4-in, green equilateral triangles in three places on the side between the serial numbers and twice on the top, on each side of the number.

The waste placed in each 7-gal waste can shall be inventoried by material (e.g., cotton, polyester, PVC, polyethylene, nylon, etc.) and physical description (e.g., rags, filters, bottles, tubing, etc.). The inventory by class, e.g., cotton rags, shall be estimated to the nearest 10% of the can volume.

Each waste can shall bear a serial identification number which shall be written on the Waste Can Inventory Sheet (AGHCF-DS-001) together with the percentage inventory.

The Waste Can Inventory Sheet must be completely filled out and signed-off before the can leaves the packaging work station.

4.0 RECORDS

- AGHCF-DS-0001, Waste Can Inventory (Black 7-gal)
- ~~AGHCF-DS-0002, RH-TRU (30 Gallon Drum) Waste Package Data Sheet~~
- Video tape of 7-gal can packaging

2.8

RCRA hazardous wastes shall be packaged in separate waste containers and the inventory sheet shall clearly state that the can potentially contains mixed waste.

Examples of potential mixed wastes include:

- Metallographic mounts containing silver paste such as Dynaloy 325A.
- Heavy metals including lead, cadmium, silver, barium, chromium, mercury, selenium, and arsenic.
- AGHC first stage HEPA filters.

Consult with the AGHCF Manager if a question exists as to whether or not an item is potentially mixed waste.

WASTE CAN INVENTORY (Black 7-gal)

Can No.:_____ Date Packaged: _____

Packaged by (Name): _____

Gamma Activity: _____

Combustible:_____ Noncombustible: _____

DESCRIPTION	Vol %
Total	%

DS-0001

Date: 07/09/01
Revision: 0

Figure 1. Waste Can Inventory (Black 7-gal).

RH-TRU (30 Gallon Drum)

WASTE PACKAGE DATA SHEET

Estimated U-Pu Content:
^{235}U _____ gm
^{239}Pu _____ gm (_____ Ci)
^{240}Pu _____ gm (_____ Ci)
^{241}Pu _____ gm (_____ Ci)

Date Loaded:_____

Drum and Seal No.:_____

Drum Vent No.:_____

Top Waste Can No.:_____

Combustible:_____ (check)

Bottom Waste Can No.:_____

Noncombustible:_____ (check)

Drum packaging materials inspected by:_____

Loaded by:_____

Total weight of loaded Drum:_____ lbs.

Inner Pouch Vent No.:_____

Outer Pouch Vent No.:_____

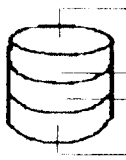
Acceptable Smearable Levels: <10 dpm/100 cm² aplha and 1000 dpm/100 cm² beta-gamma:

Inner Pouch Primary Seal (dis/min-100 cm²)_____alpha_____beta-gamma

Outer Pouch Secondary Seal (dis/min-100 cm²)_____alpha_____beta-gamma

Exterior of 30-gal Drum (dis/min-900 cm²)_____alpha_____beta-gamma
(large area smear)

Radiation Levels from 30-gal Drum at 6 cm. R/hr gamma:

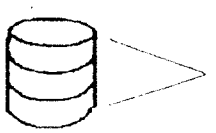


Survey Meter Used:_____

Serial No.:_____

Last Calibration:_____

Radiation Levels at Various Distances from Drum:



	AGHCF	
Distance from Drum:	1 m (3 ft)	1.78 m (6 ft)
Gamma Rad. Levels mR:		
Survey Meter Used:		
Serial No.		
Last Calibrated:		

Surveyed at AGHCF by:_____ Location:_____ Date:_____

AGHCF-DS-0002

Date: 7/9/01
Revision: 0

Figure 2. RH-TRU (30 Gallon Drum) Waste Package Data Sheet.

HFS-OPS-302 Remote Handled Transuranic Waste Sorting & Packaging

1.0 SCOPE

Remotely Handled Transuranic Waste (RH-TRU) shall be processed and packaged for removal from the AGHCF as set forth in the ANL "TRU-RH Waste Certification Plan," Document No. J0306-0033-SA and this procedure. The purpose of this procedure is to outline the requirements that must be met to ensure that prohibited waste forms are not packaged as TRU waste and that the allowable limits for conditional waste forms are not exceeded.

Typical RH-TRU waste consists of rags, tissues, grinding papers, old equipment, etc., generated inside the hot-cell or shielded gloveboxes and contaminated with adventitious material. This procedure covers the waste can preparation and packaging.

2.0 PREREQUISITE ACTION

Familiarize yourself with this procedure, the ANL "TRU-RH Waste Certification Plan," and data sheet HFS-DS-001-01, "Waste Can Inventory." Completion of Courses ESH 524 and ET 709 is also required.

3.0 APPLICABILITY

The information in this procedure applies only to the AGHCF.

4.0 RESPONSIBILITIES

AGHCF Manager: (1) Assure that the conditions specified by this procedure are followed. (2) Assure that only qualified personnel are assigned the responsibility of sorting and are trained to understand the requirements specified by this procedure. (3) Maintain a training record for sorting personnel which provides evidence that they are qualified to perform the sorting.

Sorting Personnel: (1) Assure that only recognized materials or items are placed into the TRU waste cans. (2) Assure that the prohibited TRU waste forms identified in this procedure are not placed into the TRU waste cans. (3) Follow the sorting flowchart provided in this procedure.

Reviewed by: J. H. Kilar Date 3/31/05

Approved by: T. S. Bray Date 3/31/05

5.0 LIMITATIONS

Sorting of waste and scrap must only be performed by qualified personnel who are familiar with the materials that are used in the AGHCF, the appearance of materials containing accountable materials, the prohibited waste forms and their appearance, the requirements of this procedure, and the waste documentation requirements.

6.0 PROHIBITED WASTE FORMS

Prohibited waste forms in RH-TRU waste packages include those discussed in detail below.

6.1 Fines

Powders, ashes, and similar particulate waste materials shall be immobilized if more than 1 wt% of the waste matrix in each package is in the form of particles below 10 microns in diameter, or if more than 15 wt% is in the form of particles below 200 microns in diameter.

Fines are a conditional waste form. The AGHCF procedures do not require that sieve analysis of fines be made to determine particle sizes. Instead, unless the particle sizes are determined by sieve analysis and the actual waste-matrix weight is determined, all fines will be considered to have a particle size below 10 microns in diameter and 62 lbs will be used as the weight of the waste matrix in a typical drum package. One percent of a 62 lb waste matrix allows up to 0.62 lbs (280 grams) of fines below 10 microns in diameter per drum, or 140 grams of fines below 10 microns in diameter in each of the two waste cans.

Whenever sieve analysis is used to determine particle sizes and the waste-matrix weight is determined, the results must be documented to provide evidence that the particle sizes and amounts in a waste can do not exceed the waste acceptance criteria in listed above.

If a sieve analysis is not performed, fines are to be collected in a sealable container and must be weighed if packaged as TRU waste. If the weight of the fines exceeds 140 grams, they must be immobilized by mixing into epoxy, or similar matrix, before placement into the waste can. If the weight is less than 140 grams, the fines container is to be sealed before it is placed into the waste cans.

6.2 Liquids and Corrosive Liquids

TRU wastes must not contain liquids in a free form. Liquids must be immobilized. Liquids having a pH below 2 and above 12.5 must be treated to adjust the pH to between 2 and 12.5 before they are immobilized.

Liquids are to be treated either by evaporation or by mixing with a solidification agent such as portland cement, Aquaset, Petroset, etc. For liquids other than aqueous wastes, a test must be made with a nonradioactive copy of the liquid and the solidification agent to assure that the liquid will be completely immobilized.

6.3 Pyrophoric Materials

Pyrophoric materials shall be rendered safe by mixing with chemically stable materials such as concrete, glass, etc., or processed to remove the pyrophoric property.

Zircaloy in any form and lithium, sodium, and NaK are all to be considered pyrophoric materials.

Lithium, sodium and NaK must be passivated with alcohol and the alcohol evaporated. Zircaloy is normally sorted as scrap. *Zircaloy must not be disposed of as waste until an adequate treatment method to render it safe for packaging has been tested and documented.*

6.4 Pressure Containers

Aerosol cans, gas cylinders, or other vessels which could be pressurized must be permanently vented.

The method of venting must be easily visible and the methods may include: puncturing or flattening the aerosol can; removing valves from gas cylinders; removing plugs, flanges, or caps from other types of vessels.

6.5 RCRA Hazardous Waste

RCRA hazardous wastes shall be packaged in separate waste containers and the inventory sheet shall clearly state that the can potentially contains mixed waste. Examples of potential mixed wastes include:

- Metallographic mounts containing silver paste such as Dynaloy 325A.
- Heavy metals including lead, cadmium, sliver, barium, chromium, mercury, selenium, and arsenic.
- AGHC first stage HEPA filters.

Consult with the AGHCF Manager if a question exists as to whether or not an item is potentially mixed waste.

7.0 PROCEDURE

1. All waste packaging shall be videotaped.

2. The RH-TRU shall be separated into combustible and noncombustible categories.

   NOTE: Waste packages containing combustible material shall be identified by spray painting 4-in. green equilateral triangles in three places on the side between the serial numbers and twice on the top, on each side of the number.

3. Waste placed in each 7-gal waste can shall be inventoried by:

   - Material (cotton, polyester, PVC, polyethylene, nylon, etc.)
   - Physical description (tags, filters, bottles, tubing, etc.)

3. Waste placed in each 7-gal waste can shall be inventoried by:

   - Material (cotton, polyester, PVC, polyethylene, nylon, etc.)
   - Physical description (tags, filters, bottles, tubing, etc.)

4. Each waste can shall bear a serial identification number which shall be written on the Waste Can Inventory Sheet (HFS-DS-001-01) together with percentage inventory. Estimate volume of contents to nearest 10% of overall can volume.

5. An independent verification is required of can contents BEFORE the can is closed. This independent verification is to be done by a person other than the original packager. This verification can be performed by all qualified waste handlers and sorters.

6. The independent verifier shall:

   - Look for forbidden materials.
   - Ask the original packager to verify that combustibles have not been included in a "noncombustible" waste can.
   - Ask the original packager to verify that noncombustibles have been consciously minimized in "combustible" waste containers.
   - Ask the original packager to verify that no forbidden materials are in the can.
   - Ask the original packager to verify that the inventory is "best possible" in terms of efficiency of material and space consumption.

7. After the packager has responded affirmatively to each of the above questions and the verifier has found no forbidden materials, the verifier shall check that the can number is the same as on the inventory sheet and then sign the inventory sheet.

8. The Waste Can Inventory Sheet (HFS-DS-001-01) must be completely filled out and signed off before the can leaves the packaging work station.

8.0 RECORDS

- HFS-DS-001-01, Waste Can Inventory (Black 7-gal)
- Videotape of 7-gal can packaging

Attachment 2 - CCP Records Transmittal/Receiving Form

CCP Central Records/Records Custodian, 4021 National Parks Highway - MS: GSA 203, Carlsbad, New Mexico 88220

Telephone Number: 505-234-7523, 505-234-7233, 505-234-7617
Fax Number: 505-234-7014

☒ Original Record
☐ Fax Record
☐ Electronic Record

Attn:	Records Custodian	From:	Kevin Peters
Ship to:	CCP Central Records/ CCP Records Custodian	Site:	Argonne National Laboratory-East RH-TRU Waste
	4021 National Parks Highway - MS GSA 203	Company:	Technical Specialists, LLC
	Carlsbad, NM 88220	Telephone Number:	303-980-0543
		Date Sent:	3-30-06
Telephone Number:	505-234-7523		

Document Number	Title/Description	Record Date	Total Pages
P412	Attachment 3 - Acceptable Knowledge Source Document Summary for CCP-AK-INL-500 and CCP-AK-ANLE-500	3/29/2006	2
	Remote Handled Transuranic Waste Sorting and Packaging	7/9/2001 and 3/29/2005	11
	N/A		

Comments
None

Acceptance/Rejection Signature and Date

Records Accepted ☒ [signature] (Signature) S. Keathley (Printed Name) 5/09/06 (Date)

Records Rejected ☐ _____ (Signature) _____ (Printed Name) _____ (Date)

Reason for Rejection: _____

Re-submittal: _____ (Signature) _____ (Printed Name) _____ (Date)

P.01

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Attachment 2 - CCP Records Transmittal/Receiving Form

CCP Central Records/Records Custodian, 4021 National Parks Highway - MS: GSA 203, Carlsbad, New Mexico 88220

Telephone Number: 505-234-7523, 505-234-7233, 505-234-7617
Fax Number: 505-234-7014

- [x] Original Record
- [ ] Fax Record
- [ ] Electronic Record

Attn:	Records Custodian	From:	Kevin Peters
Ship to:	CCP Central Records/ CCP Records Custodian	Site:	Argonne National Laboratory-East RH-TRU Waste
	4021 National Parks Highway - MS GSA 203	Company:	Technical Specialists, LLC
	Carlsbad, NM 88220	Telephone Number:	303-980-0543
		Date Sent:	3-30-06
Telephone Number:	505-234-7523		

Document Number	Title/Description	Record Date	Total Pages
P412	Attachment 3 - Acceptable Knowledge Source Document Summary for CCP-AK-INL-500 and CCP-AK-ANLE-500	3/29/2006	2
	Remote Handled Transuranic Waste Sorting and Packaging	7/9/2001 and 3/29/2005	11
	N/A		

DIVIDER

PAGE

Attachment 3 - Acceptable Knowledge Source Document Summary

Waste Stream Number(s): AERHDM

Site(s): Argonne Generated RH TRU Waste

Source Document Tracking Number: P626

Acceptable Knowledge Documentation Type:
- ☐ TRU Waste Management Program Information
- ☐ Waste Stream-Specific Information
- ☑ Supporting Information

Category:
- ☐ C - Correspondence
- ☐ D - Discrepancy Resolution
- ☑ P - Published Documents
- ☐ U - Unpublished Documents

Title of Source Document: 30-Gallon Remote Handled Transuranic Waste Drum Assembly

Source Document Reference Information (author(s), document and revision number, date, publisher): K. Stoll, NOD-AGHCF-OPS-303, Revision 3, 2/4/2008, NA

AK # [a]	Source Doc. Page # [b]	AK Information Summary
S2, S16	Throughout	The purpose of this procedure is to outline the requirements for assembly of a 30-gallon RH TRU drum for the loading of 7 gallon waste cans from the ABHCF. The loading of the 7-gallon waste cans directly into the drums prepared using procedure NOD-AGHCF-OPS-305 (P625) would result in the exclusion of the inner PVC pouch and spreader currently used to package AGHCF waste. Procedure identifies the NUCFIL-034 (pouch) and NUCFIL-013 for the 30-gallon drum.

Source Document Data Limitations (if any):

1. Procedure is an unsigned version

Acceptable Knowlege Expert:

/ Date: 05/08/2008

Print /Sign

[a] Obtain from Acceptable Knowledge Documentation Checklist
[b] For microfilm or microfiche, identify box, tape, reel number and location.

Attachment 2 - CCP Records Transmittal/Receiving Form

CCP Central Records / Records Custodian, 4021 National Parks Highway - MS: GSA 203, Carlsbad, New Mexico 88220
Telephone Number: 505-234-7523
Fax Number: 505-234-7014

- [x] Original Record
- [ ] Fax Record
- [ ] E-mail Record

Attn:	Sheila Pearcy	From:	Lisa Price-Watson
Ship to:	CCP Central Records/ CCP Records Custodian	Site:	ANLE Waste at ANL and INL
	4021 National Parks Highway - MS GSA 203, Carlsbad, NM 88220	Company:	Los Alamos National Laboratory
		Telephone Number:	505-628-8946
Telephone Number:	505-234-7523	Date Sent:	

Document Number	Title/Description	Record Date	Total Pages
P626	Attachment 3 - Acceptable Knowledge Source Document Summary for CCP-AK-INL-500 and CCP-AK-ANLE-500 with attached source document below:		
	NOD-AGHCF-OPS-303 - 30-Gallon Remote Handled Transuranic Waste Drum Assembly	2/4/2008	

Comments

None

Acceptance/Rejection Signature and Date

Records Accepted ☐ _____ Signature _____ Printed Name _____ Date

Records Rejected ☐ _____ Signature _____ Printed Name _____ Date

Reason for Rejection:

Re-submittal: _____ Signature _____ Printed Name _____ Date

NOD-AGHCF-OPS-303 30 Gallon Remote Handled Transuranic Waste Drum Assembly

Preparer: K. Stoll Facility Manager, Alpha Gamma Hot Cell Facility

Signature Date

Reviewer: J. Uptergrove

Signature Date

Reviewer: D. Evans, Assistant Facility Manager, Alpha Gamma Hot Cell Facility

Signature Date

Approver: K. Stoll Facility Manager, Alpha Gamma Hot Cell Facility

Signature Date

USQ PROCESS

☒ - USQ Categorical Exclusion Number: USQX-AGHCF-2007-018 USQX (Y/N) N

☒ - USQ Screening Number: USQS-AGHCF-2007-022 USQD (Y/N) Y

☒ - USQ Determination Number: USQD-AGHCF-2007-021 ☐ Positive ☒ Negative

1 SCOPE

The purpose of this procedure is to outline the requirements for assembly of a 30-gallon Remote Handled Transuranic Waste (RH-TRU) drum for the out loading of 7 gallon RH-TRU waste cans from the Alpha Gamma Hot Cell (AGHC).

2 EQUIPMENT

Obtain the following waste package materials and required tools:

- DOT 7A Type A open head steel 30-gallon drum
- Drum vent, Nuclear Filter Technology No. NUCFIL-013
- Polyethylene 30 gal drum liner
- Tape Measure
- One PVC drum pouch, with pre-punched filter hole
- One pouch filter, Nuclear Filter Technology NUCFIL-034
- Loctite Thread Locker No. 262
- Drop chute O-ring
- Calibrated torque wrench, including calibration certificate
- 1 $^1/_2$ in socket with appropriate reducers to fit torque wrench
- 2 inch high vinyl drum numbers (black on white background)
- Waste Requisition "RW" labels
- Waste Package Data Sheet (NOD-AGHCF-DS-002-02), Attachment A
- Radioactive and Mixed Waste Disposal Requisitions (WMO-195)

3 PROCEDURE

1. Inspect the 30 gal drum. Do not use the drum if dents, punctures or other distortion are found.

2. Inspect the drum lid gasket. Do not use if damage, folds or foreign material are found.

3. Install the NUCFIL-013 drum vent into the 30-gallon drum lid as follows:

   a. Record the torque wrench serial number and calibration due date on the Waste Package Data Sheet.

   b. Record the drum vent number on the Waste Package Data Sheet.

   c. Apply Loctite Thread Locker No. 262 to the threads of the drum vent.

   d. Insert the drum vent into the threaded hole in the 30-gallon drum lid with the gasket between the vent and lid.

   e. Torque the vent to 10 ft lbs.

4. Install a NUCFIL-034 pouch filter in the pre-punched hole of the drum pouch, being careful that a gasket is setting flat on each side of the PVC pouch when the vent is snapped together.

5. Ensure the polyethylene tank liner has been cut to a height of 25-26 inches outside dimension.

6. Ensure the drum number is recorded on the Waste Package Data Sheet.

7. Apply the associated 2-inch high vinyl drum number labels to the 30-gallon drum in three places in the middle of the sides and once on the top.

8. Ensure the Radioactive and Mixed Waste Disposal Requisition number is recorded on the Waste Package Data Sheet.

9. Apply the associated "RW" adhesive labels to the 30-gallon drum in three places in the middle of the sides and once on the top.

10. Assemble the drum package as follows:

    a. Place the polyethylene drum liner into the pouch

b. Place the PVC pouch in the 30-gallon drum

c. Install the drop chute O-ring over the pouch

d. Temporarily fold the excess pouch into the poly liner and place the lid and locking ring on the drum.

e. Loosely install the bolt and locking nut on the ring.

11. Ensure the top and bottom waste can numbers to be inserted into the 30 gallon drum are recorded on the Waste Package Data Sheet.

12. Place the Waste Package Data Sheet and the Radioactive and Mixed Waste Disposal Requisition in a protector sleeve and attach the sleeve to the drum cover.

13. Move the completed drum package into the staging area and log completion of the assembled drum in the RH-TRU logbook.

Attachment A

RH-TRU (30-Gallon Drum)

WASTE PACKAGE DATA SHEET

REQUISITION NUMBER: RW - _____

Date Loaded:	AGHCF Drum Number: _____
Loaded by:	Top Waste Can Number: _____
	Bottom Waste Can Number: _____

Drum Vent Number: _____	Torque wrench Serial Number: _____ Calibration due date:

Total weight of loaded drum: _____ lbs.	Tamper Seal 1 Number: _____ Tamper Seal 2 Number: _____

RADIOLOGICAL DATA

Surface Contamination

Exterior of Drum (large area wipe)	Survey Meter
Alpha (dpm/wipe): _____	Serial Number: _____
Beta-gamma (dpm/wipe): _____	Calibration due date: _____

Maximum Surface Dose Rate -- mR/hr gamma:

Drum Top: _____ Drum Upper: _____ Drum Middle: _____ Drum Lower: _____ Drum Bottom: _____	Survey Meter Serial Number: _____ Calibration due date: _____

Maximum Dose Rate at 12 in. (30 cm) – mR/hr gamma:

_____	Survey Meter Serial Number: _____ Calibration due date: _____

All required data has been recorded and the form is complete:

PIC: _____ DATE: _____

K-Wing RH-TRU Liquids Crosswalk

Prepared by: Laura Maggos, ANL Date: 11/30/2010

Purpose: To trace connections between sample IDs, bulking containers, solidification containers, and waste drums pertaining to K-Wing RH-TRU liquid waste.

Liquids Sample IDs

CCP Sample ID	ACL ID	Bottle ID	Liquid Carboy
AE02121001	10-0059-21	LSC-001	BC-001 *
AE02121002	10-0059-22	LSC-002	
AE02121003	10-0059-23	LSC-003	
AE03021001	10-0059-24	LSC-004	BC-002 *
AE03021002	10-0059-25	LSC-005	
AE03021003	10-0059-26	LSC-006	
AE03021004	10-0059-27	LSC-007	BC-007
AE03021005	10-0059-28	LSC-008	
AE02161001	10-0059-29	LSC-009	BC-003
AE02161002	10-0059-30	LSC-010	
AE02181001	10-0059-31	LSC-011	BC-006
AE02181002	10-0059-32	LSC-012	
AE03021006	10-0059-33	LSC-013	BC-004
AE03021007	10-0059-34	LSC-014	
AE03031001	10-0059-35	LSC-015	URX-aq-rins
AE03031002	10-0059-36	LSC-016	
AE03311005	10-0059-37	LSC-017	BC-005 *
AE03311006	10-0059-38	LSC-018	
AE03311007	10-0059-39	LSC-019	
AE03311001	10-0059-40	LSC-020	07-NPX-Prd-1
AE03311002	10-0059-41	LSC-021	
AE03311003	10-0059-42	LSC-022	H-LW-2
AE03311004	10-0059-43	LSC-023	

References: CCP-AK-ANL-505B, ACL Job 10-0059

* = includes "co-located" sample, aka field duplicate

LSC = Liquid Sampling Container, 30 mL square HDPE bottle

Liquids Solidification Containers

From Liquid Carboy	Solidification Container	Amount of Sorbent (kg)	Amount of Lime (kg)	Packaged in Drum
BC-001	LS-009	7	1.4	RW 18882
BC-001	LS-010	7	1.4	RW 18882
BC-001	LS-011	7	1.4	RW 18883
BC-001	LS-012	7	1.4	RW 18883
BC-001	LSP-007	0.8	0.16	RW 18882
BC-002	LS-013	8.86	1.77	RW 18885
BC-002	LS-014	8.86	1.77	RW 18884
BC-002	LS-015	8.86	1.77	RW 18884
BC-002	LSP-008	0.8	0.16	RW 18885
BC-002	LSP-010	0.8	0.16	RW 18883
BC-003	LS-001	7	0	RW 18886
BC-003	LS-002	7	0	RW 18887
BC-003	LSP-002	0.8	0	RW 18885
BC-003	LSP-003	0.8	0	RW 18885
BC-003	LSP-004	0.8	0	RW 18885
BC-004	LS-016	9	1.8	RW 18901
BC-004	LS-017	9	1.8	RW 18901
BC-004	LSP-009	0.8	0.16	RW 18901
BC-005	LS-018	9	1.8	RW 18894
BC-005	LS-019	9	1.8	RW 18897
BC-005	LS-020	9	1.8	RW 18896
BC-005	LSP-011	0.8	0.16	RW 18894
BC-006	LS-003	6	0	RW 18899
BC-006	LS-004	6	0	RW 18900
BC-006	LS-005	6	0	RW 18902
BC-006	LS-006	6	0	RW 18898
BC-006	LSP-005	1	0	RW 18897
BC-007	LS-007	7	1.4	RW 18893
BC-007	LS-008	7	1.4	RW 18895
BC-007	LSP-006	0.8	0.16	RW 18894
07-NPX-Prd-1	LSP-012	0.8	0	RW 18895
07-NPX-Prd-1	LSP-013	0.8	0	RW 18895
H-LW-2	LSP-014	0.8	0	RW 18897
URX-aq-rins	n/a	n/a	n/a	n/a
URX-aq-rins	n/a	n/a	n/a	n/a

BC = Liquids Bulking Container, 20 L round carboy

LS = Liquid Solidification container, 20 L square plastic clearboy

LSP = Liquid Solidification Pitcher, 2 L plastic pitcher

Solidified Liquids by Drum

Packaged in Drum	Solidification Container	From Liquid Carboy
RW 18882	LS-009	BC-001
	LS-010	BC-001
	LSP-007	BC-001
RW 18883	LS-011	BC-001
	LS-012	BC-001
	LSP-010	BC-002
RW 18884	LS-014	BC-002
	LS-015	BC-002
RW 18885	LS-013	BC-002
	LSP-008	BC-002
	LSP-002	BC-003
	LSP-003	BC-003
	LSP-004	BC-003
RW 18886	LS-001	BC-003
RW 18887	LS-002	BC-003
RW 18893	LS-007	BC-007
RW 18894	LS-018	BC-005
	LSP-011	BC-005
	LSP-006	BC-007
RW 18895	LS-008	BC-007
	LSP-012	07-NPX-Prd-1
	LSP-013	07-NPX-Prd-1
RW 18896	LS-020	BC-005
RW 18897	LS-019	BC-005
	LSP-005	BC-006
	LSP-014	H-LW-2
RW 18898	LS-006	BC-006
RW 18899	LS-003	BC-006
RW 18900	LS-004	BC-006
RW 18901	LS-016	BC-004
	LS-017	BC-004
	LSP-009	BC-004
RW 18902	LS-005	BC-006

AK5

Page 1 of 6

Attachment 1 – Acceptable Knowledge Documentation Checklist - Example Form

Site(s): Argonne National Laboratory

Waste Stream Description: Argonne Remote-Handled Mixed Debris

Waste Stream Number(s): AERHDM

Acceptable Knowledge Information	(1)AK#	Compiled? (Y/N)	Source Document Tracking Number
Mandatory generator site TRU waste program (PR) information			
Map of the generator site that identifies TRU waste generation, treatment, and storage areas.	PR1	Y	C138, C158, C2005, P002, P004, P025, P027, P028, P061, P1001, P2016, P2018, P2032, P320, P378, P379, P380, P604, P611, U911
Generator site mission descriptions related to TRU waste generation and management identifying defense and non-defense operations.	PR2	Y	C001, C006, C016, C036, C068, C073, C074, C092, C103, C124, C138, C152, C155, C157, C2004, C2006, C2008, C2011, C2012, C2013, C2014, C2015, C2016, C2017, C2018, C2019, C2020, C2021, C2022, C2023, C2024, C303, C304, C305, C316, C329, C330, C331, P002, P004, P006, P008, P009, P010, P012, P013, P014, P016, P017, P025, P027, P028, P029, P1001, P1002, P2007, P2008, P2010, P2012, P2016, P2018, P2019, P2028, P2030, P2032, P2033, P2034, P320, P325, P326, P344, P373, P374, P380, P389, P392, P394, P396, P520, P532, P583, P584, P585, P586, P587, P588, P599, P603, P606, P607, U001, U003, U007, U009, U011, U012, U013, U023, U040, U045, U067, U068, U069, U070, U076, U1003, U2014, U330, U5001, U5003, U911
Overview of the generator site and generator site TRU waste management operations in the context of the facility's mission.	PR3	Y	C008, C016, C036, C082, C099, C115, C124, C138, C157, P002, P004, P006, P025, P028, P029, P032, P035, P051, P060, P069, P1001, P1002, P2018, P2032, P320, P380, P394, P415, U001, U002, U013, U017, U018, U066, U911
Descriptions of historical and current TRU waste generating operations, including how waste is tracked and managed and/or how operations relative to isotopic composition were tracked.	PR4	Y	C007, C020, C029, C066, C067, C092, C099, C103, C125, C130, C131, C136, C138, C143, C155, C157, C158, C2009, C2011, C2012, C2013, C2014, C2015, C2016, C2017, C2018, C2019, C2020, C2021, C2022, C2023, C2024, C2032, C2033, C332, C333, C335, DR014, P002, P004, P006, P009, P012, P014, P027, P029, P032, P055, P059, P060, P061, P062, P1001, P2000, P2011, P2016, P2018, P2032, P2033, P2034, P329, P366, P375, P392, P396, P5002, P5004, U002, U007, U017, U018, U019, U021, U022, U023, U065, U068, U1003, U2021, U2022, U5001, U5003, U911
Waste identification and/or categorization schemes and terminology used at the generator site, including codes correlating to specific isotopic distributions.	PR5	Y	C026, C089, C094, C099, C124, C131, C2027, C2029, C2030, C2031, C332, C349, P001, P002, P006, P009, P025, P028, P031, U002, U004, U041, U1003, U1005, U1013, U1014, U1015, U1016, U1017, U2018, U307, U335, U5001, U911
Types and quantities of TRU waste generated, including historical generation through future projections.	PR6	Y	C004, C013, C026, C029, C036, C082, C108, C138, C2011, C2012, C2013, C2014, C2015, C2016, C2017, C2018, C2019, C2020, C2021, C2022, C2023, C2024, C2027, C2029, C2030, C2031, C305, C332, C333, C335, P001, P004, P031, P2032, P2033, P327, P329, P331, P392, P395, P402, P410, U012, U076, U2002, U2003, U911

NTPC RECORDS ORIGINAL
DATE REC'D 8/27/13 SP

Waste Stream Number(s): AERHDM

Acceptable Knowledge Information	(1)AK#	Compiled? (Y/N)	Source Document Tracking Number
Correlation of waste streams and description of time of generation, waste generating processes, and area and building/facility where each waste stream was generated.	PR7	Y	C006, C025, C029, C046, C066, C152, C2002, C2003, C2008, C2025, C2027, C2029, C2030, C2031, C2032, C2033, C332, C333, C350, DR010, P001, P002, P025, P035, P059, P1001, P2032, P327, P331, P392, P395, U001, U002, U004, U007, U012, U015, U017, U018, U019, U021, U022, U041, U070, U1002, U1003, U2021, U2022, U342, U911
Certification procedures for waste to be sent to the WIPP facility (i.e., procedures to ensure that prohibited items are documented and managed in accordance with site-specific certification plans).	PR8	Y	C001, C009, C066, C067, C088, C089, C091, C099, C108, C115, C116, C136, C137, C143, C147, C2025, C2033, P002, P006, P009, P023, P024, P032, P051, P055, P061, P2011, P2014, P372, P412, P413, P414, P416, P5002, P5004, P5005, P5006, P5007, P5008, U001, U004, U009, U017, U041, U1002, U911
Mandatory generator site TRU waste stream (WS)-specific information			
Waste stream designation	WS1	Y	C035, C158, C2025, C2029, C2030, C2031, C2033, C332, C333, C349, DR013, DR017, DR023, P001, P002, P327, P329, P331, P378, P410, P5003, U041, U1002, U1003, U2021, U2022, U307, U332, U5001, U5003, U911
Area(s) and building(s) from which the waste stream was or is generated.	WS2	Y	C2002, C2003, C2004, C2005, C2006, C2007, C2008, C2009, C2025, C2027, C2029, C2032, C2033, C332, C333, C344, C350, C812, DR010, DR017, DR023, P002, P004, P027, P028, P061, P1001, P2000, P2010, P2011, P2012, P2013, P2014, P2016, P2018, P2019, P2031, P2032, P2035, P327, P329, P331, P333, P366, P380, P386, P387, P392, P395, P396, P397, P399, P402, P403, P404, P407, P410, P412, P413, P414, P415, P416, P456, P469, P470, P471, P472, P473, P478, P489, P490, P492, P5002, P5004, P515, P516, P536, P537, P540, P546, P551, P552, P553, P554, P577, P578, P580, P611, P817, P819, P822, P826, P829, U007, U015, U017, U018, U019, U021, U022, U1003, U2002, U2003, U2007, U2008, U2009, U2011, U2012, U2014, U911
Waste stream volume and time period of generation	WS3	Y	C013, C014, C036, C067, C103, C108, C138, C147, C2025, C2029, C2030, C2031, C301, C303, C304, C305, C318, C332, C333, C351, C812, DR013, DR023, P002, P025, P027, P028, P327, P329, P331, P333, P373, P378, P386, P410, P486, P604, P822, P826, P829, U015, U1003, U2003, U2007, U2008, U2009, U303, U309, U321, U322, U335, U338, U911
Waste generating process (describe for each building) including processes associated with U134 waste generation, if applicable.	WS4	Y	C011, C016, C066, C067, C073, C077, C103, C115, C128, C130, C137, C138, C152, C155, C157, C2004, C2006, C2007, C2008, C2009, C2011, C2012, C2014, C2015, C2016, C2017, C2018, C2019, C2020, C2021, C2022, C2023, C2024, C2030, C2031, C314, C315, C316, C335, DR017, P002, P004, P009, P012, P025, P027, P028, P029, P031, P034, P035, P038, P039, P040, P051, P059, P060, P062, P069, P1002, P2011, P2032, P2033, P2034, P2036, P2037, P2038, P2039, P304, P320, P326, P327, P329, P331, P333, P344, P358, P366, P374, P375, P378, P379, P380, P381, P386, P387, P389, P392, P395, P396, P399, P402, P403, P404, P410, P456, P469, P470, P471, P472, P473, P475, P478, P480, P487, P489, P490, P492, P5003, P503, P505, P507, P509, P515, P516, P518, P519, P520, P521, P523, P525, P532, P536, P537, P539, P540, P545, P546, P548, P550, P551, P552, P553, P554, P556, P557, P560, P562, P566, P568, P569, P571, P572, P574, P575, P577, P578, P580, P602, P603, P604, P606, P607, P610, P819, P822, P826, P827, P829, U030, U067, U068, U069, U074, U911

Waste Stream Number(s): AERHDM

Acceptable Knowledge Information	(1)AK#	Compiled? (Y/N)	Source Document Tracking Number
Process flow diagrams. For research/development, analytical laboratory waste, or other similar processes where process flow diagrams cannot be created, a description of the waste generating processes, rather than a formal process flow diagram, may be included, if justified.	WS5	Y	C138, P001, P032, P1001, P2022, P2023, P2024, P2026, P2027, P2028, P380, P401, P412, U011, U830
Summary of basis and rationale for delineating each waste stream including justification for combining waste historically managed separately as TRU mixed and TRU non-mixed waste streams into a single waste stream, that is traceable to referenced documents.	WS6	Y	C013, C124, C2010, C2027, C2029, C2030, C2031, C2033, C332, C333, C335, C350, P001, P002, P2036, P2037, P2038, P2039, P378, P604, U015, U017, U018, U019, U021, U022, U1002, U1003, U2021, U2022, U5001, U5003, U911
Generator site mission descriptions related to TRU waste generation and management identifying defense and non-defense operations.	WS7	Y	C001, C006, C016, C046, C066, C068, C092, C138, C152, C2004, C2011, C2012, C2013, C2014, C2015, C2016, C2017, C2018, C2019, C2020, C2021, C2022, C2023, C2024, C305, C329, C330, C331, C338, P002, P014, P1001, P2007, P2008, P2010, P2012, P2016, P2018, P2019, P2028, P2030, P2032, P2033, P2034, P2035, P320, P380, P389, P394, P520, P537, P599, P822, U001, U011, U040, U067, U076, U1003, U2014, U307, U5001, U5003, U911
Material inputs or other information that identified the chemical contents of the waste and the stream. Includes events or processes that may have modified the chemical properties of the waste stream after generation.	WS8	Y	C008, C009, C011, C012, C013, C014, C020, C023, C025, C026, C029, C035, C039, C066, C077, C081, C088, C091, C094, C097, C099, C106, C115, C116, C118, C128, C130, C133, C137, C143, C147,C148, C158, C160, C2004, C2005, C2006, C2007, C2008, C2009, C2029, C2030, C2031, C303, C316, C332, C333, C335, C341, C351, DR014, P001, P002, P004, P006, P027, P031, P032, P034, P038, P039, P040, P060, P061, P062, P069, P070, P2000, P2001, P2002, P2003, P2004, P2005, P2006, P2009, P2010, P2011, P2013, P2017, P2018, P2019, P2020, P2021, P2022, P2023, P2024, P2025, P2026, P2027, P2028, P2029, P2030, P2035, P304, P326, P327, P329, P331, P333, P344, P372, P378, P379, P380, P386, P387, P392, P4054, P410, P412, P416, P472, P475, P478, P480, P484, P485, P486, P487, P5001, P5002, P5004, P503, P505, P507, P509, P515, P516, P518, P520, P521, P532, P536, P537, P539, P540, P545, P548, P550, P551, P552, P554, P556, P557, P560, P566, P568, P569, P572, P574, P575, P577, P578, P580, P603, P604, P816, P817, P819, P822, U002, U006, U015, U017, U018, U019, U021, U022, U030, U041, U065, U066, U068, U069, U072, U073, U074, U083, U084, U085, U1002, U2002, U2007, U2008, U2009, U2010, U321, U322, U5002, U911

Waste Stream Number(s): AERHDM

Acceptable Knowledge Information	(1)AK#	Compiled? (Y/N)	Source Document Tracking Number
Physical waste form (e.g., glovebox materials and chemicals handled during glovebox operations, if applicable), assigned summary category group, waste matrix code and materials inputs, including waste material parameters present in the waste stream. Includes events or processes that may have modified the physical properties of the waste stream after generation.	WS9	Y	C013, C026, C029, C035, C147, C2002, C2003, C2004, C2005, C2006, C2008, C2010, C2025, C2026, C2027, C2029, C2030, C2031, C2033, C305, C318, C332, C333, C335, C341, C351, DR010, DR014, DR016, DR017, DR023, P001, P006, P031, P032, P034, P039, P061, P062, P069, P2000, P2004, P2006, P2009, P2011, P2012, P2017, P2019, P2020, P2021, P2022, P2025, P2029, P2030, P2035, P326, P327, P329, P331, P344, P358, P372, P373, P378, P379, P380, P381, P386, P392, P395, P398, P399, P402, P403, P404, P4054, P407, P410, P412, P469, P472, P475, P478, P480, P484, P485, P486, P487, P489, P490, P492, P5001, P5002, P5004, P5005, P5006, P5007, P5008, P505, P507, P509, P515, P516, P518, P520, P521, P525, P532, P536, P537, P540, P545, P546, P548, P550, P551, P552, P553, P554, P556, P557, P560, P562, P568, P571, P574, P575, P577, P578, P580, P603, P604, P606, P610, P819, P822, U002, U015, U017, U018, U019, U021, U022, U041, U068, U072, U073, U084, U1002, U2001, U2002, U2004, U2006, U2007, U2008, U2009, U2011, U2021, U2022, U307, U309, U321, U322, U332, U5001, U911
Waste identifiers assigned by the generator site (e.g., item description code, packaging identification numbers).	WS10	Y	C013, C067, C092, C124, C131, C2027, C2029, C2032, C2033, C332, P069, P366, P412, U015, U017, U018, U019, U021, U022, U040, U041, U1003, U2007, U2008, U2009, U2021, U2022, U307, U335, U5001, U911
Specification of the isotopic ratios for the ten WIPP-tracked radionuclides and all radionuclides other than the ten WIPP-tracked radionuclides that contribute to 95 percent of the radioactive hazard for a payload container. Chemical and physical information that could affect the waste isotopic distribution, as well as calculations used to derive the isotopic distribution.	WS11	Y	C004, C007, C009, C011, C013, C025, C026, C029, C036, C046, C066, C067, C082, C092, C094, C099, C103, C124, C125, C131, C136, C137, C138, C147, C152, C155, C157, C2002, C2003, C2004, C2005, C2007, C2011, C2012, C2013, C2014, C2015, C2016, C2017, C2018, C2019, C2020, C2021, C2022, C2023, C2024, C2027, C2030, C2031, C2032, C2033, C3000, C302, C303, C304, C305, C318, C329, C332, C349, C350, C812, P001, P002, P004, P006, P009, P012, P024, P025, P031, P035, P040, P051, P055, P1002, P2000, P2001, P2002, P2003, P2006, P2008, P2009, P2010, P2017, P2018, P2019, P2020, P2021, P2022, P2023, P2024, P2025, P2026, P2027, P2028, P2029, P2030, P2033, P2034, P326, P329, P344, P372, P373, P374, P375, P378, P380, P381, P407, P414, P416, P5001, P575, P602, P603, P604, P607, P610, P815, P816, P817, P819, P821, P822, P826, P827, P829, U004, U007, U009, U012, U013, U015, U017, U018, U019, U021, U022, U045, U065, U067, U068, U069, U070, U074, U076, U1003, U2002, U2004, U2007, U2008, U2009, U2021, U2022, U303, U307, U332, U335, U5001, U5003, U830, U911

Waste Stream Number(s): AERHDM

Acceptable Knowledge Information	(1)AK#	Compiled? (Y/N)	Source Document Tracking Number
State and EPA hazardous waste constituents in the waste stream and state and EPA Hazardous Waste Numbers assigned, including documentation regarding how the site has historically managed the waste, including the historical regulatory status of the waste (i.e., TRU mixed versus TRU non-mixed waste).	WS12	Y	C012, C014, C020, C023, C029, C035, C039, C066, C077, C081, C088, C091, C094, C097, C098, C106, C116, C133, C137, C143, C147, C148, C160, C2009, C2027, C332, C335, C341, C351, C5001, P002, P004, P006, P009, P023, P024, P025, P027, P031, P038, P039, P055, P061, P062, P070, P2003, P2011, P2017, P2018, P2021, P2022, P2023, P2024, P2026, P2027, P304, P329, P331, P333, P372, P4054, P410, P412, P416, P484, P485, P487, P489, P490, P5004, P5005, P5007, P5008, P507, P536, P537, U006, U065, U066, U069, U072, U083, U084, U085, U1002, U2007, U2008, U2009, U2010, U321, U322, U332, U5002, U911
Additional acceptable knowledge documentation (briefly describe):			
Process design documents (e.g., Title II Design)	S1	~~N~~ Y 08/26/13	C138, P322
Standard operating procedures that may include a list of raw materials or reagents, a description of the process or experiment generating the waste, and a description of the waste generated and how the wastes are managed at the point of generation	S2	Y	C011, C012, C089, C097, C128, C130, C2006, C314, C315, C316, C812, P001, P004, P034, P038, P039, P040, P055, P069, P070, P2031, P2036, P2037, P2038, P2039, P320, P327, P329, P331, P358, P381, P386, P387, P389, P392, P395, P398, P399, P401, P402, P403, P404, P407, P413, P415, P456, P469, P470, P471, P472, P473, P475, P478, P480, P484, P485, P486, P487, P489, P490, P492, P5002, P5003, P5004, P5005, P5006, P5007, P5008, P503, P507, P516, P518, P520, P521, P532, P536, P537, P539, P540, P545, P546, P548, P550, P552, P553, P554, P556, P557, P560, P562, P566, P568, P569, P571, P574, P577, P578, P580, P604, P610, P625, P626, P816, P817, P819, P822, P826, P829, U065, U085, U2010, U2011
Preliminary and Final Safety Analysis Reports and technical safety requirements	S3	Y	C103, C2004, P004, P031, P2010, P2012, P2018, P379, P380, P611
Waste Packaging records	S4	Y	C332, C333, C349, P2036, P2037, P2038, P2039, P413, P415, P5001, U015, U017, U018, U019, U021, U022, U041, U317
Test plans or research project reports that describe the reagents, radionuclides, and other raw materials used in experiments	S5	Y	C011, C039, C2004, C2005, C2007, P1002, P2001, P2002, P2003, P2004, P2005, P2006, P2007, P2008, P2009, P2017, P2019, P2020, P2021, P2022, P2023, P2024, P2025, P2026, P2027, P2028, P2029, P2030, P2035, P326, P344, P372, P373, P375, P5001, P505, P509, P515, P519, P523, P525, P572, P575, P602, P607, P610, P815, P816, P817, P821, P827, U830
Site databases (e.g., chemical inventory database for SARA Title III requirements, SNM or nuclear material databases)	S6	Y	U076, U2002, U2004, U307, U5003
Information from site personnel (e.g., documented interviews)	S7	Y	C006, C066, C067, C098, C124, C131, C137, C144, C2008, C2009, C2025, C2030, C2031, C2032, C2033, C302, C349, C5001, U2021, U2022, U5001
Standard industry documents (e.g., industry specification sheets, handbooks, reference materials, or other vendor information)	S8	Y	C016, C127, C144, P004, P2015, P493

Waste Stream Number(s): AERHDM

Acceptable Knowledge Information	(1)AK#	Compiled? (Y/N)	Source Document Tracking Number
Analytical data relevant to the waste stream, including results from fingerprint analyses, spot checks, routine verification sampling or other processes that collected information pertinent to the waste stream. This may include new information (or previously collected data) which augments required information (e.g., visual examination not performed in compliance with CCP-PO-001, radiography screening for prohibited items.	S9	Y	C035, C116, C152, C160, C2032, C332, C333, C349, P1002, P4054, P5001, P5004, P821, U1001, U1002, U1013, U1014, U1015, U1016, U2021, U2022, U5001, U5002
Material Safety Data Sheets, product labels, or other product information	S10	Y	C143, C144, DR014, DR016, P325, U072, U076
Laboratory notebooks that detail the research processes and raw materials used in an experiment	S11	Y	P398
Comparable or surrogate sampling and analysis data	S12	Y	C116, C143, C160, P004, P023
Other (describe)	S13	N	N/A
Safeguards and security, Materials Control and Accountability, and other nuclear material control system data Reports of nuclear safety or criticality accidents involving special nuclear materials (SNM)	S14	Y	C007, C124, C318, C349, P401, U1003
NMMA logs or inventory records or waste disposal logs providing SNM or nuclear material information	S15	Y	P398, P401, P815, U017, U018, U019, U021, U022, U335
Packaging	S16	Y	C003, C013, C025, C029, C066, C067, C089, C097, C099, C108, C115, C130, C144, C147, C2008, C2025, C2026, C2029, C335, C349, C350, C382, DR010, DR013, DR017, P001, P002, P006, P009, P024, P031, P035, P052, P055, P2010, P2011, P2012, P2036, P2037, P2038, P2039, P373, P378, P380, P398, P412, P413, P415, P416, P469, P475, P486, P5002, P5004, P604, P825, P626, U002, U004, U015, U017, U018, U019, U022, U041, U1002, U2003, U2011, U2012, U2013, U2020, U2021, U2022, U338, U911

Acceptable knowledge information regarding waste generated off-site or from similar process: CCP-AK-SRS-12 - See relevant AK Element #s above for relevant AK from this corresponding CH AK Summary Report.

(1) AK#s are used as identifiers for program, waste stream-specific and supporting elements. The identifiers are to be used in the Acceptable Knowledge Source Document Summary and Acceptable Knowledge Information List to aid in the page location of program and waste stream-specific elements within a given document. N/A means that item is not applicable.

Additional comments:
Q1 through Q16 relevant to sealed sources associated with ORSP waste streams, therefore these elements are not applicable to this RH TRU debris waste stream

All required AK information has been compiled and source document tracking numbers assigned.

Acceptable Knowledge Expert: Kevin J. Peters / [signature] Date: 8/24/2013
Print Sign

AK6

Attachment 4 - Acceptable Knowledge Source Document Information List

Site(s): Argonne National Laboratory

Waste Stream Number: AERHDM

Waste Stream Description: Argonne East Remote-Handled Mixed Debris

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
C001	Fax to Larry Neimark re: Defense versus Non-Defense Waste	Gary Marshall	N/A	01/21/1997
C002	Memorandum to File re: ANL Scrap Request 4-NU/EU-8-71-KZ 8-20/70 6-EBR I-Mark III fuel slugs. (1442g U235)	Wilton Jackson, ANL, Ext-3228	N/A	N/A, 06/06/1972
C003	Intra-Laboratory Memo to Harvey Welsh re: Dimensions of Intermediate TRU Waste Containers	Dennis Donahue	N/A	09/14/1989
C004	Intra-Laboratory Memo to R. S. Wisner, HFEF re: Estimates of Total AGHCF Inventory for Future Shipments to ANL-W	A. B. Cohen	N/A	04/24/1995
C006	Interview with Larry Neimark re: AGHCF samples, applicable programs, defense relationship to materials, and commingling of waste	Cheryl Schultz	N/A	07/17/2001
C007	Correspondence to L. A. Neimark, Manager, IP Section re: Assessment of Nuclear Materials Inventory, Fissile Inventory Records and Handling Procedures in FF12	A. G. Hins	N/A	03/13/1991
C008	Intra-Laboratory Memo to J. V. Natale, SPM re: TRU Scrap Shipment No. 4, SPM-43 No. CZC-168	W. D. Jackson	N/A	06/05/1975
C009	Intra-Laboratory Memo to W. D. Jackson, MCT/ANL-E, re: Fissile Scrap and Irradiated Structural Materials Waste Shipments from ANL-E to ANL-W for retrievable Storage in the RSWF	L.C. Witbeck	ANL-W-SSS-(LCW)-88-146	11/17/1988
C010	Memo to F. Pausche, AGHCF Records Chief re: Fuel Element Sectioning and metallography debris, accounting and criticality safety procedures for disposal	W. D. Jackson, AGHCF Facility Supervisor	N/A	04/17/1975
C011	Intra-Laboratory Memo to D. A. Donahue, MCT, re: Work Plan for the Examination of LILY-1 and LILY-1A Specimens	L. A. Neimark	N/A	11/28/1988
C012	Intra-Laboratory Memo to Operations Personnel re: Facility Nitrogen Purge Change and Storage of Flammable Liquids	D. A. Donahue	N/A	04/09/1990
C013	Correspondence to Mr. E. M. King, Oak Ridge National Laboratory re: Radioactive Waste, i.e., nonrecoverable material, being transferred from ANL to ORNL for storage and/or processing	L. A. Neimark	N/A	04/10/1974

NTPC RECORDS ORIGINAL
DATE REC'D 8/27/13 SP

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
C014	Correspondence to A. Cohen re: Process and Procedure with all and WMO for Sampling 1st Stage HEPA Filters. Description-8" x 8" x 3" w/ 5/8" Wood Frame Ultra Aire - MSA	F. Pausche	N/A	04/22/1995
C015	Intra-Laboratory Memo to C. M. Rock, EMO, re: Radionuclide Inventory of Waste from Alpha-Gamma Hot-Cell and Gloveboxes	A. B. Cohen, Manager, AGHCF	N/A	10/02/1996
C016	Intra-Laboratory Memo to C. E. Crouthamel, CMT, and M. J. Steindler, CMT re: LWR Hot-Cell Capability at ANL-E: The D-200 M-Wing Situation	L. A. Neimark	N/A	05/03/1985
C017	Intra-Laboratory Memo to L. A. Neimark, MCT re: TRU-RH Waste Payload Meeting Summary	J. R. Thuot, Acting Manager, PFS-WM	N/A	08/14/1990
C018	Email to Tony Aldred, DR Diercks, Tom Kassner, RB Poeppel, Richard Valentin, Dick Weeks re: Chemical Waste Inventory ii	W. J. Shack	N/A	05/18/1990
C019	Intra-Laboratory Memo to L. A. Neimark re: Disposal of Spent Darkroom Solutions	D. A. Donahue	N/A	11/20/1990
C020	Intra-Laboratory Memo to Environmental Compliance Representatives re: Photo Processing Solutions - Waste Characterization	R. G. Kolzow; J. R. Thuot	N/A	12/19/1990
C021	Intra-Laboratory Memo to All ANL Employees re: DOE Imposed Hazardous Waste Shipping Moratorium	R.J. Teunis, Chief Operations Officer	N/A	10/18/1991
C022	Intra-Laboratory Memo to Distribution re: Orphan or Unwanted Chemicals	Aubrey C. Smith, MCT/MSD, Bldg. 212	N/A	12/07/1992
C023	Intra-Laboratory Memo to M. J. Ryan, SEC re: Potentially Hazardous Materials in "Operational Clean Sweep"	L. A. Neimark	N/A	03/21/1983
C024	Intra-Laboratory Memo to W. C. Kettman, ET/IPS re: Clarification of 00 No. 29 with Regard to Inventory of 6-in. Storage Holes	L. A. Neimark, Manager, IPS	N/A	12/07/1993
C025	Correspondence to D. A. Donahue re: Transfer of Special Materials from G-118 Glovebox 3 to Building 212 Caves	M. A. Vest	N/A	09/16/1994
C026	Intra-Laboratory Memo to Melanie Tompkins re: Annual Forecast for Waste Management Operations-94	Aubrey C. Smith	N/A	08/31/1993
C028	Intra-Laboratory Memo to J. Thuot, WMO re: Costs of Current RH-TRU Disposal Campaign	L. A. Neimark, MCT	N/A	07/31/1990
C029	Letter re: Survey of Waste Streams in Building 212	Noreen Kevin; W. H. Livernash	N/A	05/31/1988
C031	Intra-Laboratory Memo to Distribution re: New Movement Slip for SNM and Other Programmatically Valuable Materials in the AGHCF	L. A. Neimark, Manager, AGHCF	32	Rev. 2, 10/05/1993

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
C032	Intra-Laboratory Memo to Distribution re: New Sectioning SLIP for SNM and Other Programmatically Valuable Materials in the AGHCF	L. A. Neimark, Manager, AGHCF	34	04/05/1994
C033	Intra-Laboratory Memo to Distribution re: Radioactive Gas Release Approval Form	Adam Cohen, Regulatory Compliance Officer, AGHCF	36	06/03/1994
C034	Intra-Laboratory Memo to A. Smith, PFS-306 re: AGHCF Intermediate-Level Transuranic Waste Removal and Storage	D. Donahue, MCT-212	N/A	10/21/1986
C035	Intra-Laboratory Memo to Distribution re: Management of Broken Fluorescent Lamps	J. Herman	N/A	02/02/1999
C036	Letter to Sheldon Meyers, Deputy Assistant Secretary for Nuclear Waste Management re: Disposition of TRU from LWR Program: Documentation of Agreements Reached in August 15, 1980 Meeting	Robert H. Bauer	N/A	09/09/1980
C037	Intra-Laboratory Memo to L. Neimark, MST and W. Jackson re: Transuranic Waste Retrievable Burial	M. J. Ryan, PFS-SPM	N/A	02/07/1983
C038	Intra-Laboratory Memo to L. A. Neimark re: Self-ignition Material from "Operation Clean Sweep"	W. D. Jackson	N/A	04/13/1983
C039	Intra-Laboratory Memo to L. A. Neimark re: Procedure for Disposal of "Clean Sweep" Pyrophoric Waste	W. D. Jackson	N/A	09/06/1983
C040	Intra-Laboratory Memo to D. A. Donahue, MST re: Disposal of TRIO Capsule	R. Mattas, FPP/MST	N/A	04/03/1986
C041	Intra-Laboratory Memo to Distribution re: Solid Radioactive Waste Drum Failure	B. R. T. Frost, Director, MSD	N/A	01/07/1977
C043	Correspondance to Dr. F. W. Buckman, Director, Nuclear Activities Department, Consumers Power Company re: Disposal of Tranuranic (TRU) Waste from LWR Extened Burnup Program-Contract No. DE-ACO2-76ET34215 and DE-ACO2-79ET34006	James E. Fletcher, Director, Acquisition and Assistance Operations Division I	N/A	10/16/1980
C044	Notes from Waste Pkg Mtg (Twist & Ties)	Jack Jackson	N/A	06/28/1985
C045	Intra-Laboratory Memo to G. R. Imel, Mgr., Reactor Physics & Experiments re: Disposal of Irradiated Stainless Steel	D. C. Cutforth, Mgr., Reactor Physics	N/A	07/13/1994

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
C046	Intra-Laboratory Memo to D. C. Parzyck re: DOE request for Information Regarding Materials Not Classified as Waste	Aubrey C. Smith	N/A	03/13/1991
C049	Intra-Laboratory Memo to D. R. Schmitt, MCT and D. R. Diercks, MCT re: Passivation of Unirradiated UC Material	A. G. Hins, MCT	N/A	10/30/1990
C050	Intra-Laboratory Memo to L. A. Neimark and F. Pausche re: AGHCF Fissile Material Items to be Submitted for Scrappage from Area IV and Areas I and II	A. G. Hins	N/A	11/20/1990
C051	Intra-Laboratory Memo to D. A. Donahue, MCT re: Procedure for Examining Contents of TRU Waste Cans in Search for Accountable Material	L. A. Neimark, MCT	N/A	07/06/1992
C052	Intra-Office Memorandum to L. A. Neimark re: Disposal of Spent DOE/PNC ORT-RBCB Fuel Pins	J. H. Bottcher, Fuels & Engineering	N/A	11/23/1994
C053	Intra-Laboratory Memo to M. J. Ryan, SPM re: Use of the AGHCF for Disposal of High-level Fissile Scrap	L. A. Neimark, MSD	N/A	05/28/1976
C054	Letter to Manager, Chicago Operations Office, U.S. Energy Research and Development Administration re: Inventory and Characterization of ERDA Intermediate-Level Beta-Gamma Transuranic (TRU) Waste	P. E. Neal, Associate Director	N/A	01/27/1977
C055	Letter to Mr. M. Heilson, Lockheed Idaho Technologies Co. re: Irradiated Fuel Shipments to and from Alpha-Gamma Hot Cell Facility at the ANL-Illinois Site, 1993-1995	L. A. Neimark, Manager, Irradiation Performance Section, Energy Technology Division	N/A	07/09/1997
C056	Inter-Office Memo to L. J. Neimark, AGHCF Manager re: Waste removal	K. W. Poupa, Manager, SPM	N/A	11/12/1992
C064	Intra-Laboratory Memo to John McDade, Special Materials Representative, 212 re: Preparation for RH/TRU Shipment	Adam Cohen, Regulatory Compliance Officer, AGHCF	N/A	11/07/1994
C065	Intra-Laboratory Memo to R. Bouie, Director, PFS re: Waste Disposal Information	L. E. Boing, Waste Management Associate	N/A	08/24/1989
C066	Record of Communication with Bill Kettman and Dennis Donahue, AGHCF re: AGHCF Operations and Waste Packaging	J. Whitworth; M. Wyco	N/A	08/07/2001
C067	Record of Communication with Fred Pausche and Terry Bray, AGHCF	J. Whitworth; M. Wyco	N/A	08/08/2001

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
C068	Correspondence to Craig R. Tyler, Lockheed Martin Idaho Technologies Co. re: ANL Transuranic Waste - Definition as Defense Waste	D. S. Kirschner	N/A	04/16/1997
C069	Letter to Dr. Robert G. Sachs, Director Argonne National Laboratory re: Inventory and Characterization of ERDA Intermediate-Level Beta-Gamma Transuranic (TRU) Waste	Robert H. Bauer, Manager	N/A	01/17/1977
C070	Correspondence to Mark DeHaan re: Update of the TWBIR -HKP-04-97	Henry Peterson	HKP-04-97	03/25/1997
C072	Intra-Laboratory Memo to W. C. Kettman and F. Pausche, MCT re: Disposition of Materials from TREAT Tests RX2, LO5, and LO7 at the AGHCF	J. W. Holland	N/A	08/20/1992
C073	Letter to Ms. Trisha Dedik, Director, International Policy and Analysis Division, NN-42, U.S. Department of Energy re: Transmittal of ANL Quarterly Reports	Armando Travelli	N/A	01/15/2001
C074	Letter to Mr. Hilary Rauch, Manager, U.S. Department of Energy re: "TREAT Experiment Program"	R. Avery	N/A	04/04/1985
C077	Letter to Mr. Mahlon Heileson, Lockheed Idaho Technologies Company re: Liquids absorbed on pelletized clay are non hazardous	Daniel Pancake	N/A	10/16/1995
C079	Intra-Laboratory Memo to F. A. Nichols, MST re: IFR Information Meeting	L. A. Neimark, MST	N/A	11/15/1984
C080	Intra-Laboratory Memo to L. A. Neimark re: Work Plan for the Postirradiation Examination of Six Mixed-oxide Fuel Pins from X470 at the AGHCF	R. V. Strain	N/A	11/01/1990
C081	Intra-Laboratory Memo to Larry Neimark, ET re: Use of Carbon Tetrachloride in Alpha Gamma Hot Cell Facility (AGHCF) Experiments	Judd Johnson	N/A	09/02/1994
C082	Fax to Ray Lang, DOE-CH re: ANL-E fuel Pins	L. A. Neimark	N/A	05/20/1993
C086	Correspondance to Ms. S. A. Lott, National RH-TRU Program Coordinator, Westinghouse Electic Corporation, Waste Isolation Division re: TRU Update Meeting Information Request	J. R. Thuot, Manager, Technical Support, ANL Waste Management	N/A	04/01/1991
C088	Correspondence to Mr. W. M. Heileson, Waste Generator Interface, EG&G Idaho, Inc. re: Content of ANL-E RH TRU Drums Stored at INEL	L. A. Neimark	N/A	06/17/1994
C089	Intra-Laboratory Memo to Dennis Donahue, Supervisor/AGHCF re: Waste Management Quality Assurance Surveillance Report No. 93-MCT-03a	Georgia Anast	N/A	03/16/1993
C091	Correspondence to W. Mahlon Heileson, Waste Management, RWMC Technical Support, EG&G Idaho, Inc. re: Lead in Remote Handled Transuranic Waste Stored at Idaho National Engineering Laboratory (INEL)	Judd F. Johnson	N/A	07/18/1994
C092	Intra-Laboratory Memo to J. L. Hooper, DOE (ARG) re: Experimental Fuel Segments in the AGHCF	L. A. Neimark	N/A	06/07/1996

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
C093	Intra-Laboratory Memo to R. E. Lang, DOE-CH re: TRU Steering committee Definitions	L. A. Neimark, ANL-ET/IPS	N/A	02/01/1996
C094	Correspondence to L. Neimark, Materials & Components Technology re: Metallographic Samples	J. E. Battles; Z. Tomczuk	N/A	06/13/1990
C097	Correspondence to AGHCF, Operational Personnel re: Work Station III Fissile Grinding Waste	Dennis Donahue	N/A	N/A
C098	Interview with Cindy Rock (WMO) re: hazardous waste procedures, etc.	Cheryl Schulz	N/A	08/28/2001
C099	Correspondence to Mr. Dennis Wilkinson, RWMC/SWEP re: TRU Waste at Argonne National Laboratory-East	J. R. Thuot	N/A	05/17/1990
C100	Correspondance to Mr. Thomas W. Ortciger, Director, Illinois Department of Nuclear Safety and Mr. Thomas Skinner, Director, Illinois Environmental Protection Agency re: Proposed site Treatment Plan for Argonne National Laboratory (ANL)	Timothy S. Crawford, Argonne Group Manager	N/A	12/22/2000
C1001	E-Mail Correspondence; Re: Work Performed in the Bldg. 200 M-Wing during the 1978-1982 Time Period	C.M. Rock to K. Peters and T. Clements	N/A	04/11/2008
C1002	E-Mail Correspondence; Re: Work Performed in the M Cells of the Bldg. 200 M-Wing	J. Beitz to C.M. Rock	N/A	03/18/2008
C1003	Letter to N.D. Dudey and C.E. Crouthamel (EXXON); Management Summary and Milestone Report for July 1978	C.E. Johnson	N/A	08/14/1978
C1004	Letter to L.A. Neimark; Preparation of Test Specimens from Exxon Fuel Rods JJ-40002 and JK-40001 for Use in EPRI Program RP 1027	F. L. Yaggee	N/A	11/22/1977
C1005	Letter to N.D. Dudey and C.E. Crouthamel (EXXON); Management Summary and Milestone Report for June 1978	C. E. Johnson	N/A	07/17/1978
C1006	Letter to N.D. Dudey (EXXON); Transmittal of Gamma Scanning Data for J-2 Rods	C. E. Johnson	N/A	06/16/1978
C1007	Letter to N.D. Dudey and C.E. Crouthamel (EXXON); Management Summary and Milestone Report for April 1978	C. E. Johnson	N/A	06/16/1978
C1008	Letter to N.D. Dudey and C.E. Crouthamel (EXXON); Management Summary and Milestone Report for January 1978	C. E. Johnson	N/A	02/13/1978
C1009	Possible Contract with Exxon and Attachments	B. R. T. Frost	N/A	07/13/1976
C1010	Letter to C.E. Crouthamel (EXXON); Management Summary and Milestone Report for February 1979	C. E. Johnson	N/A	03/13/1979
C1011	Letter to N.D. Dudey and C.E. Crouthamel (EXXON); Management Summary and Milestone Report for December 1978	C. E. Johnson	N/A	01/12/1979

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
C1012	Letter to C. E. Johnson; Progress Report for December 1978 on EXXON-EPRI Program RP 306	L. A. Neimark	N/A	01/10/1979
C1013	Letter to N. D. Dudey and C. E. Crouthamel (EXXON); Management Summary and Milestone Report for November 1978	C. E. Johnson	N/A	12/18/1978
C1014	Letter to N. D. Dudey and C. E. Crouthamel (EXXON); Management Summary and Milestone Report for September 1978	C. E. Johnson	N/A	10/18/1978
C1015	Letter to C. E. Johnson; Progress Report on EXXON-EPRI Program RP 306	L. A. Neimark	N/A	10/06/1978
C1016	Letter to N. Dudey (EXXON); Gamma Scan Results for J-2 Rods	L. A. Neimark	N/A	08/13/1978
C1017	Letter to C. E. Johnson; Montly Report for June on EXXON/EPRI Program RP 306	L. A. Neimark	N/A	07/13/1978
C1018	Letter to N. D. Dudey and C. E. Crouthamel (EXXON); Management Summary and Milestone Report for August 1978	C. E. Johnson	N/A	09/18/1978
C1019	Letter to C. E. Johnson; Monthly Report for March on EXXON/EPRI Program RP306	L. A. Neimark	N/A	04/11/1978
C102	Intra-Laboratory Memo to Ken Poupa, SSD-SPM re: Request for Formation of Consolidation Batch	Adam Cohen, MCT-AGHCF	N/A	06/08/1993
C1020	Letter to N. Dudey (EXXON); Last Gamma Scan Results for J-2 Rods	L. A. Neimark	N/A	09/12/1978
C1021	Letter to L. A. Neimark; Estimated Costs for Exxon/EPRI Program	C. E. Johnson	N/A	04/06/1977
C1022	Drawings List for the CEN Shielded Fuel Examination Facility in Cell M-4 of MA-Wing in Building 200, Argonne National Laboratory	J. Beitz	N/A	03/09/2007
C1023	Intra-Laboratory Memo to D. S. Butler, Location of Fission-gas Punctures in EXXON J-2 Rods	L. A. Neimark	N/A	06/29/1978
C1024	Letter to N. D. Dudey and C. E. Crouthamel (EXXON); Management Summary and Milestone Report for April 1978	C. E. Johnson	N/A	05/17/1978
C1025	Letter to C. E. Johnson; Monthly Report for April on EXXON/EPRI Program RP306	L. A. Neimark	N/A	05/10/1978
C1026	Letter to N. D. Dudey and C. E. Crouthamel (EXXON); Management Summary and Milestone Report for March 1978	C. E. Johnson	N/A	04/17/1978
C1027	Letter to N. D. Dudey and C. E. Crouthamel (EXXON); Management Summary and Milestone Report for February 1978	C. E. Johnson	N/A	03/16/1978
C1028	Letter to C. E. Johnson; Monthly Report for February on EXXON/EPRI Program RP306	L. A. Neimark	N/A	03/07/1978
C1029	Letter from C. E. Johnson; Guidelines for Monthly EPRI/EXXON Report	C. E. Johnson	N/A	03/20/1978

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
C103	Intra-Laboratory Memo to C. A. DeLorenzo, OOS re: Safety Analysis for Handling Tritium-containing Compounds in the AGHCF	L. A. Neimark	N/A	05/30/1984
C1030	Letter to N. D. Dudey and C. E. Crouthamel (EXXON); Management Summary and Milestone Report for January 1979	C. E. Johnson	N/A	02/14/1979
C104	Intra-Laboratory Memo to L. A. Neimark re: Trip Report. RH_TRU Workshop at Albuquerque, N.M.	W. D. Jackson	N/A	01/19/1983
C105	Intra-Laboratory Memo to L. A. Neimark re: Remote Handled (RH) TRU Waste Certification Requirements	W. D. Jackson	N/A	12/02/1982
C106	Email to Whitworth, Julia re: Exploding Drum at ANL	Terri S Bray	N/A	08/30/2001
C108	Correspondence to Mr. J. T. Case, U.S. Department of Energy, Idaho Field Office re: Strategy Plan for Long-term Management and Storage of Remote-handled (RH) Transuranic (TRU) Waste - TLC-224-92	T. L. Clements	TLC-224-92	11/30/1992
C109	Intra-Laboratory Memo EBR-II Division to G. L. Hofman re: My Current Thoughts on Fuel-Cladding Compatibility	R. V. Strain	N/A	10/28/1988
C111	Intra-Laboratory Memo to L. A. Neimark, Manager, Irradiation Performance Section, MCT re: Waste Handling Training and Operator Qualification	W. D. Jackson, Supervisor, Alpha-Gamma Hot Cell Facility, MCT	N/A	05/23/1988
C112	Intra-Laboratory Memo to Division Directors and Department Heads re: Interm Procedures: On-site Packaging and Transportation of Hazardous Material	R. L. Herriford, Director, Support Services	N/A	01/18/1991
C113	Intra-Laboratory Memo to C. L. Cheever, PFS re: Packaging for Transportation of Remote Handled Transuranic Waste (RH-TRU)	W. D. Jackson, MST	N/A	03/24/1983
C114	Intra-Laboratory Memo to Distribution re: Procedure for Installation of Gaskets on 30 Gallon DOT 17-H Drums Used for Remote Handled Transuranic Waste (RH-TRU)	W. D. Jackson	N/A	06/09/1983
C115	Intra-Laboratory Memo to W. H. Kline, Waste Management Coordinator re: Waste Packaging Criteria, Transuranic Waste, Idaho National Engineering Laboratory, Revision 1, IDO-10074	W. D. Jackson	N/A	11/01/1979
C116	Fax to M. Heileson re: Pelletized Clay	Judd Johnson	N/A	11/20/1995
C118	Intra-Laboratory Memo to A. C. Smith, PFS re: Chemical Forms in AGHCF Transuranic Wastes	L. A. Neimark	N/A	04/12/1989

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
C121	Record of Communication with L. Neimark, A. Cohen, and F. Pausche (former AGHCF Section and Facility Manager and Records Chief Technician) re: AGHCF Radiological Characterization of RH-TRU Waste Shipped to INEEL	J. Whitworth and J. Biedscheid of IT Corporation; P. Kuan, R. Bhatt, and S. Kheriche of INEEL	N/A	12/18/2001,12/19/2001
C122	Correspondance to J. H. Kittel re: Status of Alpha-Gamma Hot Cell	B. J. Koprowski	N/A	05/15/1968
C124	Fax to Mark Wyco and Larry Neimark, ANL-E re: Request for ANL-E to Identify Items of ANL-W Origin	Julia Whitworth	N/A	02/21/2002
C125	Intra-Laboratory Memo to Steve Gehl, MSD re: Burnup on LWR Samples	E. R. Ebersole	N/A	10/22/1975
C126	Intra-Laboratory Memo to Distribution re: Removal of Old Equipment and Material from the Hot-cell as Low-Level Waste	A. B. Cohen, Manager, AGHCF	N/A	02/27/1996
C127	Radiological Health Handbook	N/A	N/A	01/1970
C128	Intra-Laboratory Memo to Distribution re: Revised Procedure for Determining Specimen Density by Immersion, Operations Manual Section 7.21	L. A. Neimark	OO No. 41	03/13/1995
C129	Intra-Laboratory Memo to Distrubution re: 00 No. 43, Fissile Material Accountability in the DRA	A. B. Cohen, Manager, AGHCF	00 No. 43	05/17/1995
C130	Intra-Laboratory Memo to Waste Handling Procedures Manual Holders re: Packaging of Intermediate Level* Radioactive Waste for Disposal (Liquids)	C. L. Cheever	N/A	09/12/1979
C131	Record of Communication with Larry Neimark, AGHCF re: Apparent discrepancies in the batch codes assigned to various elements as reported in different databases	M. Wyco	N/A	02/21/2002
C132	Intra-Laboratory Memo to L. A. Neimark Section Manager, Irradiation Performance Section, MCT re: WMO Quality Assurance Audit (draft) dated May 26, 1988 - Finding #4	W. D. Jackson, Alpha-Gamma Hot Cell Facility Supervisor, MCT	ANL-26 (11-68)?	07/11/1988
C133	Intra-Laboratory Memo to Division Directors/Department Heads re: Potentially Unstable Chemicals	R. A. Wynveen	N/A	04/15/1991
C135	Faxed memorandum to Al Alm, Assistant Secretary for Environmental Management and George Dials, Manager, Carlsbad Area Office re: Interpretation of the Term "Atomic Energy Defense Activities" As used in the Waste Isolation Pilot Plant Land Withdrawal Act	Robert R. Nordhaus, General Counsel	N/A	09/09/1996
C136	Intra-Laboratory Memo to Distribution re: Responsibility for Waste Disposal	J. R. Blauser	N/A	09/18/1980
C137	Email to Cheryl Schulz, Mark Wyco re: RH TRU Waste	Julia Whitworth	N/A	03/06/2002

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
C138	Intra-Laboratory Memo to Distribution re: Hot-cell Survey	L. A. Neimark	ANL-26 (11-68)	08/20/1973
C139	Intra-Laboratory Memo to J. I. Sackett, Director, EBR-II Division re: Burnout Software Package	D. C. Cutforth, EBR-II Chief Physicist	N/A	08/07/1991
C140	Fax to Julia Whitworth, IT Corporation re: Attached Letter and 99 Questions	D. Parker, Waste Management, TSA	N/A	05/14/2002
C141	Intra-Laboratory Memo to L. A. Neimark, MSD re: Establishment of RAS Loop Disassembly Capability at ANL-E	W. D. Jackson, MSD	N/A	06/11/1973
C142	Fax to Cheryl Schulz re: New C132 and Larry N. Comments	Julia Whitworth, Shaw	N/A	06/18/2002
C143	FAX to Cheryl Schulz re: Information on AGHCF Mercury Vapor Lamps and Lighting Fixtures	Geneine Staymates	N/A	03/10/2003
C144	Record of Communication with Curtis Merks re: Specifications for filter vents used on ANL-E drums and bags	Cheryl Schulz	N/A	03/10/2003 thru 03/13/2003
C146	Intra-Laboratory Memo to Distribution re: Changing of HEPA Filters	A. B. Cohen, ET/IPS	00 No. 50	06/21/1996
C147	Letter to Mr. John M. Schaffer re: Additional Information to Complete Actions Associated with Preexisting Condition (PEC) 316 - Argonne National Laboratory-East (ANL-E) Transuranic Waste - (EM-WM-03-055)	Edward J. Ziemianski	N/A	03/20/2003
C148	Record of Communication with Terri Bray, ANL-E AGHCF Manager re: Lead Solder and First Stage HEPA Filters	Cheryl Schulz	N/A	09/2001
C149	Correspondnece to Mr. Daniel Hecker, Waste Management Office, Argonne National Laboratory-East re: Transmittal, Final Argonne National Laboratory-East Transuranic Waste Acceptable Knowledge Report; email and other letter included	Tom Krause, Project Manager, Benchmark Environmental Corporation, A ThermoRetec Company	N/A	09/29/2000
C150	Intra-Laboratory Memo to C. L. Cheever, WMO re: Draft of WMO Quality Assurance Audit Report	C. A. Diokno, QES	N/A	05/26/1988
C151	Intra-Laboratory Memo to Distribution re: Procedure for Installing Vents in Pre-packaged 30-gal. TRU Waste Drums (IPS-2-09-00/Section 15.9)	L. A. Neimark, MCT	N/A	07/24/1990
C152	Intra-Laboratory Memo to D. A. Donahue, MCT/IPS re: Work Plan for the Examination of LILAC Target No.19 for Battelle Pacific Northwest Laboratories	L. A. Neimark	IPS-46-00-00	05/03/1991

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Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
C153	Intra-Laboratory Memo to D. A. Donahue AGHCF Supervisor re: Work Plan for WPF Tests	Yung Y. Liu, MCT and John W. Holland, RAS	IPS-18-00-00	05/03/1990
C154	Intra-Laboratory Memo to D. A. Donahue re: Work Plan for the Destructive Examination of Six DP-Series Test Pins Discharged from the IFR DP-1 Experiment after Run 148B (IPS-7-00-00)	Hanchung Tsai	N/A	05/15/1989
C155	Intra-Laboratory Memo to D. A. Donahue MCT re: Work Plan for the Preparation of Specimens for NPR Tests MA-2, -3, and -4	L. A. Neimark	IPS-27-00-00	09/20/1990
C156	Intra-Laboratory Memo to D. A. Donahue Supervisor, AGHCF re: Work Plan for the Preparation of FBTA Specimens from Savannah River Fuel	L. A. Neimark, MCT	IPS-39-00-00	02/14/1991
C157	Intra-Laboratory Memo to L. Neimark MCT re: Test Specification and Operating Procedure for NPR Tests ALCAL-1 and -2.	Terri Shearer	IPS-49-00-00	05/29/1991
C158	Collection of Memos beginning with: Inter-Laboratory Memo to ANL-E Environmental Compliance Representatives re: Illinois Environmental Protection Agency (EPA) Air Pollution Control Permit Applications	D. C. Parzyck	N/A	10/22/1990
C159	Intra-Laboratory Memo to The File re: Whether AGHCF Use of Alcohol is Cold Cleaning	William D. Luck, Assistant General Counsel	N/A	05/14/2001
C160	Fax Memo to Mahlon Heileson, LITCO/RWMC re: Underlying Hazardous Constituents Waste Stream ANL212951004T	Judd Johnson	N/A	11/20/1995
C161	Intra-Laboratory Memo to Waste Handling Procedures Manual Holders re: Packaging of Intermediate Level* Radioactive Waste for Disposal (Liquids)	C. L. Cheever, Acting Waste Management Coordinator	ANL-26 (11-68)	09/12/1979
C162	Intra-Laboratory Memo to Distribution re: Procedure for the AGHCF Remote-Handled Waste Documentation	Ralph Ditch, PFS/WMO QA Coordinator	N/A	10/30/1986
C2000	Memo from Gail Stine to Ronald C. Lutha regarding Work Package for Performing Work Associated with Building 205 K-Wing Solid Material Processing Project	Gail Stine	N/A	07/15/2009
C2001	Memo from Timothy S. Crawford to Dr. Dean E. Eastman regarding Approval of the Safety Analysis Report (SAR) for the Building 205 G & K Wing Complex	Timothy S. Crawford	N/A	01/31/1997
C2002	Memo to Dr. Frank Y. Fradin re: Safety Analysis Report (SAR) Rev 02 and Technical Safety Requirements (TSRs) Rev 01 for the Argonne National Laboratory - East (ANL-E) Building 205 G & K Wing Laboratories	Timothy S. Crawford	N/A	08/07/1998

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
C2003	Memo from Robert C. Wunderlich to Dr. Hermann A. Grunder regarding Approval of the Safety Analysis Report (SAR) Revision 04 and the Technical Safety Requirements Revision 03 for Building 205 G-Wing and K-Wing Laboratories	Robert C. Wunderlich	N/A	01/21/2003
C2004	Safety Review for Unsaturated Testing of Uranium Metal Spent Fuel in Bldg. 205 Senior Cave and K-116 Facilities	J. Fortner	CMT50-0118-Draft	Rev. 00, 03/07/2000
C2005	Safety Review of Tests with Samples of Spent Fuel in Bldg. 205, K-104 (Senior Cave) and, in K-116, Sampling of Leachate Solutions from the Tests	P. A. Finn	CMT50-0058-EP	Rev. 01, 03/13/2000
C2006	Work Plan for the Preparation of Unirradiated Al-clad Specimens for CMT	T. S. Bray	IPS-329-00-00	12/02/1999
C2007	Work Plan for the Preparation of Specimens from the Characterization of Pins UW02010 (A/G 498A) and UW08036 (A/G 498B)	L. A. Neimark	IPS-284-00-00	06/17/1998
C2008	Interview of D. Pancake, D. Hodge, J. Emery, L. Maggos, and J. Mackin regarding Waste Handling practices, use of chemicals, time periods of waste generation for K-Wing hot cells, Bldg. 205	Kevin Peters	N/A	09/18/2009
C2009	Communication from Laura E. Maggos to Judith Stewart regarding 205 K-Wing - contactor cleaning solutions	Laura E. Maggos	N/A	08/12/2009
C2010	Evaluation of the Physical Waste Composition for K-Wing Waste in Waste Stream AERHDM	Christopher Chancellor	N/A	09/24/2009
C2011	ANL Memo to R. J. Page re: Estimating Mass and Radioactivity for EBR-2 Element Segments Stored in Building 212 - More Numbers	K. N. Grimm	NOD-155-00-00 / Reference 5	04/22/2008
C2012	ANL Memo to R. J. Page re: Estimating Mass and Radioactivity for HBR Rods Stored in the AGHCF	K. N. Grimm	NOD-155-00-00 / Reference 6	01/24/2008
C2013	ANL Memo to R. J. Page re: Estimating Mass and Radioactivity for Surry Unit 2 Elements Stored in the AGHCF	K. N. Grimm	NOD-155-00-00 / Reference 8	03/17/2008
C2014	ANL Memo to R. J. Page re: Limerick Fuel Rod Activity Analysis	K. N. Grimm	NOD-155-00-00 / Reference 10	03/21/2006
C2015	ANL Memo to R. J. Page re: Estimating Activity for Limerick Rods Stored in the AGHCF - More Numbers	K. N. Grimm	NOD-155-00-00 / Reference 11	01/29/2008
C2016	ANL Memo to R. J. Page re: Quad Cities Unit 1 Fuel Rod Activity Analysis	K. N. Grimm	NOD-155-00-00 / Reference 13	04/21/2006
C2017	ANL Memo to R. J. Page re: Estimating Activity for Quad Cities Rods Stored in the AGHCF - More Numbers	K. N. Grimm	NOD-155-00-00 / Reference 14	01/30/2008
C2018	ANL Memo to R. J. Page re: Three Mile Island Unit 1 Fuel Rod Activity Analysis	K. N. Grimm	NOD-155-00-00 / Reference 15	04/19/2006

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
C2019	ANL Memo to R. J. Page re: Estimating Activity for TMI Rods Stored in the AGHCF - More Numbers	K. N. Grimm	NOD-155-00-00 / Reference 16	01/29/2008
C2020	ANL Memo to R. J. Page re: Estimating Mass and Radioactivity for BRP, HBR, and BR3 Elements Stored in the AGHCF	K. N. Grimm	NOD-155-00-00 / Reference 17	03/01/2007
C2021	ANL Memo to R. J. Page re: Estimating Activity for BRP, HBR, and BR3 Rods Stored in the AGHCF - More Numbers	K. N. Grimm	NOD-155-00-00 / Reference 18	03/18/2008
C2022	ANL Memo to R. J. Page re: Pu-241/Am-241 Cooling Effects for EBR-2 Element T473	K. N. Grimm	NOD-155-00-00 / Reference 21	01/25/2007
C2023	ANL Memo to R. J. Page re: Estimating Mass and Radioactivity for FFTF Element Segments Stored in Building 212 - More Numbers	K. N. Grimm	NOD-155-00-00 / Reference	03/26/2008
C2024	ANL Memo to R. J. Page re: Estimating Mass and Radioactivity for EBR-2 and PFR Element Segments from the TREAT Facility Stored in Building 212 - More Numbers	K. N. Grimm	NOD-155-00-00	03/25/2008
C2025	Communication with Dan Pancake: Inventory Update and the Management of Potentially Reactive and Pyrophoric Materials	Kevin Peters	N/A	11/13/2009; 11/30/2009
C2026	WMP Calculations for addition of 100 30-gal drums to AERHDM	N/A	N/A	N/A
C2027	Waste Stream Delineation Evaluation for Waste Stream AERHDM to include K-Wing Waste	Kevin Peters	N/A	07/14/2010
C2028	Memorandum from Jene Vance to File regarding Potential Overestimate of Activity in Drums 953 and 955	Jene Vance	N/A	01/08/2011
C2029	Waste Container Evaluation Memorandum for Waste Stream AERHDM	Kevin Peters	N/A	05/20/2008
C2030	Letter from Laura Maggos to Kevin Peters, Inclusion of Previously Packaged K-Wing Waste into ANL RH-TRU Waste Stream	Laura Maggos	N/A	10/20/2010
C2031	Letter from Laura Maggos to Kevin Peters, Inclusion of Previously Packaged K-Wing Waste into ANL RH-TRU Waste Stream, Part 2	Laura Maggos	N/A	05/13/2011
C2032	Intra-Laboratory Memo to Dan Pancake; Radionuclide Inventories of IPNS Targets	Brad Micklich	N/A	07/20/2010
C2033	Communication with Dan Pancake and Laura Maggos Regarding Clarification on the Management of Corrosion Study Liquids and West Valley and SRS Vitrified High-Level Waste Samples in the K-Wing	Kevin J. Peters	N/A	03/06/2012
C3000	Comparison of Fuel Rod Length Measurements from AK Records and VE Records for K-Wing FEW	J. Vance	N/A	11/16/2011
C301	Memo from T. Bray to Document File: Shipment of EBR-II Fuel to ANL-W	T. S. Bray	HFS-13-00-00	09/15/2004

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
C302	Memo from L. A. Neimark to Distribution. Subject: Revision 1 to the Work Plan for the Preparation of Fuel Rods for Return Shipment to Idaho, HFS-015-00-00, December 8, 2004.	L. A. Neimark	HFS-015-00-01	12/09/2004
C303	Handwritten memo dated 10/21/1994. Subject: Change postings in to Areas I, III, IV to reconcile books to SPM - attached logbooks for Area I FGE, and Area III FGE	N/A	N/A	Various Dates
C304	Memo from T. S. Bray to OO Holders. Subject: New Pu Equivalent Mass Limits for Area IV	T. S. Bray	OO No. 58	02/22/2000
C305	Memo from R. J. Page and A. Miron to T. S. Bray. Subject: Inventory and Dose Estimates for Radionuclides Stored in the Alpha-Gamma Hot Cells Facility. Report attached.	R. J. Page; A. Miron	N/A	05/02/2003
C306	Memo from R. J. Page to G. L. Winner. Subject: Isotopic Inventory of the AGHCF	R. J. Page	N/A	07/20/2005
C307	Memo from R. J. Page to J. A. Morman. Subject: Isotopic Inventory of the AGHCF	R. J. Page	N/A	12/08/2002
C309	Memo from J. A. Stillman to T. Bray. Subject: Light Water Reactor Fuel Analysis for the AGHCF	J. A. Stillman	N/A	09/09/2003
C310	Memo from D. A. Donahue to AGHCF Operations Personnel. Subject: New Operations Log Book	D. A. Donahue	OO No. 9	01/14/1991
C311	Memo from L. A. Neimark to AGHCF Operations Personnel and IPS Staff. Subject: Operations Order No. 17: Metallography Size Limitations	L. A. Neimark	OO No. 17	08/15/1991
C312	Memo from D. A. Donahue to Distribution. Subject: Record Log Books	D. A. Donahue	OO No. 15	05/30/1991
C314	Memo from M. C. Billone to Irradiation Performance Section. Subject: Deletions for the AGHCF Operations Manual (EBL Documents)	M. C. Billone	IPS-435-00-00	10/28/2003
C315	Memo from M. C. Billone to Irradiation Performance Section. Subject: Deletions for the AGHCF Operations Manual (PROG documents)	M. C. Billone	IPS-436-00-00	10/28/2003
C316	Memo from Omesh Chopra to Distribution. Subject: Laboratory ALARA Committee Review of the Work Plan for Unloading and Transferring Irradiated Stainless Steel Mechanical Test Specimens	Omesh Chopra	N/A	05/15/2000
C317	Memo from Hanchung Tsai to JNC Program File. Subject: Data Report No. 1 - Phase II Tensile Specimen Preparation	Hanchung Tsai	N/A	01/29/2002
C318	Memo from Carlos Martinez to Nick Harmon. Subject: Limerick Decay Heat and Activity Level	Carlos Martinez	N/A	11/03/1998
C319	Email fro T. S. Bray to OO Manual Holders. Subject: Fissionable Isotopes Inventory Limits in the AGHCF.	T. S. Bray	OO-87	05/12/2005
C320	Memo from A. B. Cohen to Distribution. Subject: Criticality Rules for Sealed Cans	A. B. Cohen	OO No. 29	10/27/1992
C321	Memo from L. A. Neimark to Distribution. Subject: Operations Order in Management Processes.	L. A. Neimark	OO No. 39	01/13/1995

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
C322	Memo from T. Bray to OO Holders. Subject: New Procedures for Supplemental Instructions for the AGHCF Operations	T. Bray	OO No. 57	01/06/2000
C324	Memo from T. Bray to OO Manual Holders. Subject: Documentation of Procedure Review and Approval Form	T. Bray	OO-70	06/11/2002
C325	Memo from T. S. Bray to OO Manual Holders. Subject: Use of Movement Slips for Sample Transfers Between HFS Facilities	T. S. Bray	OO-84	01/05/2004
C327	Memo from T. Bray to OO Manual Holders. Subject: Administrative Control Limits for the HEPA Vacuum Cleaner	T. Bray	OO-78	10/22/2002
C328	Memo from T. Bray to OO Manual Holders. Subject: Suspension of Transfers of Specimens to Waste Containers	T. Bray	OO-72	06/21/2002
C329	Memorandum to CCP Central Records: Evaluation of FFTF Fuel History and Defense Experiments	K. J. Peters	C009	04/02/2004
C330	Memorandum to Ines Triay, Acting Manager, CBFO: Determination and Findings, Defense Origin of Nuclear Waste, Kerr-McGee Waste	F. Marcinowski	N/A	04/15/2005
C331	Memorandum to CCP Central Records: Evaluation of Kerr-McGee Fuel Production and FFTF History	K. J. Peters	KJP:0604:001	06/28/2004
C332	Memorandum to CCP Central Records: Assessment of Waste Material Parameters for Waste Stream ID-ANLE-S5000	B. Becker	N/A	01/06/2006
C333	Memo to CCP Central Records: Assessment of Waste material Parameters (WMPs) for Waste Stream AERHDM	N/A	N/A	N/A
C335	CCP Review Comments and Resolutions for Draft A, Rev. 0, CCP-AK-ANLE-500	K. Peters; S. Schafer	N/A	02/27/2006
C338	Shaw Discrepancy Report R1 for INEEL RH-TRU Waste from ANL-E-AGHCF, Re: Defense Relationship	Julia Whitworth	R1	08/13/2001
C339	Shaw Discrepancy Report R2 for IN-W259-C and IN-W259-NC - INEEL RH TRU Waste from ANL-E AGHCF, Re: Hazardous Waste Code Determination	Cheryl Schulz	R2	04/08/2003
C340	Shaw Discrepancy Report R3 - RH TRU Waste from ANL-E AGHCF, Re: Possible Presence of HEPA Filters	Cheryl Shulz	R3	07/15/2003
C341	Shaw Discrepancy Report R4 - RH TRU Waste from ANL-E-AGHCF, re: Possible Presence of Lead in Waste	Cheryl Schulz	R4	07/15/2003
C342	Shaw Discrepancy Report R5 for RH TRU Waste from ANL-E- AGHCF, Re: Varying Methods to Determine Radiological Composition of Waste	Cheryl Schulz	R5	07/15/2003

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
C343	Shaw Discrepancy Report R6 for RH TRU Waste from ANL-E- AGHCF, Re: Batch Numbers vs. A/G numbers	Cheryl Schulz	R6	07/15/2003
C344	Shaw Discrepancy Report R7 for RH TRU Waste from ANL-E-AGHCF, Re: Waste Generated in K-Cells	Cheryl Schulz	R7	07/15/2003
C345	Shaw Discrepancy Report R8 for RH TRU Waste from ANL-E- AGHCF, Re: WMC Determination	Cheryl Shulz	R8	07/15/2003
C346	Shaw Discrepancy Report R9 for RH TRU Waste from ANL-E AGHCF, Re: Presence of Kleenex in waste	Cheryl Shulz	R9	07/15/2003
C349	Radiological Evaluation for Waste Stream AERHDM	N/A	N/A	08/03/2006
C350	Evaluation for Radiological Waste Stream Delineation for Waste Stream ID-ANLE-S5000	K. Peters	N/A	09/01/2006
C351	Letter to W. E. Bergholz, DOE-Idaho Operations Office, Argonne National Laboratory-East (ANL-E) Remote Handled (RH) Transuranic Waste Stored at the Radioactive Waste Management Complex (RWMC)	R. C. Wunderlich	AAO.030320.0201	03/20/2003
C352	Record of Communication; Analytical Chemistry Laboratory Operations and Locations	Tom Krause	CH Ref. AE-C-004	07/20/2000
C353	Discussions with Seth Snyder and Al Youngs; Chemistry Division Operations in Building 200, M-Wing and General Description of Building 200	Tom Krause	CH Ref. AE-C-015	07/27/2000
C354	Miscellaneous Cave Area Description (for Building 200) from Tory Steed	N/A	CH Ref. AE-C-016	08/25/2000
C355	Letter to R. R. Heinrich, J-1/J-2 Burnup/ Isotopic Samples for the EPRI/EXXON Program	C. E. Johnson	N/A	12/20/1978
C356	Letter to C. E. Johnson; Monthly Report on EXXON/EPRI Program RP 306 for November 1978	L. A. Neimark	N/A	12/12/1978
C357	Letter to N. D. Dudey and C. E. Crouthamel (EXXON); Management Summary and Milestone Report for October 1978	C. E. Johnson	N/A	11/30/1978
C358	Letter to R. H. Bauer; Activation of K2 Hot Cell for RRT Safety Program Work	J. D. Griffith	N/A	12/04/1977
C359	Inter-Laboratory Memo to A. J. Goldman; Feasibility of Operating K-2 Facility in D200	L. A. Neimark	N/A	04/03/1978
C360	Intra-Laboratory Memo; Cost Code for K-2 Rental in FY1981	L. A. Neimark	N/A	10/21/1980
C361	Intra-Laboratory Memo to J. R. McCreary; Cost Code for K-2 Hot Cell Rental in FY 1981 (Revised)	L. A. Neimark	N/A	10/29/1980
C362	Intra-Laboratory Memo to J. R. McCreary Regarding the TRU Waste Removal System	W. C. Kettman	N/A	08/13/1980
C363	Intra-Laboratory Memo to L. A. Niemark; Building 200, Cell K2 Operations	W. V. Lipton	N/A	05/30/1980

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
C364	Intra-Laboratory Memo to C. H. Youngquist; Priority List for Work in M-Wing Cave Facility for Month of October 1978	L. A. Neimark	N/A	10/12/1978
C365	Intra-Laboratory Memo to B. R. Frost & L. Burris; Building 301 Glovebox and Nitrogen System	E. L. Martinec	N/A	03/04/1974
C366	Intra-Laboratory Memo to C. E. Dickerman; Schedule for In-Cell Containment Box for Loop Disassembly in Bldg. 200	L. A. Neimark	N/A	01/09/1974
C367	Intra-Laboratory Memo to O. McNary; Examination Plan for L6/L7 and L8 Sibling Pins	L. A. Neimark	N/A	01/06/1977
C368	Intra-Laboratory Memo to H. V. Rhude; Fuel Elements for L8	O. McNary	N/A	03/16/1978
C369	Intra-Laboratory Memo to H. V. Rhude; Dissassembly of L7 Test Loop	R. Simms	N/A	02/22/1978
C370	Intra-Laboratory Memo to W. F. Murphy; Locations for Samples from L6, 7 Sibling Elements ANL-60-8	R. Simms	N/A	02/27/1978
C371	Intra-Laboratory Memo to A. B. Rothman; Disassembly of L7 in K2 Cell	R. Simms	N/A	02/20/1978
C372	Intra-Laboratory Memo; Plan for the Examinatin of the Irradiated L6/L7 Sibling Fuel Element in the AGHCF	W. F. Murphy	N/A	01/31/1978
C373	Intra-Laboratory Memo to L. A. Niemark; Cave K-2	J. R. McCreary	N/A	10/15/1981
C374	Miscellaneous FY 1978 Budget and Occupancy Inforamtion for M Wing Cave Complex	Various	N/A	1977
C375	Intra-Laboratory Memo; Minutes of September 9,1980 about Sb-125 Releases From Cell K-2, M-Wing, Building 200	R. H. Cooke	N/A	09/12/1980
C376	Intra-Laboratory Memo to J. R. Honekamp; ANL-E Capabilities for Test Disassembly Related to the LMFBR Safety Program	L. A. Neimark	N/A	03/18/1976
C377	Final Report of SAREF Support Facilities Requirements Task Group	J. R. Honekamp	N/A	07/29/1977
C378	Intra-Laboratory Memo to R. G. Matlock; Cost Estimate for ANL-E Support for SAREF.	L. A. Neimark	N/A	10/14/1975
C379	Intra-Laboratory Memo; Addendum to Criticality Hazards Control Statement (Revision 7) Alpha-Gamma Hot Cell Facility (Special Facility FF-1)	W. D. Jackson	N/A	07/08/1975
C380	Interview with Bill Kettman	K. Peters	N/A	07/16/2007
C382	Email to K. Peters Regarding ANL Rigid Liner Thickness	F. W. Root	N/A	05/06/2008
C5001	Interpreting observations from tests for sodium metal using phenolphthalein/ethanol reagent	D. Graczyk	N/A	03/30/2011
C801	Memo to J. McDade from T. S. Bray, Subject: Misidentified Fuel Elements in 1982 Fuel Shipment to the AGHCF; ANL ID 17881	T. S. Bray	ANL ID 17881	01/21/2004

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
C802	Memo from A. B. Cohen to J. R. McDade, Subject: Shipment of RERTR Samples to PNNL; ANL ID 27342	A. B. Cohen	ANL ID 27342	07/31/1997
C803	Memo from A. B. Cohen to SRL Characterization File, Subject: Optical metallography and SEM Analysis of RERTR Irradiated Specimens (Task 2); ANL ID 27348	A. B. Cohen	ANL ID 27348	03/26/1997
C804	Memo from A. B. Cohen to SRL Characterization File, Subject: SRTC Fission-Product Collection Test 96-1; ANL ID 27352	A. B. Cohen	ANL ID 27352	12/04/1996
C805	Memo from T. Bray to M. Goldberg, Subject: Availability of Al-Clad UAlx Plate Fuel; ANL ID 27294	T. Bray	ANL ID 27294	05/25/1999
C806	Memo from D. E. Rasmussen to J. L. Welker, A. Boltax, J. H. Bottcher, and M. J. D. B. Lambert, Subject: Fuel Pin Certification Data for Forty-Nine (49) SPA Fuel Pins for the DOE/PNC Phase II ORT Program ANL ID 41068	D. E. Rasmussen	ANL ID 41068 Letter ID 8952185	04/07/1989
C807	Memo from Richard McKnight to George Fenske regarding A/G 505A, 504B, 460A, 498A, 498B, 497C ANL ID 41180	R. D. McKnight	ANL ID 41180	02/19/1996
C808	Memo from Kou Hira to L. A. Neimark, Subject: Progress of OTT Program During the Term of the Eighth Assignee	L. A. Neimark	ANL ID 2890	02/12/1993
C809	Memo from L. A. Neimark to M. H. Derbidge, Subject: SNF Inventory in the AGHCF; ANL ID 41181	L. A. Neimark	ANL ID 19024	05/06/1996
C810	Logbook for receipt & verification; GE's loading; GE's manifest; GE's instructions to carrier; GE transmittal to ANL-SPM; ANL-ESH/HP documentation; ANL-SPM receipt documentation of cask contents; AGHCF Transfer Slip	L. A. Neimark	ANL ID 17811	11/12/1997
C811	Memo from Terri Bray from A. B. Cohen, Subject: Information on AGHCF Materials Irradiated in the State of Idaho; ANL ID 17222	T. S. Bray	ANL ID 17222	01/06/2003
C812	Memo from T. S. Bray & R. V. Strain to M. Goldberg re: Characterization of N-Reactor Fuel Samples; ANL ID 3983	T. S. Bray; R. V. Strain	N/A	10/04/2000
C813	Email from Mike Billone to George Fenske (ANL) responding to Limerick Fuel Discharge date request.	Mike Billone	ANL ID 41167	06/24/2002
C814	Memo from peter L. Gray (WSR) to John Marra, Subject: ANL Proposal to Send K-13 Fuel to SNL for Return to SRS	Peter L. Gray	ANL ID 41202	10/07/1993
C815	Memo from Harry Hootman, WSRC to Art Wright, ANL; ANL ID 41203	Harry Hootman	ANL ID 41203	10/23/1989

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
C816	Email from Wade Bickford to George Fenske re: Request from ANL to Characterize Mk-22 Scrap; ANL DOC ID 41204	Wade Bickford	ANL ID 41204	03/27/2006
C817	Email from Wade Bickford to George Fenske re: Request from ANL to Characterize MK-22 Scrap; ANL ID 41205	Wade Bickford	ANL ID 41205	03/29/2006
C818	Memo from J. Vance to Irene Quintana dated July 9, 2010 regarding Analysis of Fuel Weight Confirmation Test Results for ANL-E K-Wing Debris RH TRU Waste Stream	J. Vance	C818	07/09/2010
DR010	Discrepancy Regarding the Volume of 7-Gallon Waste Cans	K. Peters	N/A	06/07/2006
DR011	Waste Requisition and Video Discrepancies	Lisa Price	DR11	06/13/2006
DR012	Discrepancy Report for Duplicate Can ID# in Waste Streams ID-ANLE-S5000 (Drum 809) and AERHDM (Drum 813)	K. Peters	DR012	08/17/2006
DR013	Discrepancy Resolution Form Regarding the Argonne Waste Population of 44 Drums vs. 45	S. Schafer	N/A	08/28/2006
DR014	Discrepancy Report for the RCRA Assignment of EPA HWNS to Waste Stream ID-ANLE-S5000	Kevin Peters	N/A	11/16/2006
DR016	Unsealed 1-gallon Waste Can Discrepancy Report	Kevin Peters	N/A	08/14/2007
DR017	Discrepancy involving free liquids in waste	Kevin Peters	N/A	05/07/2007
DR022	Acceptable Knowledge Source Document Discrepancy Resolution concerning use of TCE	Christopher Chancellor	N/A	08/13/2009
DR023	Acceptable Knowledge Discrepancy Resolution Concerning Underestimated Original Projections for AGHCF Debris, FEW, and K-Wing Debris Waste Materials	Kevin Peters	N/A	06/23/2010
P001	AGHCF Operations Manual	N/A	IPS-2-00-00	Various Revs., Various Dates
P002	Central Characterization Project Acceptable Knowledge Summary Report for Argonne National Laboratory-East Contact-Handled TRU Waste Facility Maintenance and Laboratory Operations	N/A	CCP-AK-ANLE-001	Rev. 11, 12/31/2003
P003	Procedure for Solidification of Liquid Radioactive Waste MCT Alpha-Gamma Hot Cell Facility (AGHCF)	D. A. Donahue	N/A	06/10/1987
P004	Safety Analysis Report for the Alpha-Gamma Hot Cell Facility (BLDG. 212)	W. D. Jackson	M4000-0025-SA-01	Rev. 0, 11/1982
P005	Status of Performance and Fabrication of Metallic U-Pu-Zr Fuel for the Integral Fast Reactor	N/A	N/A	07/1984

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
P006	Safety Analysis for Twenty Year Retrievalbe Storage of Intermediate Gamma Level Transuranic Waste	W. D. Jackson, Alpha-Gama Hot Cell Facility, Materials Science Division, Argonne National Laboratory	N/A	06/01/1976
P007	Transport, Handling, and Interim Storage of Intermediate-Level Transuranic Waste at the INEL	John C. Metzger and Alan M. Snyder	TREE-1172	09/01/1977
P008	ANL-W History - Reactors (IFR)	N/A	http://www.anl.gov/anlw_history/reactors/ifr.html	07/23/2001
P009	TRU-RH Waste Certification Plan for Waste Management Operations	Ralph W. Ditch, Gary E. Griffin	J0306-0033-SA	Rev. 2 and 4, 11/10/1986 & 04/16/1991
P010	Argonne News Articles re: General Information; IFR Fuel; Low-Enrichment Fuel	N/A	Volume 34, Number 13, October	10/1994; 11/1995
P011	The Low-Enrichment Fuel Development Program	D. Stahl	N/A	11/01/1978
P012	The Status of Uranium-Silicon Alloy Fuel Development for the RERTR Program	R. F. Domagala, T. C. Wiencek, H. R. Thresh and D. Stahl; Argonne National Laboratory, Materials Science Division	N/A	11/01/1980
P013	Frontiers: Research Highlights 1946-1996	N/A	N/A	1996
P014	Institutional Plan: FY 1980-FY1985; Institutional Plan FY 1981 - FY1986	N/A	N/A	12/1979; 08/1980
P015	Basic Research in the Mission Agencies: Agency Perspectives on the Conduct and Support of Basic Research	James S. Kane, Deputy Assistant Administrator for Physical Research	N/A	01/01/1978

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Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
P016	Liquid Metal Fast Breeder: Right Answer, Wrong Question	N/A	http://www.atomicinsights.com/	10/01/1995
P017	1992 Congressional Hearings Intelligence and Security: Naval Reactors, Arms Control, Office of Inteligence, 03/11/1992, Question and Answer	T. Bevill	Qp2AF105 (http://www.fas.org/)	03/11/1992
P019	Burnout Software to Calculate Fuel Depletion in the EBR-II Core	D. C. Cutforth, J. R. Armstron, K. N. Grimm, D. A. Kucera, L. W. Schorzman, D. G. Walters	N/A	06/01/1991
P020	Special Materials User's Guide, Argonne National Laboratory	N/A	N/A	05/1996
P021	Source Term and Waste Characterization for INEL Remote-Handled/Special-Case Stored Transuranic Wastes Review for Sufficiency and Completeness	H. K. Peterson, EG&G Idaho, Inc	EDF-RHTRU-94-003	09/28/1994
P022	Integral Fast Reactor program	N/A	N/A	05/1992
P023	Argonne National Laboratory-East Remote Handled Waste	W. Mahlon Heilseson	EDF-RWMC-759	08/29/1994
P024	Certification of Remote-Handled Transuranic Waste at the Tan Hot Cells	H. D. Welch, EG&G Idaho, Inc.	EDF-RWMC-424	09/28/1990
P025	Argonne National Laboratory-East, Transuranic Waste Acceptable Knowledge Report	Benchmark Environmental Corporation	WMO-AK/WIPP-001.0	09/29/2000
P026	ORIGEN2 - A Revised and Updated Version of the oak Ridge Isotope Generation and Depletion Code	A. G. Croff, Oak Ridge National Laboratory	NL-5621Orm-5-66A-N	07/01/1980
P027	Preliminary Engineering Proposal on Alpha-Gamma Hot Laboratory for Fuels Technology Center, Argonne Naltional Laboratory	N/A	N/A	06/1958
P028	Presentaion to DOE Office of Nuclear Safety re: Alpha-Gamma Hot Cell Facility (AGHCF)	N/A	N/A	07/19/1993
P029	Engineering Test Plan for the Irradiation Testing of U3Si Dispersion Fuels: Reduced Enrichment Research and Test Reactor Program	R. F. Mattas	M4000-0004-SA-01	Rev. 1, 06/1980
P030	Radiological Acceptance Knowledge Report for Drums 728 through 737	Julia Whitworth, Shaw Environmental Team Lead	INEEL/EXT-02-00527	Rev. 0, 07/2002

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
P031	Alpha-Gamma Hot Cell Facility (AGHCF) Safety Analysis Report	A. B. Cohen, Manager, AGHCF	IPS-221-00-00	01/1998
P032	Procedure for Sorting Remote-Handled TRU Waste (30-Gallon Intermediate-Level Waste)	N/A	AGHCF-SORT	Rev. 0, 01/07/1987
P033	AGHCF Operations Manual: 15.3 Procedure for Operation of the Fuel Behavior Test Apparatus (FBTA)	N/A	IPS-2-03-01	Rev. 1, 03/11/1992
P034	AGHCF Operations Manual: 15.6 Procedure for Acid Cleaning a Zinc-Bromide Shielding Window	W. C. Kettman	IPS-2-06-00	Rev. 1, 04/16/1996
P035	AGHCF Operations Manual: 15.9 Procedure for Installing Vents in Pre-packaged 30-gal. TRU Waste Drums	Dennis A. Donahue, Supervisor, MCT-AGHCF	IPS-2-09-00	Rev. 0, 07/24/1990
P036	AGHCF Operations Manual: 15.10 Procedure for Repackaging 30-gal. TRU Waste Drums	N/A	IPS-2-10-00	Rev. 0, 09/14/1990
P037	AGHCF Operations Manual: 15.12 Procedure for preparing Window Cavity for Modified Window Tank Inspection	Daniel J. Evans	IPS-2-12-00	Rev. 0, 11/14/1990
P038	AGHCF Operations Manual: 15.13 Procedure for Installing a Modified D-301 Window Tank in a Type A Window Cavity	Dennis A. Donahue, Supervisor, AGHCF	IPS-2-13-01	Rev. 1, 12/07/1990
P039	AGHCF Operations Manual: 15.15 Procedure for Installing Lead Shielding Around a Tank Insert in an AGHCF Window Cavity	D. A. Donahue	IPS-2-15-00	Rev. 0, 02/01/1991
P040	AGHCF Operations Manual: 15.17 Procedure for Changing an In-line Filter in a Radioactive Gas Collective System	F. E. Savoie	IPS-2-17-00	Rev. 0, 11/08/1991
P041	Application of Advanced Liquid Metal Reactors to the Destruction of Radioactive Wastes	R. A. Karnesky, K. D. Dobbin, D. P. Jordheim, J. A. Rawlins, D. W. Wootan	WHC-SA–1075-FP, DE91 017808	08/1991
P042	AGHCF Operations Manual: 15.20 Procedure for Conducting Plenum-Unplugging Tests on ORT Mixed-Oxide Fuel Pins in the Whole-Pin Furnace System	G. R. Fenske, Cognizant Engineer	IPS-2-20-00	Rev. 0, 01/11/1994
P043	AGHCF Operations Manual: 15.22 Procedure for Conducting Tests on ORT Mixed-oxide Fuel Pins in the Whole-Pin Furnace System	G. R. Fenske, Cognizant Engineer	IPS-2-22-01	Rev. 1, 03/16/1994
P044	AGHCF Operations Manual: 15.24 Procedure for Testing the AGHCF Peripheral High-Gamma Alarm System	N/A	IPS-2-24-00	Rev. 0, 03/24/1995

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Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
P045	AGHCF Operations Manual: 15.26 Procedure for Loading Fuel Element Segments for Return to ANL-W	W. C. Kettman	IPS-2-24-00	Rev. 0, 01/08/1996
P046	AGHCF Operations Manual: 15.27 Removal of Outer Glass from a Type B or C Shielding Window	W. C. Kettman	IPS-2-24-00	Rev. 0, 04/16/1996
P047	AGHCF Operations Manual: 15.28 Painting a Drained Shielding Window Tank Cavity	W. C. Kettman	IPS-2-24-00	Rev. 0, 04/16/1996
P048	AGHCF Operations Manual: 15.29 Procedure for Installation of Cold-side Gaskets	W. C. Kettman	IPS-2-24-00	Rev. 0, 04/16/1996
P049	AK Documentation Report for INEEL-Stored Remote-Handled Transuranic Waste From Argonne National Laboratory-East	IT Corporation	ITC-DOC-828599-02	Rev. 0, 07/15/2003
P050	LWR Fuel Reprocessing and Recycle Program Quarterly Progress Report for Period July 1 to September 30, 1976	B. L. Vandra	ORNL/TM-5660	11/1976
P051	AGHCF Operations Manual: 11.0 Waste Management; 15.3 Procedure for Operation of the Fuel Behavior Test Apparatus (FBTA)	N/A	IPS-2-00-00 & IPS-2-03-00	Rev. 3 & 0, 10/23/1996 & 11/9/1989
P052	Test and Evaluation Document for the U.S. Department of Transportation Specification 7A Type A Packaging	N/A	DOE/RL-96-57, Volume 1	Rev. 0-F & 0-D, 07/03/2002
P053	Radioactive Waste that Does Not Conform to Disposal Site Acceptance Criteria	N/A	ANL-E PFS-WMO QP 15.1	Rev. 0, 07/17/1990
P054	Procedure for Remote Outloading of RH-TRU Waste at the AGHCF	W. D. Jackson, Materials Science and Technology Division, Argonne National Laboratory	M4000-00320SA-00	Rev. 0, 08/1983
P055	Waste Handling Procedures	C. L. Cheever, Manager, Waste Management Operations	N/A	09/18/1986
P057	AGHCF Operations Manual: 15.4 Procedures for Conducting Tests in the Whole-Pin Furnace System	Yung. Y. Liu, Engineer	IPS-2-04-01	Rev. 1, 05/10/1990
P058	AGHCF Operations Manual: 15.0 Nuclear Materials Management	N/A	IPS-2-00-00	Rev.1, Various Dates
P059	AGHCF Operations Manual: Section VII - Examination Procedures	W. D. Jackson	M1002-0032-SE-00	02/20/1973
P060	AGHCF Operations Manual: 7.0 Standard Examination Procedures	N/A	IPS-2-00-00	Rev. 0, 06/20/1989

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Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
P061	Examination Techniques for High Burnup U-Pu Elements for Fast Breeder Reactors	B.J. Koprowski and F. L. Brown	ANL-ms-912A	06/30/1967
P062	AGHCF Operations Manual: 7.15 Preparation of Metallographic Specimens	N/A	IPS-2-00-00	Rev. 0, 06/20/1989
P063	SPM Procedure for High Gamma Transuranic Waste Handling from Alpha Gamma Hot Cell Facility (AGHCF) Bldg. 212, MSD, ANL-E	N/A	N/A	01/20/1975
P064	US Atomic Energy Commission AEC Manual: Chapter 0511 Radioactive Waste Management	N/A	AEC 0511-01	09/19/1973
P066	Argonne National Laboratory Illinois Site Site Waste Management Plans	W. H. Kline, Waste Management Coordinator	N/A	05/1977
P067	Procedure for High Gamma Level Transuranic Waste Handling At the AGHCF, MSD, ANL-E	N/A	M1002-0047-SP-00	Rev. 0, 12/30/1974
P068	AGHCF Operations Manual: 7.14 Mounting Metallographic Specimens	N/A	IPS-2-00-00	Rev. 0 & 1, Various Dates
P069	AGHCF Operations Manual: 7.13 Fuel Element Sectioning	N/A	IPS-2-00-00	Rev. 0 & 1, Various Dates
P070	AGHCF Operations Manual: 7.21 Specimen Density by Immersion	N/A	IPS-2-00-00	Rev. 0, 06/20/1989
P073	AGHCF Operations Manual: 8.0 Administrative Controls	N/A	IPS-2-00-00	Rev. 3, 12/20/1995
P074	Plan for Decommissioning TREAT Loop Disassembly Facility (K-2 cell, building 200, M-wing)	W. D. Jackson, Irradiation Performance Group	M4000-0019-SA-00	06/12/1981
P096	Internal Technical Report: Waste Characterization for INEL Remote-Handled/Special-Case Stored Transuranic Wastes	Dennis A. Peterson	WM-PD-85-014	11/1985
P1001	From Test Tube to Pilot Plant; A 50 Year History of the Chemical Technology Division at Argonne National Laboratory	Robert K. Steunenberg and Leslie Burris	ANL-00/16, ISBN 0-967168-1-X	08/2000
P1002	Design, Operation, and Performance Data for High Burnup PWR Fuel from the H.B. Robinson Plant for Use in the NRC Experimental Program at Argonne National Laboratory	O. Ozer	EPRI Report - 1001558	05/2001
P1003	Building 200/205 Pneumatic Transfer Tube D&D Project Final Report	N/A	ANL/D&D-98-5	1998
P1004	Irradiation and Evaluation of Mixed Oxide Fuel Performance at the Big Rock Point Reactor, Post-Irradiation History: Fuel and Fission Product Behavior	C. E. Johnson, et al	Research Project 306	11/1987
P1005	Characterization of Low Burnup Rods (J-1) From Big Rock Point Reactor, Final Report	C. E. Johnson, et al	Research Project 306	06/1980

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Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
P1006	Analytical Shearing of Fuel Rods in a Hot Cell	J. E. Parks, et al	TANSAO 30 1-814, ISSN: 003-018X	1978
P1007	LWBR Proof-of-Breeding Analytical Support Project	I. O. Winsch, et al.	TANSAO 34 1-899, ISSN: 003-018X	06/8-12/1980
P1009	Reference Information Concerning Some 1960s and 1970s Use of Building 200 MA-Wing Hot Cells and Surrounding Areas	James V. Beitz	N/A	12/23/2008
P1010	Progress in Nuclear Energy-Volume 3, Parts 5, 6, 7, Analytical Chemistry, A Large-Scale Facility for Chemical Research with Intensely Radioctive Materials	D. C. Stewart	N/A	1963
P1011	Verification Survey of Building 200 Hot Cells	C. M. Sholeen	ANL/ESH-HP-96/02	03/1996
P1012	Characterization of Irradiated Zircaloys: Susceptibility to Stress Corrosion Cracking	F. L. Yaggee, R. F. Mattas, L. A. Neimark	EPRI NP-1557 - Project 1027	10/1980
P1013	RP1027 - Characterization of Irradiated Zircaloys	N/A	N/A	04/06/1978
P1014	Characterization of Irradiated Zircaloys: Susceptibility to Stress Corrosion Cracking	F. L. Yaggee, R. F. Mattas, L. A. Neimark	EPRI NP-1155 - Project 1027	09/1979
P1015	Fuel Performance Improvement Program - Semiannual Progress Report, October 1979 - March 1980	C. E. Crouthamel, M. D. Freshley	DOE/ET/34215-16, UC-78	04/1980
P173	Transuranic Waste Baseline Inventory Report	Carlsbad Area Office Technical Assistance Contractor	DOE/CAO-95-1121	Rev. 2, 12/1996
P2000	Facility Hazard Category 2 Threshold Ratio Values for the K-Wing Nuclear Facility in Building 205	Dr. James V. Beitz	N/A	08/01/2008
P2001	Retention of Neptunium in Uranyl Alteration Phases Formed During Spent Fuel Corrosion	E. C. Buck, R. J. Finch, P. A. Finn, and J. K. Bates	ANL/CMT/CP-93028	09/1997
P2002	Corrosion Mechanisms of Spent Fuel Under Oxidizing Conditions	P. A. Finn, R. Finch, E. Buck, and J. Bates	ANL/CMP/CP-93030	09/27/1997

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Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
P2003	Elements Present in Leach Solutions from Unsaturated Spent Fuel Tests	P. A. Finn, J. K. Bates, J. C. Hoh, J. W. Emery, L. D. Hafenrichter, E. C. Buck, and M. Gong	ANL/CMT/CP-79779	11/29/1993
P2004	Oxidative Corrosion of Spent UO2 Fuel in Vapor and Dripping Groundwater at 90C	Robert J. Finch, Edgar C. Buck, Patricia A. Finn, and John K. Bates	ANL/CMT/CP-96766	04/15/1999
P2005	Corroded Spent Nuclear Fuel Examined with EELS	Edgar C. Buck, Nancy L. Dietz, and John K. Bates	ANL/CMT/CP-89579	07/18/1996
P2006	Corrosion Tests of LWR Fuels - Nuclide Release	P. A. Finn, Y. Tsai, and J. C. Cunnane	N/A	11/26/2001
P2007	Corrosion Testing of Spent Nuclear Fuel Performed at Argonne National Laboratory for Repository Acceptance	Margaret M. Goldberg	ANL/CMT/CP-102400	08/04/2000
P2008	I-129 Release Fractions in Unsaturated Tests with Fast-Flux MOX Fuels	P. A. Finn, Y. Tsai, M. M. Goldberg, and R. V. Strain	ANL/CMT/CP-103284	12/08/2000
P2009	Measurement Techniques in Dry-Powdered Processing of Spent Nuclear Fuels	Stephen F. Wolf, Delbert L. Bowers, and Paul J. Persiani	ANL/CMT/CP-98274	10/13/1999
P2010	Nuclear Operations Deactivation, Decommissioning, and Demolition Program: Activity-Specific Safety Analysis for Building 205 K-Wing Hot Cell Liquid Processing	B. Voelz	NOD-181-00-00	Rev.0, 06/26/2009
P2011	Nuclear Operations Deactivation, Decommissioning, and Demolition Program: Appendix B: Building 205 K-Wing Hot Cell Deactivation Project Plan	D. Hodge	NOD-162-00-01	Rev.1, 03/05/2009
P2012	Nuclear Operations Deactivation, Decommissioning, and Demolition Program: Activity-Specific Safety Analysis for Building 205 K-WingCell A & B Material Sorting, Size Reductio and Transfer	B. Voelz	NOD-184-00-00	Rev. 0, 07/09/2009
P2013	NUCLEAR OPERATIONS DIVISION WORK CLEARANCE PERMIT: 205 K-Wing Hot Cell Liquids Processing	D. Hodge	WCP-09-205K-005	06/25/2009
P2014	NUCLEAR OPERATIONS DIVISION WORK CLEARANCE PERMIT: 205 K Wing Cell A & B Material Sorting, Size Reduction & Transfer	D. Hodge	WCP-09-205K-009	07/13//2009

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Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
P2015	Waste Handling Procedures Manual	N/A	N/A	Various Revisions, Various Dates
P2016	Basis of Interim Operations for Building 205 K-Wing Deactivation	C. A. Sprain	NOD-205K-NSB-201	08/29/2008
P2017	Determination of actinide and fission-product isotopes in very-high-burnup spent nuclear fuel	V. S. Sullivan, Et al	DOI: 10.1007/s10967-008-0709-4	03/29/2007
P2018	Safety Analysis Report Building 205 G-Wing and K-Wing Laboratories	M. A. Slawecki, et al.	CMT-30-0470	Rev. 2, 12/01/1997
P2019	Test Plan for the Characterization of an Approved Testing Material (ATM) Mixed Oxide Fuel	Lawrence A. Neimark	SNF-3A-004	Rev. 0, 04/08/1998
P2020	Colloidal Products and Actinide Species in Leachate from Spent Nuclear Fuel	P. A. Finn, E. C. Buck, M. Gong, J. C. Hoh, J. W. Emery, L. D. Hafenrichter, and J. K. Bates	N/A	1994
P2021	The Dissolution and Analyses of the Dissolver Solution, Undissolved Residue, and Cladding from Big Rock Point Irradiated Nuclear Fuel	A. J. Bakel, D. L. Bowers, K. J. Quigley, M. C. Regalbuto, and G. F. Vandegrift	N/A	N/A
P2022	Results of the UREX+ Spent Fuel Demonstration	G. F. Vandegrift, et al.	N/A	N/A
P2023	Results of the UREX+2 Spent Fuel Demonstration	Candido Pereira, et al.	N/A	02/28/2005
P2024	Results of the 2005 UREX+1a Spent Fuel Demonstration	Candido Pereira, et al	N/A	03/31/2006
P2025	2006 UREX+1a Spent Fuel Demonstration: Preliminary Results from Fuel Dissolution and UREX Feed Adjustment	Allen Bakel, Carol Mertz, and G. Vandegrift	N/A	07/14/2006
P2026	Results of the 2006 UREX+1a Spent Fuel Demonstration	Candido Pereira, et al.	N/A	12/15/2006

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Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
P2027	Results of the 2007 TALSPEAK Spent Fuel Demonstration	Candido Pereira, et al.	N/A	04/30/2007
P2028	Preliminary Results of the UREX+3a Spent Fuel Demonstration	Candido Pereira, et al.	N/A	09/30/2007
P2029	Aqueous Dissolution of Urania-Thoria Nuclear Fuel	Paula A. Demkowicz, et al.	Volume 147	07/2004
P2030	Advanced Proliferation Resistant, Lower Cost, Uranium-Thorium Dioxide Fuels for Light Water Reactors; Nuclear Energy Research Initiative Project 99-0153, Progress Report for Work through September, 2002	Philip E. MacDonald	INEEL/EXT-02-01411	2002
P2031	Nuclear Operations Division Policy and Procedures Manual: K-Wing Senior Cave Operations	V. Sullivan	NOD-205K-OPS-300	Rev. 0, 03/10/2008
P2032	Nuclear Operations Deactivation, Decommissioning, and Demolition Program: Building 212 Alpha Gamma Hot Cell Facility Deactivation Project Plan (with Appendix 1, 2, and 3)	D. Pancake, et al.	NOD-190-00-00 & 191-00-00, 192-00-00, 194-00-00	Rev. 0, 8/26/2009 & 8/14/2009, 8/21/2009
P2033	Nuclear Operations Deactivation, Decommissioning, and Demolition Program: Revised Estimate of the Radioactive Inventory in the AGHCF	R. J. Page	NOD-155-00-00	Rev. 0, 01/07/2009
P2034	Fuels for Sodium-Cooled Fast Reactors: US Perspective	Douglas C. Crawford, et al.	N/A	05/10/2007
P2035	Results of Testing Metallographic (Met) Mounts for the Presence of Sodium, Performed in the Alpha Gamma Hot Cell Facility (AGHCF)	D. Pancake	NOD-215-00-00	Rev. 0, 05/01/2010
P2036	Repackaging Fuel Examination Waste into Shielded Containers	B. Christel	NOD-AGHCF-OPS-117	Rev. 1, 05/12/2010
P2037	Processing Radioactive Waste Can and Drum Information	D. Carlson	NOD-AGHCF-OPS-312	Rev. 1, 05/02/2011
P2038	Preparation of Container Shielding Configurations for Material Transfers From C-Cell	J. Emery	NOD-205K-OPS-301	Rev. 2, 03/01/2010
P2039	Gated Drum Shield Operations and Movements in Building 205 K-Wing	J. Emery	NOD-205K-OPS-302	Rev. 3, 05/04/2010
P236	Draft RH-TRUCON, Content Codes ID 325A, 325B, 325C, 325D	N/A	DOE/WIPP 90-045	Rev. 3, 08/2001
P301	Verification and Validation Requirements for the GHCF Fissile Inventory Management System (FIMS) 4.0; Memo to HFS Document File	T. S. Bray, Manager, ET-HFS	HFS-004-00-00	09/15/2003
P303	Work Plan for Decontamination of IML Cell 4; Memo to IPS Documentation File	Robert Daum	IPS-361-00-00	09/01/2000

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Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
P304	Work Plan for Oxidizing Zircaloy Cladding Samples for the Zn-Zircaloy Interaction Study; Memo to IPS Document File	Hanchung Tsai, ET-IPS	IPS-362-00-00	09/25/2000
P306	Procedures for Testing of SS-3-size Tensile Spcimens with the 1122 Instron Machine in the Irradiated Materials Laboratory (IML); Memo to IPS Document File	Hanchung Tsai, ET-IPS	IPS-380-00-00	05/17/2001
P307	Standard Operating Procedure - Analysis and Calculation of Gamma Radioactivity	Vivian S. Sullivan, Analytical Chemistry Laboratory, ANL	SOP: ACL-084	Rev. 1, 03/25/2003
P308	Standard Operating Procedure - Procedure for the Determination of Trace Elements in Solution by Inductively Coupled Plasma Mass Spectrometry	N/A	WMRD-SOP-034	Rev. 3, 08/13/2003
P309	Standard Operating Procedure: Alpha Scan for Actinides Utilizing Extraction Chromotography	Vivian S. Sullivan, Analytical Chemistry Laboratory, ANL	SOP: ACL-258	Rev. 0, 08/08/2002
P310	Design, Operation, and Performance Data for High Burnup PWR Fuel from the H. B. Robinson Plant for Use in the NRC Experimental Program at ANL (EPRI document)	E. J. Ruzauskas, Acting Manager, KWU Projects	EMF-2528	Rev. 0, 04/2001
P311	Procedures for conducting LOCA Integral Tests - Phase B; Memo to Distribution	Y. Yan, ET	IPS-409-01-03 & IPS-409-01-02	Rev. 2 & 3, 08/14/2002 & 09/11/2002
P312	Procedures for conducting LOCA Integral Tests with Quench; Memo to distribution	Y. Yan, ET	IPS-409-01-04	Rev. 4, 12/16/2003
P314	Standard Operating Procedure - Obtaining Gamma Spectra for Samples in a Calibrated Geometry Using the Ortec Gamma Vision Program	Vivian S. Sullivan, Analytical Chemistry Laboratory, ANL	SOP: ACL-259	Rev. 0, 03/25/2003
P316	Functional Requirements and Design Review Information for a Glovebox in the Irradiated Material Laboratory; Memo to Ralph Fabian, ET, Design Review Committee Chair and Committee Members	Rob Daum, ET-IPS	IPS-413-00-00	09/17/2002
P317	Window Installation Procedure for IML Glovebox System	R. S. Daum	IPS-413-02-00	Rev. 0, 03/19/2003
P318	Update to the Design of the IML Glovebox Gas Inlet, Exhaust and Atmospheric Monitoring Systems Memo to Ralph Fabian, ET, Design Review Committee Chair	Rob Daum, ET-IPS	IPS-413-03-00	04/29/2003

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Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
P319	Procedure for Leak Testing of IML Instron Glovebox System; Memo to IPS Documentation File	Robert Daum, ET-IPS	IPS-416-00-00	05/07/2003
P320	Management Plan for Irradiation Performance Section Facilities, Energy Technology Division	H. Drucker	IPS-417-00-00	Rev. 0, 10/14/2002
P321	Work Plan for Replacing Water/Acid Solution in K-2 Cell Windows with Zinc Bromide Solution; Memo to distribution	S. Baumann	IPS-419-00-00	12/03/2002
P322	Design of Shielding Containers to Store Radioactive Samples within the K2 Hot Cell in Building 200; Memo to IPS Documentation File	Robert Daum, ET-IPS	IPS-420-00-00	01/20/2003
P323	Transfer and Storage of Samples in Building 200 K2 Hot Cell; Memo from IPS Documentation File	Robert Daum, ET-IPS	IPS-421-00-00	02/18/2003
P324	Shielding of Wall Ports in K2 Hot Cell; Memo to IPS Documentation File	Robert Daum, ET-IPS	IPS-422-00-00	01/22/2003
P325	Functional Requirements for Hydrogen-Charged Materials to be Used as Standards for Hydrogen Content Determination; Memo to IPS Documentation file	Robert Daum, ET-IPS	IPS-424-00-00	01/22/2003
P326	Procedures beginning with: Work Plan for Determining the Effectiveness of Defueling a Short Cladding Segment from High Burnup In-cell LOCA TestSample ICL#2 in Room-Temperature Nitric Acid	Y. Yan	IPS-428-00-00 & IPS-428-00-01	Rev. 0 & 1, 08/06/2003 & 09/16/2003
P327	Procedure for Thinning Gauge Sections of Tensile Specimens after Tensile Tests; Memo to IPS Document File	Hanchung Tsai, ET-IPS	IPS-429-00-00 & IPS-429-00-01	Rev. 1 & 2, 08/14/2003 & 08/26/2003
P328	Program Planning for SNL'S HEDD Impact Test Program; Memo to Mike Billone, T. S. Bray	Hanchung Tsai, ET-IPS	IPS-430-00-00	09/08/2003
P329	Feasibility Study for Defueling Irradiated Cladding Using Non-Volatile Methods; Memo to IPS Documentation File	Robert Daum	IPS-432-00-00	12/02/2003
P330	Work Plan for the Characterization and Sectioning of H. B. Robinson Rod R01 (A/G 615) and Surry Rod H7 (A/G 593) for the Sandia HEDD Project; Memo to IPS Document File	Hanchung Tsai, ET-IPS	IPS-433-00-00	10/14/2003
P331	Work Plan for Preparation of Samples for LECO Hydrogen or Oxygen Analysis; Memo to Distribution	T. Burtseva, ET	IPS-434-00-00	10/16/2003
P332	Work Plan for Fractographic Examination of Phase Ii ANL/JNC Tensile Specimens with the AGHCF SEM; Memo to IPS Document File	Hanchung Tsai, ET-IPS	IPS-437-00-00	11/19/2003
P333	Procedure for the Steam Oxidation Tests at High Temperature on Unirradiated Advanced Cladding Alloys M5, E110, ZIRLO and Zry-4 Cladding within the Out-of-cell LOCA Integral Test Apparatus; Memo to M. C. Billone and T. S.Bray	Y. Yan, IPS	IPS-438-00-00	12/01/2003

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Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
P334	Standard Operating Procedures for Bldg. 212 Alpha-Gamma Hot Cell Facility Laser Controlled Area	Hanchung Tsai	IPS-439-00-00 & IPS-439-00-01	Rev. 0 & 1, 01/20/2004 & 08/16/2005
P335	Work Plan for Sectioning of HBR Rod A02 Segment A/G611B; Memo to NRC Program File	Y. Yan	IPS-440-00-00	02/17/2004
P336	Operation Procedure for Rodlet Pressurization and Leak Checking - Part 1. Ex-cell Mockup Tests	Tatiana Burtseva	IPS-441-000-000	04/12/2004
P337	Laser Weld Qualification Plan for the SNL Rodlet Project; Memo to Distribution	Hanchung Tsai, ET-IPS	IPS-442-00-00	Rev. 0 & 2, 03/03/2004 & 10/27/2004
P338	LW51 Laser Operating Procedure for Ex-cell Operation in the AGHCF	Z. Xu and H. Tsai	IPS-443-00-00	03/11/2004
P339	Work Plan for Annealing and Radial-Hydride Treatments of Non-Irradiated Zircaloy-4; Memo to Distribution	Robert Daum, ET-IPS	IPS-453-00-00	01/11/2004
P340	IPS-457-00-00 - Memo to Distribution. Subject: Work Plan for Sectioning HBR Rod No. R05 (A/G No. 609) and Preparing SNF Rodlets for NRC and DOE-RW Programs	Robert Daum, ET-IPS	IPS-457-00-00	Rev. 0, 09/08/2005
P341	IPS-468-00-00 - Memo to M. C. Billone transmitting Procedure for the Two-sided In-cell Steam Oxidation Tests on Irradiated Advanced Alloys M5 and ZIRLO Cladding	Y. Yan, IPS	IPS-468-00-00	Rev. 0, 12/01/2005
P342	International Conference on the Physics of Nuclear Science and Technology, Volume 2: Incorporation of Measurement Data from Irradiated Fuel Samples inot the MTG System at FCF	Richard D. McKnight	ANL/RA/CP-95623	10/5-8/1998
P343	Proceedings of the International Conference on the Physicsof Nuclear Science and Technology, Volume 2: Comparison of Measured and Calculated Composition of Irradiated EBR-II Blanket Assemblies	Grimm, Hill, Khalil, McKnight, Stillman, Toppel	N/A	10/5-8/1998
P344	Analysis of Spent Nuclear Fuel Sample A/G 574B2 (Limerick Reactor) to Determine Selected Isotopes and Estimate Fuel Burnup	D. G. Graczyk	N/A	04/2003
P346	An Underwater Instrument for Breeder Reactor Spent Fuel Assemblies	Lestone, Pecos, Rennie, Sprinkle, Staples, Grimm, Hill, Cherradi, Islam, Koulikov, Starovich	LA-UR-99-2000	05/4-6/1999
P348	Justification for Continued Operation	J. A. Morman	HFS-016-00-00	08/18/2005
P349	ANL Calculational Methodologies for Determining Spent Nuclear Fuel Source Term	R. D. McKnight	ANL/RA/CP-101396	04/06/2000

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Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
P350	Application of Control Charts and Isotope Correlations to Spent Fuel measurements at FCF	McKnight, Soltys, Yacout	ANL/RA/CP-99678	10/12/1999
P351	Nuclear Material Estimation and Uncertainties for the Spent Fuel Treatment at FCF	Battisti, Krsul, Mariani, Vaden, Westphal	ANL/RA/CP-99677	10/12/1999
P352	Characterization of Spent EBR-II Driver Fuel	R. D. McKnight and B. J. Toppel	ANL/RA/CP-96362	09/22/1999
P353	Validation and Application of a Physics Database for Fast Reactor Fuel Cycle Analysis	Khalil, McKnight, Stillman, Toppel	ANL/RA/CP-80815	04/11-15/1994
P354	Measurement of Lanthanum and Technetium in Uranium Fuels by Inductively coupled Plasma Atomic Emission Spectroscopy	Cummings, Carney, Krsul, Crane	ANL/ED/CP-99189	10/13/1999
P355	Spent Fuel Fissile Mass Verification at the ANL-West Radioactive Scrap and Waste Facility	Smith, Mosby, Aumeier, Klann, Hill	N/A	02/25/2001
P356	Estimating Root-Zone Moisture and Evapotranspiration with AVHRR Data	J. Song	ANL/ER/CP-100176	01/18/2000
P358	Procedure for Changing the Glove Rings in the Glove Niche: OO No. 42	A. B. Cohen, Manager AGHCF	OO No. 42	03/15/1995
P359	Tracking of Non-Accountable Samples in the AGHCF	T. Bray	OO-86	10/15/2004
P362	Tracking of Defueled Cladding Samples	T. Bray	OO No. 66	06/06/2001
P363	New Movement Slip	T. Bray	OO-65	Rev. 0 & 1, 10/31/2000 & 03/13/2001
P364	Transfer Slip for SNM and Other Programmatically Valuable Materials in the AGHCF and Addendum 1	T. S. Bray	OO No. 49	Rev. 0 & 1, 04/18/1996 & 03/14/2001
P365	Remote Outloading of RH TRU Waste from Cell - Operations Order Revisions to Manual Procedure 11.5.7.	L. A. Neimark, Manager, IPS	OO No. 46	10/25/1995
P366	Operations Order on the Collection of Cutting Swarf	Adam Cohen, Regulatory Compliance Officer, AGHCF	OO No. 38	Rev. 0 & 1, 12/01/1994 & 12/21/1994

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Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
P367	Radioactive Gas Release Approval Form	Adam Cohen, Regulatory Compliance Officer, AGHCF	OO No. 36	06/03/1994
P368	Verification of Contents of Primary RH TRU Waste Containers	A. B. Cohen, Manager, AGHCF	OO No. 21	Rev. 1 & 2, 03/16/1992 & 08/07/1996
P369	Chapeter 5, Section 5.1 of the Health Physics Procedures Manual - Unrestricted Release of Materials and Equipment	N/A	N/A	08/19/2005
P370	Chapter 4, Section 4.4 of the Health Physics Procedures Manual: Special Surveys - Leak Check Surveys of Accountable Sealed Sources	N/A	Chapter 4, Sect. 4.4	08/19/2005
P371	Chapter 3, Section 3.1 of the Health Physics Procedures Manual: Trash Surveys	N/A	Chapter 3, Sect. 3.1	08/19/2005
P372	Review of Zirconium-Zircaloy Pyrophoricity	Thurman D. Cooper	RHO-RE-ST-31 P	11/1984
P373	Metallographic Analysis of irradiated RERTR-3 Fuel Test Specimens	Meyer, Hofman, Strain, Clark, and Stuart	ANL/NT/CP-103306	10/1-6/2001
P374	The RERTR Program: A Status Report	A. Travelli	ANL/TD/CP-97495	09/28/1999
P375	Progress of the RERTR Program in 1999	A. Travelli	ANL/TD/CP-100128	01/18/2000
P376	Reactor Engineering Department Annual Report (April 1, 1997 - March 31, 1998)	Tokai-mura, Naka-gun, Ibaraki-ken	JAERI-Review–98-022	11/1998
P377	Inventory of Power Plants in the United States as of January 1, 1998	N/A	DOE/EIA-0095(98)	12/1998
P378	Argonne National Laboratory-East Building 212 Energy Technology Division Alpha-Gamma Hot Cell Facility Preliminary Decontamination and Decommissioning Plan	T. S. Bray	HFS-003	Rev. 3, 10/08/2003
P379	Design Basis Threat Impact Assessment and Implementation Plan for the Argonne Illinois Site	N/A	N/A	12/19/2003
P380	Alpha-Gamma Hot Cell Facilit (AGHCF), Safety Analysis Report	N/A	IPS-221-00-01	Rev. 1, 10/2001
P381	AGHCF Criticality Hazards Control Statement: Use of a Safe Vac Vacuum Cleaner in Alpha-Gamma Hot Cell Facility Areas 1 and 3, Addendum 1 to IPS-6	Richard Lell	IPS-6-01-10	Rev. 10, Addendum 1, 10/23/2002
P383	Validation Results Based on the Spent Fuel Demonstration Program at FCF	R. D. McKnight	ANL/RA/CP-101397	04/06/2000

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
P384	AGHCF Maintenance Implementation Plan, Argonne National Laboratory-East Building 212	N/A	HFS-006-00-00	Rev. 0, 10/22/2003
P385	Quality Assurance Plan for the Building 212 Irradiated Materials Laboratory (IML); Memo to Distribution	T. Bray, Manager, IML	IPS-312-00-00 & IPS-312-00-01	Rev. 0 & 1, 08/11/1999 & 08/09/2001
P386	CRIEPI Posttensile SEM Fractography, Supplemental Instruction SI 197 for Rod/Specimen 583D1 (S1T4), 583E1 (S1T5) in accordance with IPS-311-00-00	H. Tsai	SI 197	07/13/2001
P387	Prep of Creep Samples, Supplemental Instruction 340 of Rod/Specimen A/G 611C16, A/G 611C17, A/G 592C in accordance with IPS-393-00-02	H. Tsai	SI 340	02/25/2003
P389	AGHCF Supplemental Instructions for IRIS-11, A/G 558 in accordance with IPS-295-00-00	L. A. Neimark	IPS-295-00-00	12/01/1998
P390	Tensile Testing of NEPO Specimens in K2, Supplemental Instruction 342 of Rod/Specimen 618D, 618E in accordance with IPS-294-00-02	R. Daum	SI 342	03/11/2003
P391	Adendum to Work Plan for Task 1 SRTC Specimens: IPS-229-00-00, July 3, 1996	L. A. Neimark	IPS-220-03-00	07/17/1996
P392	Procedures for Conducting Tests in the Whole-Pin furnace System (IPS-2-04-00)	L. A. Neimark	IPS-2-04-00 & IPS-2-04-01	Rev. 0 & 1, 01/22/1990 & 05/22/1990
P393	Quality Assurance Plan for Irradiation Performance Section Activities	N/A	IPS-1-00-01	Rev. 1, 06/1989
P394	Work Plan for the Preparation of Fuel Rods for Return Shipment to Idaho	L. A. Neimark, ET-HFS	HFS-015-00-00	12/08/2004
P395	Work Plan for the Replacement of the Area 3 GM Manipulator Power Cord	K. Stoll, Asst. Manager, HFS	HFS-014-00-00	10/12/2004
P396	AGHCF Special Nuclear material Inventory Management Plan	N/A	HFS-011-00-00	02/06/2004
P397	ET-PFS Facility Support Agreement	N/A	HFS-012-00-01	Rev. 1, 03/01/2004
P398	Seal (TID) Application and Removal	N/A	AGHCF-OPS-100	Rev. 1, 12/10/2002
P399	Cask Handling at the AGHCF	N/A	HFS-OPS-101	Rev. 1 & 2, 04/06/2001 & 12/14/2004
P401	Movements and Transfers In or Out of Material Balance Area	N/A	AGHCF-OPS-103	Rev. 0, 07/09/2001
P402	Loading and Unloading of Shielded Casks	N/A	AGHCF-OPS-104	Rev. 0, 02/15/2001
P403	Movement of Materials Through the Alpha Barrier	N/A	AGHCF-OPS-105	Rev. 0, 02/09/2001

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
P404	Movement of Material In-Cell	N/A	AGHCF-OPS-106	Rev. 0, 02/15/2001
P405	Nuclear Materials Management	N/A	AGHCF-OPS-107	Rev. 0, 07/16/2001
P4054	Results of Testing Metallographic (Met) Mounts for the Presence of Sodium, Performed in the Alpha Gamma Hot Cell Facility (AGHCF)	D. Pancake	NOD-215-00-00	Rev. 0, 05/06/2010
P406	Nuclear Materials Accountability	N/A	AGHCF-OPS-108	Rev. 0, 02/09/2001
P407	Criticality Control	N/A	AGHCF-OPS-109	Rev. 1, 04/05/2002
P408	Special Materials Group (SPM) Documentation	N/A	AGHCF-OPS-110	Rev. 0, 02/09/2001
P409	Nuclear Materials Management Safeguards	N/A	AGHCF-OPS-111	Rev. 0, 04/06/2001
P410	Changing a Final HEPA Filter in the Main Exhaust	N/A	AGHCF-OPS-207	Rev. 1, 11/25/2002
P411	High Gamma Level Transuranic Material	N/A	AGHCF-OPS-301	Rev. 0, 01/31/2001
P412	Remote Handled Transuranic Waste Sorting and Packaging	N/A	AGHCF-OPS-302 & NOD-AGHCF-OPS-302	Rev. 0, 2, 3, & Draft, 07/09/2001, 03/29/2005, & 05/09/2007
P413	30 gallon Remotely Handled Transuranic Waste Drum Assembly	N/A	AGHCF-OPS-303	Rev. 0 & 6, 01/19/2001 & 05/31/2011
P414	Estimation of Activity in Waste Containers	N/A	AGHCF-OPS-304	Rev. 0, 04/20/2001
P415	RH-TRU 30-gal Waste Drum Out-Loading	N/A	AGHCF-OPS-305	Rev. 2 & 8, 06/07/2002 & 07/08/2011
P416	Chemical and Other Regulated Waste Management	N/A	AGHCF-OPS-306	Rev. 0, 10/31/2001
P417	AGHCF Low Level Waste Inventory Sheet	N/A	AGHCF-OPS-308	Rev. 1, 11/08/2001
P425	AGHCF Quality Assurance Plan	T. S. Bray	HFS-POLICY-200	Rev. 2 & 3, 07/2001 & 07/2003
P426	Problem Resolution System	N/A	HFS-POLICY-201	Rev. 1, 11/11/2003
P427	Corrective Action Tracking System	N/A	AGHCF-POLICY-202	Rev. 0, 11/03/2000

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
P428	Procedure Guidelines	N/A	AGHCF-POLICY-203	Rev. 1 & 2, 12/03/2001 & 10/27/2003
P429	Quality Assurance Levels	N/A	HFS-POLICY-204	Rev. 1, 10/27/2003
P430	HFS Document Control System	N/A	HFS-POLICY-205	Rev. 0 & 1, 11/03/2000 & 10/27/2003
P431	Training and Qualification of Personnel	N/A	AGHCF-POLICY-300	Rev. 1 & 2, 11/26/2001 & 03/25/2005
P433	Industrial Hydiene and Environmental Health	N/A	HFS-POLICY-401	Rev. 3, 03/29/2005
P437	Operational Responsibilities	N/A	HFS-POLICY-500	Rev. 2, 03/29/2005
P446	Movement of Materials Through the Alpha Barrier	N/A	AGHCF-POLICY-605	Rev. 0, 02/09/2001
P447	Operations Order	N/A	AGHCF-POLICY-607	Rev. 0, 11/10/2000
P448	Configuration Control	N/A	AGHCF-POLICY-610	Rev. 1, 12/04/2002
P450	Operations Log Book	N/A	AGHCF-POLICY-612	Rev. 0, 11/10/2000
P451	Record Log Books	N/A	AGHCF-POLICY-613	Rev. 0, 02/09/2001
P453	AGHCF Seal (TID) Program	N/A	AGHCF-POLICY-617	Rev. 1, 12/10/2002
P455	Unreviewed Safety Question	N/A	HFS-POLICY-619	Rev. 3, 03/14/2005
P456	Electron Beam Laboratory User's Guide	N/A	AGHCF-EBL-100	Rev. 0, 06/11/2001
P457	Oxygen Analyzer Calibration, Area 4	N/A	AGHCF-EBL-101	Rev. 0, 06/15/2001
P458	Waste Disposal	N/A	AGHCF-EBL-102	Rev. 0, 06/15/2001
P459	Training for Non-irradiated Performance Section, Electron Beam Laboratory, and Scanning Electron Microscope Users	N/A	AGHCF-EBL-103	Rev. 0, 06/15/2001

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Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
P461	Safety and Glovebox Procedures	N/A	AGHCF-EBL-401	Rev. 0, 08/16/2001
P463	Emergency Response to an In-cell Fire	N/A	HFS-EMER-200	Rev. 1, 10/02/2003
P466	Procedure for Positioning the AGHCF Movable Gamma Shield	N/A	HFS-EMER-300	Rev. 1, 10/02/2003
P468	Switching the AGHCF Nitrogen Supply from the Main Tank (Tank #30) to an Alternate Supply	N/A	HFS-EMER-400	Rev. 0, 09/26/2005
P469	Changing an In-line Filter in a Radioactive Gas Collective System	N/A	AGHCF-MAINT-100	Rev. 0, 01/31/2001
P470	Alpha-Gamma Hot Cell Facility Operations Manual. ANL-E Energy Technology, Irradiation Performance Section. Removing Master Manipulator at Work Station 5.	N/A	AGHCF-MAINT-200	Rev. 0, 01/31/2001
P471	Removal and Installation of Model A Slave Manipulators	N/A	AGHCF-MAINT-201	Rev. 0, 01/19/2001
P472	Manipulator Movement, Cleaning and Repair	N/A	AGHCF-MAINT-202	Rev. 1, 11/26/2002
P473	Changing Glove Rings in AGHCF Glove Niche	N/A	AGHCF-MAINT-300	Rev. 0, 01/31/2001
P474	Semi-annual HFS Facilities Glove and Pouch Inspection	N/A	HFS-MAINT-301	Rev. 1, 08/19/2003
P475	Acid-Clean Windows	N/A	HFS-MAINT-501	Rev. 2, 08/20/2003
P476	Zinc-Bromide ShieldingWindows Argon Gas Blanket Maintenance	N/A	HFS-MAINT-502	Rev. 1, 09/26/2005
P477	Removing Window Glass Type A	N/A	HFS-MAINT-503	Rev. 3, 11/20/2003
P478	Preparation of a Type A Tank-in-a-Tank Replacement Window Assembly	N/A	HFS-MAINT-505	Rev. 1, 08/20/2003
P479	Removal of Outer Glass From a Type B or C Shielding Window	N/A	AGHCF-MAINT-508	Rev. 0, 01/31/2001
P480	Painting a Drained Shielding Window Cavity	N/A	AGHCF-MAINT-509	Rev. 0, 12/15/2000
P481	Installation of Coldside Gaskets	N/A	AGHCF-MAINT-510	Rev. 0, 12/15/2000
P482	Installation of Outer Glass Type B or C Shielding Window Tank	N/A	AGHCF-MAINT-511	Rev. 0, 01/31/2001
P483	Preparing Window Cavity for Modified Window Tank Insert	N/A	HFS-MAINT-512	Rev. 2, 08/20/2003
P484	Installing a Type A "Tank-in-a-Tank" Window Assembly	N/A	HFS-MAINT-513	Rev. 3, 08/20/2003
P485	Procedure for Installing Lead Shielding Around a Tank Insert in an AGHCF Window Cavity	N/A	HFS-MAINT-514	Rev. 1, 08/20/2003
P486	Hydroxylamine Hydrochloride Addition to Zinc Bromide Solution	N/A	HFS-MAINT-515	Rev. 1, 03/14/2005

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Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
P487	Installation of Lead-Glass Glovebox Window Panes	N/A	HFS-MAINT-516	Rev. 0, 09/05/2003
P489	Work Plan for Decontaminating the CTA after the Completion of the ANL/JNC Tensile Testing; Memo to IPS Document File	H. Tsai	IPS-313-00-00 & IPS-313-00-01	Rev. 0 & 1, 07/06/1999 & 07/09/1999
P490	Work Plan for Diameter Measurements of Irradiated V-alloy Creep Specimens from the HFIR-2J Experiment	H. Tsai	IPS-314-00-00	Rev. 0, 07/16/1999
P491	Revised Wrok Plan for Diameter Measurements of Irradiated V-alloy Creep Specimens from the HFIR RB-12J Experiment	Hanchung Tsai	IPS-314-00-01	Rev. 1, 09/13/1999
P492	Procedure for Cutting Uranium Metal or Uranium Alloys on the South Bay Diamond Bandsaw in the South Hood, Room F-206; Memo to IPS Document File	R. V. Strain	IPS-315-00-00	07/20/1999
P493	Specification for Plastic Tunnel Suit, Alpha-Gamma Hot Cell Facility	Terri Bray	IPS-316-00-00	08/12/1999
P494	Procedure for Preparation of Uranium Alloy Consumable electrodes for RERTR Fuel Powder Production; Memo to IPS Document File	I. G. Prokofiev	IPS-317-00-00	08/04/1999
P495	Baseline HBR Cladding Microhardness, Supplemental Instruction 318 for Rod/Specimen A/G628 in accordance with IPS-379-00-00	H. Tsai	SI 318	07/23/2002
P496	Work Plan for Cutting ART-A1 Pressurized Creep Specimen with the EDM in Cell 4 of the IML; Memo to IPS Document File	Allan Hins	IPS-319-00-00	08/18/1999
P497	Procedure for Tensile Testing SSJ Specimens with the 1122 Instron Machine in the Irradiated Materials Laboratory (IML), and Work Plan for TensileTesting HFIR-11J SSJ Specimens with the 1122 Instron Machine in the Irradiated Materials Laboratory (IML)	Hanchung Tsai	IPS-320-00-00 & IPS-320-00-01	Rev. 0 & 1, 09/15/1999 & 01/24/2000
P498	Work Plan for In-cell Oxidation Mockup Tests; Memo to IPS Document File	Hanchung Tsai, IPS-ET	IPS-321-00-00	10/20/1999
P499	Plan for Establishing In-cell Capability for Spot-welding Thermocouples to LOCA Test Specimens; Memo to H. Tsai, Manager, IPS	L. A. Neimark, ET/IPS	IPS-322-00-00 & IPS-322-01-00	Rev. 0 & 1, 10/27/1999 & 02/03/2000
P500	Plan for Establishing Capability for Spot-welding Thermocouples to LOCA Test Specimens: Addendum No. 2 - Functional Requirements for In-cell Test Assembly Fixture (TAF); Memo to T. S. Bray, Manager, IPS	L. A. Neimark, ET/IPS	IPS-322-02-00	02/14/2001
P5001	CP-5 Converter Tubes	N/A	NOD-206-00-00	Rev. 0, 01/20/2010

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
P5002	Non-Reactivity Verification of SWARF	E. McGinn, M. Clark, D. Pancake, S. Sternberg, R. Creed	19239.0	Draft, 03/12/2013
P5003	Minimum FEW Specimen Measurement Length	D. Pancake	NWM-348-00-00	Rev. 0, 08/30/2012
P5004	Non-Reactivity Verification of SWARF - Working Copy	E. McGinn, M. Clark, D. Pancake, S. Sternberg, R. Creed	19239.1	Rev. 1, 04/22/2013
P5005	Testing the presence of reactive Sodium in AGHCF swarf cans	Argentina Leyva	WCD-11-AGHCF-001	Rev. 1, 01/28/2011
P5006	SWARF Conditioning Stage 1	Argentina Leyva	20398.0	04/04/2013
P5007	Sodium Loop Section Processing	Richard Creed	WPC-11-AGHCF-049	Rev. 3, 06/05/2012
P5008	SWARF Conditioning Stage 2	Argentina Leyva	20404.0	04/03/2013
P501	Review of the Quality Assurance Program Plan for the Advanced Materials Fabrication Facility (a.k.a. Building 212 H-wing High Bay Fab Facility); Memo to Distribution	Hanchung Tsai, Manager IPS, ET	IPS-323-00-00	11/1999
P502	Shutdown Instructions for C3, Supplemental Instruction 324 for Rod/Specimen 591C3 in accordance with IPS-393-00-01	H. Tsai	SI 324	08/22/2002
P503	Work Plan for Microstructural Examination on V-4Cr-4Ti Rods for Making Creep Tube Supplemental Instruction 252 for Rod/Specimen A/G 625A 1 through 14; Memo to IPS Document File	Yong Yan	IPS-325-00-00	11/04/1999
P504	Work Plan for Microstructural Examination on the Creep Tubes of V-4Cr-4Ti; Memo to IPS Document File	Yong Yan	IPS-325-01-00	11/18/1999
P505	Work Plan for the Heat Treatment and Microstructural Examination on V-4Cr-4Ti Rods for Making Creep Tubing; Memo to IPS Document File	Yong Yan	IPS-325-02-00	01/22/2000
P506	Surry Additional H Analyses, Supplemental Instruction 326 for Rod/Specimen Surry Rod H9, A/G 591A2, 591A4 in accordance with IPS-373-00-00 IPS-326-00-00, Procedure for Cutting Uranium Metal or Uranium Alloys on the Cut-off Machine in the Hood, Room H-141	H. Tsai	SI 326 & IPS-326-00-00	09/03/2002 & 08/09/1999
P507	Photography and Met of Weld Samples, Supplemental Instruction 252 for Rod/Specimen A/G 625A 1 through 14 in accordance with IPS-327-00-00	Bob Strain	SI 252	12/13/2001

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Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
P508	Work Plan for Cutting Ring Stretch Specimens from Big Rock Point Cladding with the EDM in Cell 4 of the IML; Memo to IPS Documentation File	Robert Daum	IPS-327-00-00, -01, & -02	Rev. 0, 1, & 2. 12/07/1999, 03/22/2000 & 03/20/2001
P509	Work Plan for the LOCA Mock-up - Phase 1; Memo to NRC Program File	R. V. Strain	IPS-328-00-00	11/23/1999
P510	Work Plan for the Preparation of Unirradiated Al-clad Fuel Specimens for CMT	T. Bray	IPS-329-00-00	12/02/1999
P511	Design Review Update of Load Train Assembly for Ring Stretch Mechanical Property Testing	R. Daum, Iori Prokofiev, ET-IPS	IPS-330-00-00, -01, -02, -03, & -04	Rev. 1, 2, 3, & 4, Various Dates
P512	Hydrogen Analysis of Hydrided Zr-4 Cladding, Supplemental Instruction 85 for Rod/Specimen 581E7 and 581E8 in accordance with IPS-331-00-01	R. Daum	SI 85	10/30/2000
P513	Preparation of TMI-1 RST Specimens, Supplemental Instruction 169 for Rod/Specimen 536B3H TMI-1 Cladding in accordance with IPS-330-00-01	R. Daum	SI 169	05/29/2001
P514	H Analysis of Unirradiated Zr-4, Supplemental Instruction 322 for Rod/Specimen: 581-series Penn State Zr-4 in accordance with IPS-330-00-03	R. Daum	SI 322	08/02/2002
P515	Work Plan for Determing Hydrogen Contents in TMI-1 Cladding; Memo to IPS Document File	Hanchung Tsai, IPS-ET	IPS-331-00-00 & IPS-331-00-01	Rev. 0 & 1, 10/20/1999 & 02/03/2000
P516	Replacement of the WPF Furnace; Memo to IPS Document File	Hanchung Tsai, IPS-ET	IPS-333-00-00	10/20/1999
P517	Functional Requirements for the AGHCF Fissile Inventory Management System (FIMS) 3.0 Including Validation and Verification Requirements; Memo to IPS Document File	T. Bray	IPS-334-00-00	01/07/2000
P518	Work Plan for the Steam Oxidation Tests at 1200 degrees on Unirradiated Zry-4 and Irradiated TMI-1 Cladding; Memo to NRC Program File (Several Supplemental Instructions)	Y. Yan	IPS-335-00-00 & IPS-335-01-00	Rev. 0 & 1, 02/11/2000
P519	Work Plan for cutting Limerick Rod Sections and Loading into Shipping Tubes; Memo to IPS Document File	Hanchung Tsai, IPS-ET	IPS-336-00-00	01/24/2000
P520	Work Plan for the Examination of Fuel Nano-plates from the RERTR-3 Experiment in ATR; and Supplemental Instruction 305 for PIE of RERTR-3 on Rod/Specimen A/G 580AB, and Supplemental Instruction 286 Repolish Sample and Specimen Ring for EMPA	R. V. Strain, ET/IPS	IPS-338-00-00 & SI 305	01/20/2000 & 04/05/2002
P521	Workplan for Assessment of Auger Analyzer: Examination of NERI Stainless Steel Samples; Memo to Distribution	R. V. Strain	IPS-339-00-00	01/25/2000
P522	Work Plan for Blister Tests of Micro-plates from the RERTR-2 Irradiation; Memo to Distribution	R. V. Strain	IPS-341-00-00	02/01/2000

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
P523	Work Plan for CMT Samples from TMI Fuel Rod Segments; Memo to Distribution	R. V. Strain	IPS-342-00-00	01/31/2000
P524	Work Plan for Conducting Charpy and Tensile Tests on Vanadium Alloy Specimens (Heat 832665) after Long-term Exposure in the DIII-D Experimental Tokamak (Experiment W2); Memo to IPS Document File	Hanchung Tsai, IPS-ET	IPS-343-00-00	02/03/2000
P525	Work Plan for Inspection and Storage of CRIEPI Tensile Coupons; Memo to IPS Document File	Hanchung Tsai, IPS-ET	IPS-344-00-00	02/07/2000
P526	Procedure for Conducting the Impact Testing with Dynatup Impact Tester; Memo to IPS Document file	Yong Yan	IPS-345-00-00	02/11/2000
P527	Testing of Cold-Worked 316SS Speciments; Supplemental Instructions 258 for Rod/Specimen 620 (NEPO 316SS Specimens) in accordance with IPS-346-00-00	R. Daum	SI 258	01/03/2001
P528	Work Plan for the LOCA Mock-up - Phase II; Supplemental Instruction 289 for Rod/Specimen A/G581C27, 28, and 29	R. V. Strain	IPS-347-00-00	04/11/2000
P529	Procedure for Performing LOCA Integral Tests in Out-of-Cell Mock-up Apparatus (Mock-up - Mark II) and Safety Analysis of the LOCA Criteria Test Mock-up, and Supplemental Instructions 297 for Zry-2, unirradiated	Y. Yan	IPS-348-03-00, IPS-348-00-00, & IPS-349-00-00	02/2002, 04/17/2000, & 09/05/2000
P530	Work Plan for Cleaning Depleted Uranium Rods for Mechanical Treatment; Memo to IPS Document file	I. G. Prokofiev	IPS-350-00-00	04/10/2000
P531	Work Plan and Procedure for Cutting Tensile Specimens with the EDM for the CRIEPI Program and Supplemental Instruction for Rod/Specimen ID: 583A	Hanchung Tsai	IPS-351-00-00	04/11/2000
P532	Complete Axial Specimen Preparation for Rod/Specimen ID: 592C2C, 592C14C Surry According to IPS-382-00-00	R. Daum	SI 352	07/31/2003
P533	Oxidation Test for IPS-335-00-00	T. Bray	SI 103	01/09/2001
P534	Work Plan for Laser Weldment Impact Testing and Microstructural Characterization - Phase 1; Memo to IPS Document File	Yong Yan	IPS-353-00-00	04/12/2000
P535	Work Plan for Microstructural Examinations on the Laser Weld V-4Cr-4Ti from heat NIFS-1 and #832665; Memo to IPS Document file	Yong Yan	IPS-353-00-01	03/19/2001
P536	Decontamination and Transfer of A/G 587 Tensile Specimens to Clean Vials; Memo to IPS Document File	T. Bray, Manager, AGHCF	IPS-354-00-00	Rev. 0, 04/18/2000
P537	Revised Work Plan for Unloading and Transferring Irradiated Stainless Steel Mechanical Test Specimens to Cell 2 of the IML	H. Chung, O. Chopra	IPS-355-00-01	05/15/2000
P538	Work Plan for Axial Gamma Scanning of Limerick Rod F9 (A/G 574)	H. Tsai	IPS-356-00-00	05/22/2000

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Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
P539	Work Plan for Examination and Testing of Limerick Rod F9, Mid Segment, A/G 574C; Memo to IPS Document File	H. Tsai	IPS-357-00-00	06/15/2000
P540	Work Plan for Preparation of Low-Oxygen Vanadium Alloy Test Specimens; Memo to IPS Document File	H. Tsai	IPS-358-00-00	06/26/2000
P541	Work Plan for Fabrication of Full-sized Plated using U-10 w/o Mo Powder; Memo to IPS Document File	T. C. Wiencek	IPS-359-00-00	08/01/2000
P544	Procedure for Welding End-fittings to tubes using the Astro Arc Welder	R. Daum	IPS-363-00-00 & IPS-363-00-01	Rev. 0 & 1, 10/17/2001
P545	Work Plan for End-fitting to Cladding Welding for LWR Fuel Rod Segments and Supplemental Instruction 133; Memo to NRC Program file	R. V. Strain	IPS-364-00-00	10/03/2000
P546	Work Plan for Conducting Melt Dioolution Tests on Al-clad Fuels and Supplemental Instruction 184; Memo to SRTC Characterization File	T. S. Bray	IPS-366-00-00	11/07/2000
P547	Work Plan for Calcining Magnesium Trisilicate 9Mg-2Si-3O-8) and Calcium Oxide (CaO) Powders for CMT; Memo to IPS Document File	H. Tsai	IPS-367-00-00	10/20/2000
P548	Work Plan for Conducting the Zn-Zircaloy Interaction Tests; Memo to IPS Document File	H. Tsai	IPS-368-00-00	11/30/2000
P549	Modifications to the Oxidation Apparatus	Y. Yan	IPS-370-00-00	02/06/2001
P550	Work Plan for Tensile and Impact Testing of 832864 GA Heat of V-4Cr-4Ti Specimens after 1-Yesr DIII-D Exposure; Work Plan for the Initial Characterization and Sectioning of Surry Rod FA-434 (A/G 591)	H. Tsai	IPS-373-00-00 & IPS-374-00-00	03/15/2001 & 03/20/2001
P551	Work Plan for the Examination of Fuel Plates from the RERTR-4 Experiment in ATR; Work Plan for Cutting H. B. Robinson Rod Sections and Loading into Shipping Tubes, and Supplemental Instruction 153	R. V. Strain, Bob Strain	IPS-375-00-00, -01-00, & IPS-376-00-00	03/16/2001, 04/12/2001, & 03/26/2001
P552	Oxygen Pickup by LECO Oxygen Determinator for the LOCA Zry-2 Test #6 and Work Plan for Preparing Samples for Oxygen Analyses from Zry Cladding after Steam Oxidation Test at High Temperature	Y. Yan	IPS-377-00-00 & IPS-377-01-00	04/06/2001
P553	Procedure for the Removal, Repair, and Replacement of Valves in the Vacuum System for the ETEC Scanning Electron Microscope	R. V. Strain	IPS-378-00-00	04/13/2001
P554	Work Plan for the Initial Characterization and Sectioning of H. B. Robinson Rod RA1 8235 (A/G 611) and Supplemental Instruction 328	Hanchung Tsai	IPS-379-00-00	05/16/2001
P556	Work Plan for Cutting Axial Tensile Specimens from Surry Cladding with the EDM in Cell 3 of the IML Memo to IPS Document File and Supplemental Instruction 260	R. Daum	IPS-381-00-00	07/10/2001

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
P557	Load Train Assembly and Testing Procedure for Axial Tensile Testing of Surry Cladding, and Supplemental Instruction 338, Rev. 1; Memo to IPS Document File	Rob Daum, ET-IPS	IPS-382-00-00 & IPS-382-00-01	Rev. 0 & 1, 11/29/2001 & 04/11/2003
P558	Procedure for Operating Instron Model 8511; Memo to IPS Documentation File	Robert Daum	IPS-383-00-00	09/10/2003
P559	Data Analyses for Oxidation Benchmarking Test OC#7 on Unirradiated Zircaloy 4; Memo to NRC Program	Y. Yan, ET	IPS-384-00-00	07/05/2001
P560	Work Plan for Unloading a Spent IPNS Target into the AGHCF Hot Cell; Memo to IPS Document File	Allan Hins	IPS-385-00-00	08/13/2001
P561	Operation of the In-cell LOCA Test Assembly Apparatus (TAA); Memo to Distribution	L. A. Neimark	IPS-386-00-00	08/13/2001
P562	Work Plan for Disassembly of IPNS Spent Target REU-1 in the AGHCF Hot Cell; Memo to IPS Document File	Allan Hins	IPS-387-00-00	12/04/2001
P564	Preparation and Examination of Cladding Tensile Specimens; IPS Document File	Rob Daum	IPS-390-00-00	09/10/2003
P565	Thermal Creep Specimen Design and Initial Demonstration; Memo to Dan McGann, ET	Hanchung, Tsai, ET	IPS-391-00-00	02/28/2001
P566	Work Plan for Characterization of Surry Rod G6 (A/G 592)	Hanchung Tsai, ET-IPS	IPS-392-00-00	09/21/2001
P567	Procedure for Zircaloy Thermal Creep Tests, and Supplemental Instruction 266	Hanchung Tsai, ET-IPS	IPS-393-00-00, -01, -02, & -03	Rev. 0, 1, 2, & 3, 09/26/2001 thru 02/25/2003
P568	Pre-oxidized Zry for TC Welding Practice, Supplemental Instruction 294 for Rod/Specimen Unirradiated 0.48" Zry cladding in accordance with IPS-395-00-00	Y. Yan	SI 294	03/29/2002
P569	Procedure for Calibration of Pressure Transducers (PTs) in the NRC Thermal Creep Systems; Memo to IPS Document File	Hanchung Tsai, ET-IPS	IPS-394-00-00 & IPS-394-00-01	Rev. 0 & 1, 10/30/2001 & 11/02/2001
P570	Work Plan for Mockup Testing of the In-cell LOCA Apparatus; Memo to NRC Program File	R. V. Strain	IPS-395-00-00	10/25/2001
P571	Procedure for Measuring Diameters and Lengths of Cladding Creep Specimens with the Zmike Laser Profilometer; Memo to IPS Document File	Hanchung Tsai and Jakub Dobrzynski	IPS-396-00-00	11/08/2001
P572	Optical Metallography Test Weld, Supplemental Instruction 262 for Rod/Specimen A/G 625D5	Bob Strain	SI 262	01/10/2002
P573	Procedure for the Removal, Repair, and Replacement of Valve V2 in the Vacuum System for the ETEC Scanning Electron Microscope	Darold L. Perry	IPS-399-00-00	11/29/2001

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
P574	Procedure for the Repair of the Driver Screw Mechanism of AGHC Shield Door Number 2, Supplemental Instruction 354	D. Donahue	IPS-401-00-00 & IPS-401-00-01	Rev. 0 & 1, 01/08/2002 & 01/11/2002
P575	Work Plan for the Examination of Fuel Plates from the RERTR-4 Experiment in ATR, Revision 1	R. V. Strain	IPS-400-01-00	02/22/2002
P576	Work Plan and Procedure for Cutting Tensile Specimens with the EDM for the FY02 NEPO 3.13 Program and Supplemental Instruction 274	R. Daum	IPS-402-00-00	01/24/2002
P577	Work Plan for Cladding Annealing Tests for Dry Cask Storage and Supplemental Instruction 291	H. Tsai	IPS-404-00-00	02/01/2002
P578	General Work Plan for Preparing Segments of Fuel Cladding for Programmatic Investigations and Supplemental Instruction 303	R. Daum	IPS-405-00-00	02/28/2002
P579	Procedure for Inserting a High Pressure Line into the AGHC for the LOCA Apparatus at work Station 6; Memo to NRC Program File	H. Tsai and R. V. Strain	IPS-406-00-00	04/01/2002
P580	In-cell LOCA Integral Test with unirradiated Zry-2, Supplemental Instructions 357 for Rod/Specimen 12" long unirradiated Zry-2, A/G 581C41 in accordance with IPS-409-01-03	Y. Yan	SI 357	09/03/2003
P581	Standard Operating Procedure - Quality Assurance, Calibration and Counting Protocols for Gamma Spectra of Samples	Vivian S. Sullivan, Analytical Chemistry Laboratory, ANL	SOP: ACL-070	Rev. 1, 03/25/2003
P582	Met. Of Loi 9-11 after Oxidation Test at 1100C; Supplemental Instructions 321 for Rod/Specimen Limerick, A/G574C1B, 574C1G in accordance with IPS-340-00-00	Y. Yan	SI 321	07/30/2002
P583	Roadmap for SP-100 Fuel Pin Irradiation Testing	B. J. Makenas	WHC-SP-1083	02/1994
P584	U.S. Department of Energy - The Secretary's Annual Report to Congress 1992-1993	N/A	DOE/S-0111	1993
P585	Safety issues at the DOE Test and Research Reactors, A Report to the U.S. Department of Energy	N/A	N/A	1988
P586	Report to Congress - The Liquid Metal Fast Breeder Reactor Program - Past, Present, and Future	N/A	RED-75-352	04/28/1975
P587	Program Scoping Plan for the Fast Flux Test Facility, A Nuclear Science and Irradiation Services User Facility	N/A	PNNL-12245	Rev. 1, 08/1999
P588	An Overview of the Argonne National Laboratory Fast Critical Experiments 1963-1990	L. G. DeSarge	ANL-NT-175	04/2001
P590	Methodology to Determine Radioisotope Contents in RH TRU Waste Drums from Irradiated Fuel Examination at ANL-E	N/A	INEEL/EXT-02-001 69	Rev. 0, 09/2003

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
P591	Engineering Design File, Estimation of Inventory of Significant Isotopes in RH-TRU Waste Drums 728 through 737	N/A	EDF-1979	Rev. 1, 03/19/2003
P592	Evaluation of Radionuclide Contents in RH TRU Waste Drums 728 through 737 Based on Reported Irradiated Fuel Examination	N/A	INEEL/EXT-02-00168	Rev. 0, 09/2003
P593	Engineering Design File, Quantifying Special Actinides in RH-TRU Waste from Irradiated Fuel Examined at ANL-E	N/A	EDF-2555	Rev. 0, 12/16/2002
P594	Engineering Design File - Results of ORIGEN2 Calculations for 14 EBR-II Experiment Fuel Elements that Generated Remote-Handled TRU Waste in Drums 728-737	N/A	EDF-2365	Rev. 0, 09/2002
P595	Engineering Design File - Verification and Validation of a Portion of ORGEN2 Code Used for RH-TRU Radiological Characterization	N/A	EDF-1980	Rev. 0, 03/2002
P596	White Paper: Peer Review of Proposed Radiological Characterization Methodology for Remote-Handled Transuranic Waste Stored at the Idaho National Engineering and Environmental Laboratory	N/A	INEEL/EXT-03-01182	09/2003
P599	The Defense Programs Origin of Transuranic waste at Argonne National Laboratory-West	H. F. McFarlane	ANL-NT-192	11/2001
P600	Standard Operating Procedure: Preparation of Samples for Gamma Spectrometry Analysis	W. Elane Streets	SOP: ACL-072	Rev. 2, 03/25/2003
P601	Standard Operating Procedure: Gross Alpha and Beta Radioactivity	Richard B. Holtzman and W. Elane Streets	SOP: ACL-095	Rev. 4, 03/31/2003
P602	Analysis of Three Mile Island and Quad Cities Spent Nuclear Fuel Samples	Stephen F. Wolf, Delbert L. Bowers, and James C. Cunnane	N/A	04/28/1999
P603	Validation of the Rebus-3/RCT Methodologies for EBR-II Core-Follow Analysis	R. D. McKnight	CONF-920308-Vol. 2	N/A
P604	Criticality Hazards Control Statement, Alpha-Gamma Hot Cell Facility, Special Facility FF12, and Addendum 1, Use of a Safe Vac Vacuum Cleaner in Alpha-Gamma Hot Cell Facility Areas 1 and 3	James A. Morman	IPS-6-00-09, IPS-6-00-10, & IPS-6-01-10	Rev. 9 & 10, 03/08/1990 07/2001
P605	Technical Safety Requirements for the Alpha-Gamma Hot Cell Facility, Energy Technology Division, Building 212	Terri Bray	IPS-221-01-00; AGHCF-POLICY-616	Rev. 0, 10/2001
P606	Status and Progress of the RERTR Program in the Year 2000	Armando Travelli	ANL/TD/CP-103012	2000

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
P607	Initial Assessment of Radiation Behavior of Very-High-Density Low-Enriched-Uranium Fuels	G. L. Hofman, M. K. Meyer, J. L. Snelgrove, M. L. Dietz, R. V. Strain, and K. H. Kim	ANL/TD/CP-100148	1999
P610	Baseline HBR Cladding Microhardness; Program: NRC hi BU DCS	H. Tsai	SI 318	07/23/2002
P611	Waste Handling Procedures Manual - Appendix I Radioactive Waste Management Basis	N/A	RWMB-01	Rev. 1, 04/06/2004
P614	Identification of Additional Fuel Elements/Materials Examined in the Alpha-Gamma Hot Cell Facility for ANL-E RH TRU Waste	Kerry Martin	EDF-6946	Rev. 0, 05/19/2006
P615	Information on Fuel Elements Examined at the AGHCF at ANL from November 1971 to August 7, 1995 Based on Waste Consolidation Records	P. Kuan	EDF-6685	Rev. 0, 05/19/2006
P616	Decontamination of Hot Cells K-1, K-3, M-1, M-3, and A-1, M-Wing, Building 200: Project Final Report Argonne National Laboratory-East	C. L. Cheever and R. W. Rose	ANL/D&D/TM-96/2	09/1996
P617	Criticality Hazards Control Statement for Special Facility MF200-KW	W. D. Jackson	DOC-10146	10/11/1978
P618	Quality Assurance Plan for RAS Loop Disassembly Facility, D-200, M-Wing, K-1 Cell	L. A. Neimark	M3101-0025-SE-00	01/16/1974
P619	Reprot of the Preliminary Design Review of the RAS Loop Disassembly Facility, D-200, M-Wing, K-1 Cell	L. A. Neimark	M3101-0026-SF-00	03/13/1974
P620	Posttest Examination Plan for the L6 Experiment	W. F. Murphy	M4000-0012-SA-00	Rev. 0, 01/05/1981
P621	Posttest Examination Plan for the L7 Experiment	L. A. Neimark	M3203-0008-SA-00	02/19/1979
P622	Addendum to Criticality Hazards Control Statement (Revision 7) Alpha-Gamma Hot Cell Facility (Special Facility FF-1)	W. D. Jackson	Bldg. 200 File H121A	04/28/1975
P623	Light-Water-Reactor Safety Research Program: Quarterly Progress Report; April-June 1975	R. G. Sachs and J. A. Kyger	ANL-75-58	09/26/1975
P624	Quarterly Progress Report for the Period Ending June 30, 1975; Transient Fuel Response and Fission-Product Release Program	L. R. Kelman	N/A	07/24/1975
P625	RH-TRU 30-Gallon Waste Drum Out-Loading	K. Stoll	NOD-AGHCF-OPS-305	02/06/2008
P626	30-Gallon Remote Handled Transuranic Waste Drum Assembly	K. Stoll	NOD-AGHCF-OPS-303	Rev. 3, 02/04/2008
P801	Oxidation of Spent Fuel Between 250° and 360°C; ANL ID 38909	R. E. Einziger; R. V. Strain	RP2062-10-1 & TV-48296A	01/1984

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
P802	Extended Burnup Demonstration, Reactor Fuel Program, Pre-Irradiation Characterization and Summary of Pre-Program Poolside Examinations, Big Rock Point Extended Burnup Fuel; ANL ID 32218	C. A. Exarhos; L. F. Van Swam; F. P. Wahlquist	XN-NF-80-40; UC-78; DOE/ET/34006-3	12/1981
P803	Extended Burnup Demonstration, Reactor Fuel Program, Poolside Fuel Examination, Big Rock Point Extended Burnup Fuel; ANL ID 32205	C. A. Exarhos; L. F. Van Swam; G. A. Sofer	XN-NF-81-62; UC-78; DOE/ET-34006-10	12/1983
P804	Summary Report on the HFED Miniplate Irradiations for the RERTR Program; ANL ID 41175	R. L. Senn	ORNL-6539	04/1989
P805	Summary Report on the HFED Miniplate Irradiations for the RERTR Program; ANL ID 7137	R. L. Senn	ORNL-6539	04/1989
P806	Evaluation of Existing Technology Base for Candidate Fuels for the HWR-NPR; ANL ID 15063	J. L. Snelgrove; G. L. Hofman; R. L. Frontroth; W. R. McDonnell; H. B. Peacock; R. F. Whitacre; G. L. Copeland	ANL/NPR-93/002; UC-940	02/1993
P807	Proceedings of the International Meeting on Reduced Enrichment for Research and Test Reactors, 24-27 October, 1983, Tokai, Japan; ANL ID 41177	Keichiro Tsuchihashi	Jaeri-M 84-073	05/1984
P808	Memo from Garkisch to Kazuya Yamamoto transmitting the SPA-1A Data Report. Data Report, SPA-1A Test Irradiation in EBR-II; ANL ID 2857	H. D. Garkisch, K. Yamamoto	NDP-94-028 Doc ID: WCAP-14154, WAES-TR-94-001	09/1994
P809	Review of Behavior of Mixed-Oxide Fuel Elements in Extended Overpower Transient Tests in EBR-II ANL ID 41182	H. Tsai; L. A. Neimark; S. Nagai; N. Nakae	ANL/ET/CP 83008; Conf-950426--5	10/1994
P810	Memo from H. D. Garkisch to Seiichiro Maeda transmitting SPA-2 Data Report; Data Report SPA-2 Test Assembly Irradiation in EBR-II; ANL ID 41077	H. D. Garkisch, S. Maeda, G. W. Kuhns	Rpt: WCAP-14184, WAES-TR-95-001; NDP-95-032	09/1995
P811	IPS-166-00-00, Work Plan for the Examination of Tritium Breeding Ceramic materials from the FUBR Experiment in EBR-II (S/A X415A); ANL ID 41181	L. A. Neimark	IPS-166-00-00	05/18/1995
P812	Fusion Materials, Semiannual Progress Report for Period Ending June 30, 1999	N/A	DOE/ER-0313/26	06/30/1999
P813	IPS-282-00-00, Work Plan for Conducting Melt Dilution Tests on Al-clad Fuels; ANL ID 27329	A. B. Cohen	IPS-282-00-00	05/18/1998

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
P814	Paper: Postirradiation Examination of High-Density Alloy Dispersion Fuels; ANL ID 29329	S. L. Hayes; M. K. Meyer; G. L. Hofman; R. V. Strain	ANL ID 29329	10/01/1998
P815	Paper: Initial Assessment of Radiation Behavior of Very-High-Density Low-Enriched-Uranium Fuels; ANL ID 29330	G. L .Hofman, M. K. Meyer, J. L. Snelgrove, M. L. Dietz, R. V. Strain, K. H. Kim	ANL ID 29330	10/1999
P816	IPS-269-04-01, Metallography on an Additional RERTR-1 Microplate, A/G 549V; ANL ID 1210	R. V. Strain	IPS-269-04-01	09/25/1998
P817	Miscellaneous IPS Work Instructions: IPS-292-00-00 through IPS-292-09-00	R. V. Strain	IPS-292-00-00 thru IPS-292-09-00	08/98 thru 11/99
P818	IPS-292-02-00, Continuation of Metallography on RERTR-2 Microplates; Transmitted by Memo from R. V. Strain to S. L. Hayes dated 10/31/98; ANL ID 6823	R. V. Strain	IPS-292-02-00	11/10/1998
P819	IPS-306-00-00, Work Plan for the Characterization of N-Reactor Fuel Specimens (A/G 562); ANL ID 27297	T. Bray	IPS-306-00-00	03/09/1999
P820	IPS-329-00-00, Work Plan for the Preparation of Unirradiated Al-clad Fuel Specimens for CMT; ANL ID 3986	T. S. Bray	IPS-329-00-00	12/02/1999
P821	Metallographic Examination of Damaged N Reactor Spent Nuclear Fuel Element SFEC5,4378; ANL ID 41179	S. C. Marschman, T. D. Pyecha, J. Abrefah	PNNL-11438; UC-602	08/1997
P822	IPS-338-00-00, Work Plan for the Examination of Fuel Nano-Plates from the RERTR-3 Experiment in ATR; ANL ID 6811	R. V. Strain	IPS-338-00-00	01/20/2000
P823	Work Plan for Preparing the Surry Rod Sections for Shipment; ANL DOC ID 18073	Hanchung Tsai	IPS-368-00-00	11/27/2000
P824	Examination of Spent PWR Fuel Rods After 15 Years in Dry Storage; ANL ID 29316	R. E. Einziger, H. Tsai, M. C. Billone, B. A. Hilton	NUREG/CR-6831 ANL-03/17	09/2003
P825	Work Plan for the Initial Characterization and Sectioning of Surry Rod FA-434 (A/G 591); ANL DOC ID 12374	Hanchung Tsai	IPS-373-00-00	03/20/2001
P826	Revised Work Plan for the Examination of Fuel Plates from the RERTR-5 Experiment in ATR; ANL DOC ID 27225	R. V. Strain	IPS-375-01-00	Rev. 1, 04/12/2001

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
P827	Recent Observations at the Postirradiation Examination of Low-Enriched U-Mo Miniplates Irradiated to High Burnup; ANL DOC ID 29331	G. L. Hofman; Y. S. Kim; M. R. Finaly; J. L. Snelgrove; S. L. Hayes; M. K. Meyer; and C. R. Clark	ANL ID 29331	10/05/2003
P828	Design, Operation, and Peerformance Data for High Burnup PWR Fuel from the H. B. Robinson Plant for Use in the NRC Experimental Program at ANL; ANL DOC ID 41174	E. J. Ruzauskas; K. N. Fardell	EPRI 1001558	Rev. 0, 04/2001
P829	Revised Work Plan for the Examination of Fuel Plates from the RERTR-4 Experiment in ATR, Revision 1; ANL DOC ID 27220	R. V. Strain	IPS-400-01-00	Rev. 1, 02/22/2002
P830	Irradiation and Evaluation of Mixed Oxide Fuel Performance at the Big Rock Point Reactor; AND DOC ID 13901	C. E. Johnson; R. R. Heinrich; L. A. Neimark; J. E. Sanecki; C. E. Crouthamel; M. H. Campbell	ANL ID 13901	11/1987
P831	Characterization of Irradiated Fuel From the Big Rock Point Reactor; ANL DOC ID 13903	C. E. Crouthamel; M. H. Campbell	ANL ID 13093	12/1982
P832	Final Test Plan for the Post-Irradiation Examination of the J-2 Fuel rods (RP-306-1, Task 1H); ANL DOC ID 13980	Norman Dudey	RP-306-1; ANL ID 13980	10/1978
P834	Chemical Engineering Division Fuel Cycle Programs Quarterly Progress Report for April - June 1979	M. J. Steindler, et al.	ANL-79-99	09/1980
P835	Chemical Engineering Division Annual Technical Report for 1980	L. Burris, et al.	ANL-81-38	06/1981
P836	Light-Water-Reactor Safety Research Program: Quarterly Progress Report for January - March 1979	E. Gale Pewitt, et al.	ANL-79-43	08/1979
P837	Chemical Engineering Division Fuel Cycle Programs Quarterly Progress Report for July - September 1979	M. J. Steindler, et al.	ANL-79-109	1979
P838	Fusion Power Program Quarterly Progress Report for January - March 1979	Charles C. Baker, Samuel D. Harkness	ANL/FPP-79-2	08/1979
U001	AGHCF Position Statement Regarding Defense Versus Non-Defense TRU Waste	N/A	N/A	04/07/2000
U002	Draft Proposal For: Alpha-Gamman Hot Cell Facility Waste Management Plan	N/A	N/A	N/A

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
U003	Argonne National Laboratory-West Mission Description	N/A	N/A	05/18/2001
U004	Remote-Handled Waste Content Codes Assessed	N/A	N/A	N/A
U005	Data and Process Knowledge Assessment for Remote-Handled Transuranic Waste Stored at the Radioactive Waste Management Complex-Preliminary Draft	C. R. Tyler	N/A	09/01/1994
U006	Summary of Purchasing Requisitions Received from T. Bray: Heavy Metals Usage Identified by IT That May Be in the RH-TRU Waste Stream	N/A	N/A	09/06/2001
U007	Material Control Sheets for A/G numbers 1 through 510 and some attached paperwork	N/A	N/A	N/A
U008	WACC Audit Findings and Observations and hand written notes "WIPP Audit Team Closeout 7/19/90"	N/A	N/A	07/19/1990
U009	Transuranic Waste at Argonne National Laboratory-West: Meeting the Waste Acceptance Criteria for the TRU Repository	N/A	N/A	08/10/2001
U010	Closeout Mtg w Wilkinson	N/A	N/A	10/18/1992
U011	Project Process Flow Diagram: Fuel Elements from EBR-II and FFTF	N/A	N/A	N/A
U012	Basis for Assessment of the Environmental impact of the expanded Program at Argonne-East	N/A	N/A	N/A
U013	Waste Stream Fissile Content	N/A	N/A	03/23/1990
U014	1990 Batch Information for Drums 614-685, 728-735	N/A	N/A	N/A
U015	RH-TRU 1995, Drums 798 to 809.	Various Authors	N/A	Various Dates
U016	Material Receipt and SPM Data for AG# 409 A,B	W. P. Kenney	N/A	05/14/1990
U017	RH-TRU 1994, Book 8, Drums 778 to 797	Adam Cohen	N/A	10/19/1995
U018	RH-TRU 1993, Book 7, Drums 748 to 777	N/A	N/A	N/A
U019	RH-TRU 1991-1992, Book 6, Drums 728 to 737	N/A	N/A	N/A
U021	RH-TRU 1990, Book 4, Drums 687 to 727	N/A	N/A	N/A
U022	RH-TRU 1985-1987, Book 3, Drums 617 to 686	N/A	N/A	N/A
U023	Fuel Shipments into AGHCF 1993-1995	N/A	N/A	07/08/1997
U024	Irradiated Eng. Bldg. 212	N/A	N/A	N/A

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
U025	In "IFR Charact 031" Folder	N/A	N/A	N/A
U026	Analytical Results for EFL Castings: In "IFR Charact 036" Folder	N/A	N/A	N/A
U027	Report of Analytical Results	N/A	CMT-84 (10-84)	08/01/1990
U028	Elements Sectioned in Area 1 Between Nov. 1971 and 24 October 1975	Includes W. D. Jackson, AGHCF, Facility Supervisor	N/A	04/17/1975
U029	Fax to L. A. Neimark: Different Pu Feedstock Batches	D. L. Porter	N/A	09/06/1990
U030	Liquid Waste Disposal Requisition	L. A. Neimark, MSD	N/A	12/01/1976
U031	Carbide Fuel in AGHCF	N/A	N/A	01/28/1985
U032	AGHCF -Waste Unirradiated Inventory	N/A	N/A	11/16/1988
U034	Shipping Order	N/A	Nos. 19959, 16762, 10394	11/02/1990
U035	Hot Cell Examination Work Sheet	N/A	421A-E; 403A,B; 427F-H,J,K; 40	02/18/1991
U036	Acceptable Knowledge for ANL RH-TRU Waste	R. T. Klann, K. N. Grimm, & B. A. Brush	N/A	N/A
U037	Shipping Papers: DOT Certification Statement, Transuranic Waste Package Data for Shipments TRU9001-9007 and TRU9009-9011	Various Authors	N/A	Various Dates
U038	Components of Radioactive Source Terms for Support Facilities (Normal Operations)	N/A	N/A	08/02/1976
U039	Report Selection Criteria	N/A	N/A	N/A
U040	Spreadsheet Correlating Number Quota with Quota Title and Number Project	N/A	N/A	07/31/2001
U041	Videotape Logs	Cheryl L. Schulz	N/A	Various Dates
U042	RH-TRU 1976 to 1982, Book 1	Various Authors	N/A	Various Dates
U043	RH-TRU 1982 to 1985, Book 2	Various Authors	N/A	Various Dates
U044	General Data and Sectioning Information from AG Book for AG# 403 A,B	N/A	N/A	11/20/1990

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
U045	Material Receipt and SPM Data for AG# 285	W. P. Kenney, D. Garcia	N/A	01/04/1985
U046	Material Receipt and SPM Data for AG# 377	W. Keeney and B. Brush	E 883	01/23/1989
U047	Material Receipt and SPM Data for AG# 394	D. R. Stallions and R. Underwood	N/A	02/01/1989
U048	Material Receipt and SPM Data for AG# 378	W. Keeney and B. Brush	N/A	01/23/1989
U049	Material Receipt and SPM Data for AG# 403 A,B	W. P. Keeney	N/A	02/19/1990
U050	Material Receipt and SPM Data for AG# 421A, B, C, D, E	W. P. Keeney	N/A	11/05/1990
U051	General Data and Sectioning Information from AG Book for AG# 409 A, B	Hanchung Tsai	IPS-21-00-00	05/11/1990
U052	General Data and Sectioning Information from AG Book for AG# 421 A, B, C, D, E	N/A	N/A	N/A
U053	Material Receipt and SPM Data for AG# 425	L. A. Neimark	N/A	01/14/1991
U054	Material Receipt and SPM Data for AG# 426	Dennis Donahue	N/A	02/04/1991
U055	Metallographic and SEM Examinations of Nozzle Segments	L. A. Neimark and A. G. Hins	TMIV/(91)AL04	09/23/1991
U056	Material Receipt and SPM Data for AG# 427	W. P. Keeney	E-907	03/04/1991
U057	General Data and Sectioning Information from AG Book for AG# 427B, F, G, H, J, K	Yung Y. Liu	N/A	N/A
U058	Material Receipt and SPM Data for AG# 428	H. W. Helenberg	N/A	05/29/1991
U059	Material Receipt and SPM Data for AG# 429	N/A	N/A	06/26/1991
U060	General Data and Sectioning Information from AG Book for AG# 429A, B, C, D	N/A	N/A	N/A
U061	Material Receipt and SPM Data for AG# 430	N/A	N/A	06/26/1991
U062	General Data and Sectioning Information from AG Book for AG# 430A	Hanchung Tsai	IPS-54-00-00	07/23/1991
U063	Argonne National Laboratory ANL Waste Certification Training	IT Corporation	N/A	12/12/1991
U064	Conversion Factors	N/A	N/A	10/08/1980

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
U065	Hand written Notes: One titled "Decon & Repair Procedures for Cleaning and Repairing a Manipulator"	N/A	N/A	03/24/1987
U066	Addendum Criticality Safety Training Quiz 7/17 or 7/21/75	N/A	N/A	07/21/1975
U067	Information on Fuel Elements T678 and T680	N/A	IPS-26-00-00, et al.	05/24/2001
U068	Information on Fuel Elements DP-15, DP-17, DP-27, DP-32, DP-21, DP-24, DP-29, DP-45, and DP-61	N/A	N/A	N/A
U069	Information on Fuel Elements UBA-15, UBB-23, UCA-37, UCD-45, UCE-47	N/A	N/A	N/A
U070	Information on Fuel Element WT-185	N/A	N/A	N/A
U071	Argonne Highlights (website)--important historical dates	N/A	http://www.anl.gov/OPA/history	09/10/2001
U072	Material Safety Data Sheets (MSDS)--various metal and chemical compounds	N/A	N/A	N/A
U073	Combustible Waste Contents (52 cans)	N/A	N/A	N/A
U074	Information on Fuel Element T61 of Subassembly X425	N/A	N/A	03/11/2002
U075	LANMAS database	N/A	N/A	05/31/2001
U076	AGHCF Fissile Inventory Management System Database	N/A	N/A	Various Dates
U077	S/A Listing for Various Pins	N/A	N/A	N/A
U078	Forms: Subassembly Transfer from Reactor Plant	P. Kent, B. Brush	N/A	06/29/1990
U079	Work Station No. 3 Grinding Loss Record	N/A	N/A	01/11/1992
U080	RWMIS Summary for RH-TRU (miniminal information regarding nuclides and gross weights)	N/A	N/A	N/A
U081	Remote Handled Waste Stored at the RWMC	N/A	N/A	N/A
U082	RWMIS Summary for RH-TRU (detailed information on weights, curies, and disposal location)	N/A	N/A	08/24/1987
U083	HEPA Filters	Adam Cohen	N/A	03/07/1996
U084	Report of Analytical Results	D. Bowers	MT-84 (4-94)	11/03/1995
U085	Procedure for Determining Fuel Pellet Density Using a Mercury Prinometer (handwritten)	N/A	N/A	N/A

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
U1001	Building 200 Special Survey Reports	N/A	N/A	11/27/1978-03/20/1981
U1002	RH TRU RTR Prescreen For Repackaging/AK Worksheets and Videos	Various Authors	N/A	Various Dates
U1003	Argonne Special Material Reciept and Transfer Documentation by A/G Number	ANLE	N/A	1953-2003
U1005	Health Physics Monthly Reports for Activities in Building 200	Various Authors	N/A	1975-1981
U1006	SPM 24 Logbood for the 200 Area 9/23/74 through 3/1/96	ANLE	N/A	09/23/1974 - 03/01/1996
U1007	Material Control Ledger	ANLE	N/A	N/A
U1008	Argonne National Laboratory Core Competency Areas	ANL	N/A	N/A
U1009	Calculation Review Checklist: Cs-137 DTC Correlation for 55-Gal Drum with Liners	Jene Vance	INL-RH-20	Rev. 0, 01/12/2009
U1010	Calculation Review Checklist: DTC Spreadsheet for 55-Gal Drum with Liners, INL-RH-21	Jene Vance	INL-RH-21	Rev. 0, 01/12/2009
U1011	CCP Calc Package: CCP Calculation Cover Sheet - INL Cs-137 Dose-to-Curie Correlation for 55-Gallon Drums	J. Vance	INL-RH-19	Rev. 0, 11/09/2009
U1013	CCP Calc Package for: Radiological Characterization - Drum 953	James Holderness	ANLE-RH-35	Rev. 0 & 1, 07/22/2010 - 10/06/2010
U1014	CCP Calc Package for: Radiological Characterization - Drum 954	James Holderness	ANLE-RH-36	Rev. 0 & 1, 07/22/2010 - 01/18/2011
U1015	CCP Calc Package for: Radiological Characterization - Drum 955	James Holderness	ANLE-RH-37	Rev. 0 & 1, 07/22/2010 - 01/18/2011
U1016	CCP Calc Package for: Radiological Characterization - Drum 956	James Holderness	ANLE-RH-38	Rev. 0 & 1, 07/22/2010 - 01/18/2011
U1017	Analysis of Fuel Weight Confirmation Test Results for ANL-E K-Wing Debris RH TRU Waste Stream	Jene Vance	N/A	07/09/2010
U168	Calculation Review Checklist: DTC Factor for Nine Drums w/ Lead Shielding, INL-RH-89	Jene Vance	INL-RH-89	Rev. 0, 08/07/2009
U169	CCP INL RH TRU Radiological Characterization: DTC and Related Calcs for 55-Gal Drum with Lead	J. Vance	INL-RH-90	Rev. 0, 08/28/2009

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
U2000	K-Wing Inventory Reference	Laura E. Maggos	N/A	07/22/2009
U2001	Chemical Technology Building K-Wing Hot Cell Pictures	Laura E. Maggos	N/A	07/21/2009
U2002	CMT Nuclear Materials Inventory Database - detail report with ratios and FGEs	N/A	N/A	07/21/2009
U2003	Argonne National Laboratory A SQS Presentation	Devin S. Hodge	N/A	06/09/2009
U2004	Material in K-Wing Spreadsheet	Laura E. Maggos	N/A	03/18/2011
U2006	Alpha Gamma Hot Cell Facility (AGHCF) Hot Cell Pictures	Daniel C. Pancake, Jr.	N/A	07/22/2009
U2007	RW85461 WMO-195 Radioactive and Mixed Waste Disposal Requisition	Devin S. Hodge	RW85461	08/20/2003
U2008	RW85462 WMO-195 Radioactive and Mixed Waste Disposal Requisition	Devin S. Hodge	RW85462	08/20/2003
U2009	RW85463 WMO-195 Radioactive and Mixed Waste Disposal Requisition	Devin S. Hodge	RW85463	08/20/2003
U2010	Contactor Cleaning Procedure	Scott Aase and Ralph Leonard	N/A	08/19/2003
U2011	Gated Drum Shield Operations and Movements in 205 K-wing	N/A	NOD-205K-OPS-302	Rev. 0, Draft C, 08/14/2009
U2012	Preparation of Container/Shielding Configurations for Material Transfers from C-cell	N/A	NOD-OPS-301	Rev. 0, Draft A, 06/26/2009
U2013	30 Gallon Drum (Spec 7A) RH-TRU Debris + FEW Configuration	N/A	N/A	N/A
U2014	Building 212 Alpha Gamma Hot Cell Facility Deactivation Project Plan	D. Pancake, M. Sodaro	NOD-190-00-00	Rev. 0, 08/26/2009
U2015	Next Phase TRU Waste Campaign Baseline	D. Hodge	NOD-191-00-00	Rev. 0, 08/14/2009
U2016	Alpha-Gamma Hot Cell Facility Excess Materials and Waste Disposition Campaign Baseline	M. Sodaro	NOD-192-00-00	Rev. 0, 08/14/2009
U2017	Alpha-Gamma Hot Cell Facility Decontamination Project Planning Level Baseline	M. Sodaro	NOD-194-00-00	Rev. 0, 08/14/2009
U2018	Revised Estimate of the Radioactive Inventory in the AGHCF	R. J. Page	NOD-155-00-00	Rev. 0, 01/07/2009
U2019	30 Gallon Drum (Spec 7A) RH-TRU Debris + FEW Configuration	N/A	N/A	N/A
U2020	FEW Sheilded Pot and Capsule Photographs and Drawings	ANL	N/A	N/A
U2021	K-Wing RH-TRU Liquids Crosswalk	Laura Maggos	N/A	11/30/2010

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
U2022	Carboy BC-004 Liquids Bulking Summary Spreadsheets	N/A	N/A	N/A
U301	Batch data for AGSC Can 608	N/A	N/A	N/A
U302	Fissile Inventory Management System User Manual (Excerpt)	N/A	N/A	N/A
U303	Notes for Correction of Fissile Ledger Database Regarding H. B. Robinson Fuel Shipment	T. Bray	N/A	04/17/2004
U304	Robinson Report	N/A	N/A	N/A
U305	Isotopic Data from H. B. Robinson Report	N/A	N/A	N/A
U306	Methodology for Estimating the Radiological Inventory in the Alpha-Gamma Hot Cell	N/A	N/A	N/A
U307	Report 105 - Custodian Batch Balance (Pure)	N/A	Report 105	12/01/2004
U308	Batch Number List	N/A	N/A	N/A
U309	Limerick Power - Fuel Rods Retrieved from Assembly YJ1433	N/A	N/A	N/A
U310	Building Isotopic Inventory and Hazard Category Fractions (Building Radioactive Materials Inventories)	N/A	N/A	N/A
U311	Hazardous Chemicals Inventory by Building AND Comparison to CFR Threshold Quantities	N/A	N/A	N/A
U312	Unirradiated Materials in AGHCF (List)	N/A	N/A	05/17/1993
U313	Unirradiated Material in AGHCF (Log Book Page)	Various Authors	N/A	01/17/1991
U314	Excerpt from Special Materials Handling Manual	N/A	N/A	05/1990
U315	Reportable Mass Information	N/A	N/A	05/12/1989
U316	Materials List	N/A	N/A	N/A
U317	Material Control Ledger	Various Authors	N/A	N/A
U319	Grinding Loss Records for Work Station No. 3	Various Authors	N/A	1972 - 1994
U320	Various Site and Facility Maps, demographic data	N/A	N/A	Various Dates
U321	Area 1 Hydrogenous Liquid Inventory (Limit 3L plus fluids sealed in equipment)	N/A	N/A	1988 - 2004
U322	Hydrogenous Liquid in Cell Area I	N/A	N/A	1988 - 2001

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
U323	Draft - AGHCF-DSA-Chapter 2 Facility Description	ANL	DSA Chpt 2	Rev. 2, 02/18/2004
U324	Destroyed Seals	T. Bray	N/A	07/08/2005
U325	AGHCF Seal Logbook	Various Authors	N/A	1992 - 2001
U326	Report of Analytical Results (AGHCF Smear Data)	Terri Bray	N/A	12/07/2005
U327	Preliminary Report of Analysis of Smear Data from Alpha Gamma Hot Cell Facility	Vivian Sullivan	06-0053	12/08/2005
U328	Lot 17 Activity Inventory by Fuel Element	N/A	N/A	N/A
U329	Sectioning Diagram for Savannah River Fuel - A/G No. 425	D. Donahue	A/G 425	11/24/1992
U330	West Valley Demonstration Project Transuranic Waste Defense Waste Determination	K. J. Peters	N/A	09/20/2004
U332	Waste Requisitions - WMO-195, Radioactive and Mixed Waste Disposal Requisitions	ANL	Various	Various Dates
U333	DVDs of Packaging for Cans in RH-TRU Drums in the AGHCF	N/A	Various	1993 - 2002
U334	Handwritten Drum List of Drums with top and bottom can numbers	Terri Bray	N/A	1976 - 2002
U335	Various Excel Spreadsheets Regarding Fissile Material and Waste Management Tracking	Various Authors	N/A	Various Dates
U336	Various Inventory Spreadsheets from AGHCF	Various Authors	N/A	Various Dates
U337	Informal process: Generic Steps Necessary to Document RH-TRU Waste	N/A	N/A	N/A
U338	Appendix "B", Statement of Work, Characterization of ANL RH-TRU Waste	N/A	6F-00069	02/17/2006
U339	General Description of Building 200 Provided by Al Young	N/A	CH Ref. AE-U-5	08/14/2000
U340	Draft of an Environmental Assessment for Increased Post Irradiation Examination Capabilites at ANL-E	N/A	N/A	Draft, 1974
U341	Material Flow Diagram for ANL-E Examinations of Materials Received From ANL-West	N/A	N/A	N/A
U342	SAREF Safety Program Environmental Impact Assessment	N/A	N/A	1975
U343	RTR Quick Scan Data for 6 K-Cell Drums	N/A	N/A	Various Dates
U344	AGHCF Fuel Pins - Second Batch	N/A	N/A	N/A
U5001	CP-5 Converter Tube Addition to ANL RH TRU FEW Waste Stream	Dan Pancake	N/A	N/A

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
U5002	Determination of Flammable Volatile Organic Compounds Concentration for the RH-TRU Debris Waste from ANL-E (Waste Stream AERHDM)	J. Biedscheid	N/A	03/11/2013
U5003	2nd Batch of AGHCF Fuel Pins	Dan Pancake	N/A	N/A
U801	SPM Logbook information for A/G 505; ANL ID 46488	N/A	ANL ID 46488	Various Dates
U802	SPM Logbook information for A/G 249; ANL ID 46232	N/A	ANL ID 46232	Various Dates
U803	RERTR Miniplate Data Sheets; ANL ID 328	R. F. Domagala	ANL ID 328	03/1998
U804	Report 105 dated 5/31/2001; ANL ID 422	N/A	ANL ID 422	05/31/2001
U805	SPM Logbook data for A/G 356; ANL ID 46339	N/A	ANL ID 46339	Various Dates
U806	Documentation Providing Status of ANL Compatibility Plates; ANL ID 327	N/A	ANL ID 327	Various Dates
U807	Document providing links between AGSC can numbers, A/G numbers, and element numbers; ANL ID 37788	N/A	ANL ID 37788	11/18/1994
U808	Special Materials Information System Principal User Batch Balance Sheet (Report 105); ANL ID 27344	N/A	ANL ID 45659	09/05/1990
U809	Memo from L. A. Neimark to Walter Gray re: Fissile Contents of RERTR and SRL Specimens for Leaching Studies; IPS-247-00-01, Work Plan for the Preparation of Al-clad Fuel Specimens for Pacific Northwest National Laboratory (PNNL); ANL ID 27344	N/A	IPS-247-00-01	05/1997; 04/1997
U810	Memo and Draft Report from R. V. Strain to M. M. Goldberg: Draft Report: Initial Results of Electron Microprobe Examination of a Section from Mixed-oxide Fuel Pin UW02010; ANL ID 3987	R. V. Strain	ANL ID 3987	05/20/1999
U811	Special Materials (SPM) Logbook Data for A/G 558; ANL ID 46539	N/A	ANL ID 46539	N/A
U812	Tables and Core Date for the ORR; ANL ID 41197	N/A	ANL ID 41197	N/A
U813	Appendix A, Core Configuration, Fuel Element Locations, and BOC 235U Fuel Element Masses Appendix F, Evaluation of Fuel Element Powers, U235 Masses, and Burnups of the Gamma-Scanning of Full-Sized Fuel Elements ANL ID 41198	N/A	ANL ID 41198	N/A
U814	Lists of RERTR Samples Currently in AGHCF ANL ID 43971	N/A	ANL ID 43971	06/11/1992

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
U815	Documentation from AGHCF SPM Logbook for A/G 497 ANL ID 41183	N/A	ANL ID 41183	Various Dates
U816	Proceedings of the Technical Review Meeting of DOE/PNC Operational Reliability Testing (ORT) program in EBR-II ANL ID 2076	John Lambert	ANL ID 2076	N/A
U817	Special Materials Logbook information for A/G 497 ANL ID 46480	N/A	ANL ID 46480	Various Dates
U818	Record of Meeting: Final Technical Review of PNC/DOE Operational Reliability Testing Program in EBR-II ANL ID 39017	N/A	ANL ID 39017	03/1996
U819	Paper: Characterization of Mixed-Oxide Fuel Pins UW02010 and UW08036, DOE Spent Nuclear Fuels Program ANL ID 8745	N/A	ANL ID 8745	N/A
U820	Miscellaneous Gamma Scans and Work Plan: IPS-172-00-00, Work Plan for the Examination of Actinide-Burning Pin G562 (A/G 505) at the Alpha Gamma Hot Cell Facility ANL ID 39380	N/A	IPS-172-00-00 ANL ID 39380	Various Dates
U821	Miscellaneous Data from the Irradiation Performance Databook #10-F122-4-4-B23987 IPS-283-00-00, Work Plan for the Preparation of Leaching Samples from and the Characterization of YMP ATM-109 (A/G 539) ANL ID 22635	N/A	ANL ID U821	Various Dates
U822	Final Report: Procurement and Characterization of Fuel Rod Segments from Quad Cities-2 Fuel Rods VW00101, ZB00113, AND ZS00102 ANL ID 7748	N/A	ANL ID 7748	N/A
U823	YMP Draft Annual Report, FY 1998 ANL ID 42099	N/A	ANL ID 42099	11/19/1998
U824	As-Built Data Package, RERTR Microplate Irradiation in the Advanced Test Reactor (RERTR-1 and RERTR-2)	S. L. Hayes, C. L. Trybus, and M. K. Meyer	ANL ID 1212	08/04/1997
U825	Special Materials Logbook information for A/G 460 ANL ID 46443	N/A	ANL ID 46443	Various Dates
U826	AGHCF Sectioning Slips Nos. 223 - 354 dating from 1/25/1999 through 3/5/2001 ANL ID 5249	Various Authors	ANL ID 5249	01/25/1999 thru 03/05/2001
U827	http://www.pnl.gov/main/welcome/history.html	PNNL	N/A	08/2005

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
U828	2 Attachments entitled: Commercial LWR Fuel Rod Segments at ANL; and Parameters for Irradiated Cladding Test Specimens ANL ID 29320	N/A	ANL ID 29320	N/A
U829	Presentation: Characteristics of high-Burnup Rods to be Supplied for the LOCA Testing Program	R. L. Yang	ANL-LOCA 5/99	05/11/1999
U830	RERTR-3 Postirradiation Examination Plan at the Alpha-Gamma Hot Cell Facility; transmitted by memo from S. L. Hayes to R. V. Strain ANL ID 6808	S. L. Hayes and M. K. Meyer	ANL ID 6808	01/13/2000
U831	AGHCF Transfer Slips No. 161 through 216. Dates range from 02/09/1999 to 07/15/2000 ANL ID 1355	Various Authors	ANL ID 1355	02/09/1999 thru 07/15/2000
U832	Miscellaneous AGHCF Supplemental Instructions	Various Authors	Various Doc. Numbers	Various Dates
U833	Excerpted pages from Report: Design, Operation, and Performance Data for High Burnup PWR Fuel from the H. B. robinson Plant for Use in the NRC Experimental Program at Argonne National Laboratory ANL DOC ID 8824	E. J. Ruzauskas; K. N. Fardell	1001558; ANL ID 8824	05/2001
U834	Special Materials (SPM) Logbook informtion for A/G 607 ANL DOC ID 46587	N/A	ANL ID 46587	N/A
U835	Special Materials (SPM) Logbook Information for A/G 608 ANL DOC ID 46588	N/A	ANL ID 46588	N/A
U836	Special Materials (SPM) Logbook Information for A/G 612 ANL DOC ID 46592	N/A	ANL ID 46592	N/A
U837	AGHCF Transfer Slips No. 366 through 467. Date spans from 12/5/2001 through 10/12/2004 ANL ID 1361	N/A	ANL ID 1361	12/05/2001 thru 10/12/2004
U838	AGHCF Transfer Slips No. 254 for A/G 573 A-3. Included are Loss or Gain Reports ANL DOC ID 46554	N/A	ANL ID 46554	Various Dates
U839	Excerpted Pages from Various Documents Collected From the ANL-E Scanner Database Pertaining to Fuel Pin Information.	Various Authors	Various Doc. Numbers	Various Dates
U840	AGHCF Sectioning Slips 2-1125 ANL DOC ID'S 1350; 1353; 5252; 5249; 1351	N/A	1350; 1353; 5252; 5249; 1351	04/1994 thru 07/2005
U841	Original Pin List from George Fenske re: Burnup Data for Pins Contributing to Waste Remaining at ANL-E	George Fenske	N/A	04/06/2006
U842	Fuel Pin Composition Calc.	Jene Vance	INL-RH-01	Rev. 0, 05/08/2006

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
U843	Scaling Factor Development	Jim Holderness	INL-RH-02	Rev. 0, 06/05/2006
U844	INL Cs-137 Dose-to-Curie Correlation	Jim Holderness	INL-RH-03	Rev. 0, 05/08/2006
U845	MCNP Sensitivity Studies	Jim Holderness	INL-RH-04	Rev. 0, 05/08/2006
U846	INL Cs-137 Dose-to-Curie Correlation Uncertainty	Jim Holderness	INL-RH-05	Rev. 0, 05/08/2006
U848	Uncertainty Analysis for Drums	Jim Holderness	INL-RH-07	Rev. 0, 06/05/2006
U849	Determination of Isotopes to be Reported Per WIPP WAC	Jene Vance	INL-RH-08	Rev. 0, 06/05/2006
U850	INL Shielded and Unshielded Dose-to-Curie Correlations	Jim Holderness	INL-RH-09	Rev. 0, 05/08/2006
U851	Fuel Information Input Check	J. Vance	INL-RH-10	Rev. 0, 06/05/2006
U852	RERTR Adjustment Factor Development	J. Vance	INL-RH-11	Rev. 0, 05/08/2006
U853	Disposition of Identified Items	Jene Vance	INL-RH-12	Rev. 0, 06/05/2006
U854	Modification of ORIGEN Input Files for Specific Pins	Jim Holderness	INL-RH-13	Rev. 0, 05/08/2006
U855	CCP Calc Package: Co-60 Dose Rate Contribution	Jim Holderness	INL-RH-14	Rev. 0, 05/08/2006
U856	Derivation of Burnup and Composition for Thorium Pins	J. Vance	INL-RH-15	Rev. 0, 05/08/2006
U857	Scaling Factor Sensitivity Analysis	Jim Holderness	INL-RH-16	Rev. 0, 06/05/2006
U858	Demonstration of Commonality of INL and LANL Experimenters	Jene Vance	INL-RH-17	Rev. 0, 07/11/2006
U859	Pu and U Isotope Relationships in Fuel	Jene Vance	LANL-RH-03	Rev. 0, 02/22/2006
U860	Mass Spectroscopy Results Input Check	Jene Vance	LANL-RH-05	Rev. 0, 02/22/2006
U861	ORIGEN2.2 Code Verification Check	Jene Vance	LANL-RH-09	Rev. 0, 02/22/2006
U862	Fission Product Contribution to Total Dose Rate	Jene Vance	LANL-RH-10	Rev. 0, 02/22/2006
U863	Evaluation of Cs-137 Migration in Fuel Pin	J. Vance	LANL-RH-12	Rev. 0, 02/22/2006
U864	ORIGEN2.2 One Step Burnup Evaluation	J. Vance	LANL-RH-13	Rev. 0, 02/22/2006
U865	ORIGEN 2.2 Input Generation	Jene Vance	LANL-RH-14	Draft, N/A

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
U866	ORIGEN 2.2 Data Extraction	Jim Holderness	LANL-RH-15	Rev. 0, 02/22/2006
U867	Mass Spectroscopy Comparison to ORIGEN	Jene Vance	LANL-RH-16	Rev. 0, 02/22/2006
U869	Fast Reactor Cross Section Library Sensitivity Study	Jim Holderness	LANL-RH-29	Rev. 0, 05/08/2006
U870	Evaluation of the Effects of Reactor Operating History	Jim Holderness	LANL-RH-30	Rev. 0, 05/08/2006
U872	Experimental Fuel Pins Irradiated in EBR-II Through December 8, 1980 ANL ID 35616	F. R. Shober, W. A. Briggs, H. M. Armstrong, J. N. Casale	TC-1117-3	09/1981
U873	Argonne National Laboratory EBR-II Project, Run 89, Report of EBR-II Operations, June 15, 1977 through August 8, 1977 ANL ID 3137	D. J. Fluke	ANL ID 3137	08/1977
U874	Performance of Commercially-Produced Mixed-Oxide Fuels in EBR-II (P-15 Test) ANL ID 33414	J. W. Hales, C. W. Hoth	HEDL TME 80-41; UC-79b	08/1980
U875	Engineering and Safety Analysis for AIR1 (R1) Fuel Rods	Atomics International	DP071270-001	Rev. 8, 04/05/1976
U876	Performance Evaluation of the WBA-20 Radial Blanket Irradiation Test ANL ID 2006	Umesh P. Nayak, Timothy S. Roth, Carl E. Schenone	WARD-RB-94000-4	02/1981
U877	Proposal to Irradiate Unencapsulated Fuel Pins in the EBR-88: Subassemblies PNL-6, PNL-7, and PNL-8	E. O Ballard and L. A. Pember	BNWL-1103	Rev. 1, 06/06/1969
U878	EBR-II Quality Assurance Requirements; As-Built Description, Certification, and Data Transmittal Checklist for EBR-II Experiments	J. Barner	463-PP-E-44	Rev. 2, 12/01/1975
U879	Advanced Carbide/Nitride Fuels Program Irradiation Experiments ANL ID 39535	N/A	ANL-AFP-25	08/1976
U880	Irradiation Behavior of the WBA-21 Oxide Blanket Test ANL ID 8482	Umesh P. Nayak, Thomas P. Soffa	WARD-RB-94000-5	11/1982
U881	The K6 Test: Helium-Bonded Uranium-Plutonium Carbide Fuel Pins Irradiated to 12-at.% Burnup in EBR-II ANL ID 9605	Trent W. Latimer, Roy L. Petty	LA-8688	06/1981
U882	Fuel Information Input Check	Jene Vance	ANLE-RH-01	Rev. 1, 09/13/2006

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
U883	Fuel Pin Composition Calculation	J. Vance	ANLE-RH-02	Rev. 0, Change 1, 09/13/2006
U884	Modification of ORIGEN Input Files for Specific Pins	Jim Holderness	ANLE-RH-03	Rev. 0, 06/22/2006
U885	Scaling Factor Development	Jim Holderness	ANLE-RH-04	Rev. 0, 06/22/2006
U886	DTC and Related Calcs for Drum Characterization	Jim Holderness	ANLE-RH-05	Draft, N/A
U887	Uncertainty Analysis for Drums	Jim Holderness	ANLE-RH-06	Rev. 0, 06/22/2006
U888	Determination of Isotopes to be Reported per WIPP WAC	Jene Vance	ANLE-RH-07	Rev. 1, 09/13/2006 & 10/16/2006
U889	CCP Calc Package; ANLE K-Wing RH TRU Radiological Charaterization	Jene Vance	ANLE-RH-08	Rev. 0, 04/15/2010
U890	K-Wing Debris Determination of Reportable Radionuclides	Jene Vance	ANLE-RH-09	04/14/2010
U891	CCP Calc Package: ANLE K-Wing Debris Cs-137 DTC Correlation	J. Vance	ANLE-RH-10	Rev. 0, 05/04/2010
U892	Analysis of Cladding Co-60 Activity Level	Jim Holderness	LANL-RH-19	Rev. 0, 02/22/2006
U893	Activation Product Contribution to Total Dose Rate	Jene Vance	LANL-RH-27	Rev. 0, 05/08/2006
U894	CCP Calc Package: Uncertainty Analysis for K-Wing Debris for Project ANL K-Wing RH TRU Radiological Characterization	J. Vance	ANLE-RH-11	Rev. 0, 05/04/2010
U895	CCP Calc Package; DTC Spreadsheet K-Wing Debris	Jene Vance	ANLE-RH-12	Rev. 0, 05/04/2010
U896	CCP Calc Package: Development of U-234 Scaling Factor for ANL-E K-Wing Debris RH TRU Radiological Characterization	J. Vance	ANLE-RH-13	Rev. 0, 05/04/2010
U897	CCP Calc Package for: ORIGEN2.2 Analysis of K-Wing FEW	J. Vance	ANLE-RH-14	Rev. 0, 06/06/2011
U898A	CCP Calc Package for: Radiological Characterization of Drum 18876	Jene Vance	ANLE-RH-15-1	Rev. 0, 06/01/2011
U898B	CCP Calc Package for: Radiological Characterization of Drum 18875	J. Holderness	ANLE-RH-15-2	Rev. 0, 06/06/2011
U898C	CCP Calc Package for: Radiological Characterization of Drum 18877	J. Holderness	ANLE-RH-15-3	Rev. 0, 06/06/2011
U898D	CCP Calc Package: Radiological Characterization of Drum 18878	J. Holderness	ANLE-RH-15-4	Rev. 0, 06/06/2011
U898E	CCP Calc Package for: Radiological Characterization of Drum 18879	Jim Holderness	ANLE-RH-15-5	Rev. 0, 06/06/2011
U898F	CCP Calc Package for: Radiological Characterization of Drum 18880	J. Holderness	ANLE-RH-15-6	Rev. 0, 06/06/2011

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
U898G	CCP Calc Package for: Radiological Characterization of Drum 18881	J. Holderness	ANLE-RH-15-7	Rev. 0, 06/06/2011
U898H	CCP Calc Package for: Radiological Characterization of Drum 18904	J. Holderness	ANLE-RH-15-8	Rev. 0, 06/06/2011
U900	CCP Calc Package for: Determination of Reportable Radionuclides - K-Wing FEW	Jene Vance	ANLE-RH-17	Rev. 0, 06/06/2011
U902	CCP Calc Package for: Fuel Rod Loading Calculation	Jene Vance	ANLE-RH-19	Rev. 0, 06/06/2011
U903	CCP Calc Package for: AGHCF Fuel Information Input Check	Jene Vance	ANLE-RH-20	Rev. 0, 07/08/2010
U904	CCP Calc Package for: ORIGEN 2.2 Data Extraction	James Holderness	ANLE-RH-21	Rev. 0, 07/08/2010
U905	CCP Calc Package for: ORIGEN2.2 Analysis of AGHCF FEW	James Holderness	ANLE-RH-22	Rev. 0, 07/08/2010
U906	CCP Calc Package for: ORIGEN 2.2 Analysis of HBR High Burnup Fuel	James Holderness	ANLE-RH-23	Rev. 0, 07/08/2010
U907	CCP Calc Package for: ORIGEN 2.2 Analysis of Thorium Fuel	James Holderness	ANLE-RH-24	Rev. 0, 07/08/2010
U908	CCP Calc Package for: Determination of Reportable Radionuclides	James Holderness	ANLE-RH-25	Rev. 0, 07/08/2010
U909	CCP Calc Package for: Fuel Rod Loading Calculation	Jene Vance	ANLE-RH-26	Rev. 0, 07/08/2010
U910	CCP Calc Package for: Radiological Characterization - Drum 952	James Holderness	ANLE-RH-27	Rev. 0 & 1, 07/08/2010 - 10/06/2010
U911	CCP-AK-ANLE-500, Central Characterization Project Acceptable Knowledge Summary Report For ARGONNE REMOTE-HANDLED DEBRIS WASTE, WASTE STREAM: AERHDM, Revision 6, Markup	N/A	CCP-AK-ANLE-500	Rev. 6, Markup, 2010
U924	CCP Calculation Package: ANLE-RH-28 - DTC and Related Calcs for Drum Characterization	J. Vance	ANLE-RH-28	Rev. 0, 08/10/2010
U925	CCP Calculation Package: ANLE-RH-29 - Fuel Pin Weight Ratio	J. Vance	ANLE-RH-29	Rev. 0, Draft, N/A
U926	CCP Calculation Package: ANLE-RH-30 - AGHCF Shielded Debris DTC Values	J. Vance	ANLE-RH-30	Rev. 0, Draft, N/A
U927	CCP Calculation Package: ANLE-RH-31 - AGHCF FEW CTD Value for Surface Dose Rate Multiplier	J. Vance	ANLE-RH-31	Rev. 0, Draft, N/A
U933	CCP Calculation Package: ANLE-RH-40, Cs-137 Scaling Factor Development for Liquids	J. Vance	ANLE-RH-40	Rev. 0,1, & 2, 01/24/2011; 07/01/2011, 04/20/2012

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
U944	CCP Calculation Package: ANLE-RH-41, Uncertainty Analysis for K-Wing Liquids	J. Vance	ANLE-RH-41	Rev. 0, 1, & 2, 01/24/2011; 07/01/2011, 04/20/2012
U945	CCP Calculation Package: ANLE-RH-42 - Determination of Reportable Radionuclides for Solidified Liquids	J. Vance	ANLE-RH-42	Rev. 0, Draft, N/A
U946	CCP Calculation Package: ANLE-RH-43, DTC Values for Solidified Liquids and Debris	J. Vance	ANLE-RH-43	Rev. 0 & 1, 01/24/2011; 07/01/2011
U947	CCP Calculation Package: ANLE-RH-44, DTC Spreadsheet K-Wing Liquids	J. Vance	ANLE-RH-44	Rev. 0, 1, & 2, 01/20/2011; 06/23/2011, 04/20/2012
U948	CCP Calculation Package: ANLE-RH-45 - Carboy BC-004 Scaling Factors Development	J. Vance	ANLE-RH-45	Rev. 0, Draft, N/A
U949	CCP Calculation Package: ANLE-RH-46 - Carboy BC-007 Comparison Between Sampling and AK Infor Derived SFs	J.Vance	ANLE-RH-46	Rev. 0, Draft, N/A
U950	CCP Calculation Package: ANLE-RH-47 - Carboy BC-004 Uncertainty Analysis	J.Vance	ANLE-RH-47	Rev. 0, Draft, N/A
U951	CCP Calc Package: ANLE-RH-50-1, ANLE AGHCF RH TRU Characterization, Radiological Characterization - Drum 1002.	J. Vance	ANLE-RH-50-1	Rev. 0, 01/14/2011
U952	Potential Overestimate of Activity in Drums 953 and 955	J. Vance	N/A	01/08/2011
U953	CCP Calc Package: ANLE-RH-51, Comparison of SFs from Two Sets of Fuel Pins for ANLE Debris Waste	J. Vance	ANLE-RH-51	Rev. 0, 06/06/2011
U954	CCP Calc Package: ANLE-RH-52, Development of SFs for RERTR FEW Debris	J. Vance	ANLE-RH-52	Rev. 0, 06/06/2011
U955	CCP Calc Package: ANLE-RH-53, AGHCF Uncertainty for Drums with RERTR Plates	J. Vance	ANLE-RH-53	Rev. 0, 06/06/2011
U956	CCP Calc Package: ANLE-RH-54, DTC Values for RERTR in Sheilded Containers	J. Vance	ANLE-RH-54	Rev. 0, 06/06/2011
U957	CCP Calc Package: ANLE-RH-55, DTC and Related Calcs for RERTR Drum Characterization	J. Vance	ANLE-RH-55	Rev. 0, 08/02/2011
U959	CCP Calc Package: ANLE-RH-56, Scaling Factors for Solidified Liquids and Debris	J. Vance	ANLE-RH-56	Rev. 0, 07/11/2011
U960	CCP Calc Package: ANLE-RH-57, Scaling Factor Uncertainty for Solidified Liquids and Debris	J. Vance	ANLE-RH-57	Rev. 0 & 1, 07/01/2011, 04/20/2012

Attachment 4 - Acceptable Knowledge Source Document Information List (continued)

Source Document Tracking Number [a/c]	Title or Description [a]	Author	Document # [b]	Document Revision # and Date
U961	CCP Calc Package: ANLE-RH-48, Comparison of Scaling Factors, Drums 18888 & 18889 RH TRU Characterization	J. Vance	ANLE-RH-48	Rev. 0, 06/06/2011
U963	CCP Calc Package: ANLE-RH-61, AGHCF Fuel Information Input Check - 2nd Batch of Pins	J. Vance	ANLE-RH-61	Rev. 0, 07/27/2011
U964	CCP Calc Package: ANLE-RH-62, ORIGEN2.2 Analysis of 2nd Batch of FEW	J. Vance	ANLE-RH-62	Rev. 0, 07/27/2011
U965	CCP Calc Package: ANLE-RH-63, Scaling Factor Development - 2nd Batch of Pins	J. Vance	ANLE-RH-63	Rev. 0, 07/27/2011
U966	CCP Calc Package: ANLE-RH-64, Uncertainty for Shielded Debris from 2nd Batch of Fuel	J. Vance	ANLE-RH-64	Rev. 0 & 1, 07/27/2011; 08/29/2012
U967	CCP Calc Package: ANLE-RH-65, 2nd Fuel Batch Determination of Reportable Radionuclides	J. Vance	ANLE-RH-65	Rev. 0, 07/27/2011
U968	CCP Calc Package ANLE-RH-66: DTC and Related Calcs for 2nd Batch of Debris	J. Vance	ANLE-RH-66	Rev. 0, 07/27/2011

[a] From Acceptable Knowledge Souce Document Summaries (Attachments 3)

[b] Or publisher's document number if available

[c] In the case where a AK Summary Report has been revised based on information in Attachment 11- Acceptable Knowledge Source Document Discrepancy Resolution form, identify the tracking number.

Acceptable Knowledge Expert: Kevin J. Peters Print/Sign Date: 8/23/2013

Attachment 5 – Hazardous Constituents

Site(s): Argonne National Laboratory-East

Waste Stream Description: RH Debris from AGHCF Hot Cell Operations

Waste Stream Number: AERHDM

Compound	Suspected Present? (Y/N)	Suspected Concen-tration (ppm)	Used as a solvent? [a] (Y/N/NA)	Associated with packaging? (Y/N/NA)	TC constituent concentration less than regulatory level? [a] (Y/N/NA)	TC Hazardous Waste Number [a]	F-Listed Hazardous Waste Number [a]	U- or P-Listed Hazardous Waste Number [a]	EPA Hazardous Waste Number Assigned (N/Specify HWN)	State Hazardous Waste Number [b]
Metal Compounds (CCP-PO-001 Table B3-8 & 40 CFR Part 261)										
Arsenic	Y	Unknown	N/A	N/A	N	D004	N/A	N/A	D004	N/A
Barium	Y	Unknown	N/A	N/A	N	D005	N/A	N/A	D005	N/A
Beryllium	Y	<1 wt%	N/A	N/A	N	N/A	N/A	P015	N	N/A
Cadmium	Y	Unknown	N/A	N/A	N	D006	N/A	N/A	D006	N/A
Chromium	Y	Unknown	N/A	N/A	N	D007	N/A	N/A	D007	N/A
Lead	Y	Unknown	N/A	N/A	N	D008	N/A	N/A	D008	N/A
Mercury	Y	Unknown	N/A	N/A	N	D009	N/A	U151	D009	N/A
Selenium	Y	Unknown	N/A	N/A	N	D010	N/A	N/A	D010	N/A
Silver	Y	Unknown	N/A	N/A	N	D011	N/A	N/A	D011	N/A
Volatile Organic Compounds (CCP-PO-001 Tables B3-2 and B3-4 & 40 CFR Part 261)										
1,1,1-Trichloroethane	Y	Unknown	Y	N	N/A	N/A	F001/F002	U226	F002	N/A
1,1,2,2-Tetrachloroethane	N	N/A	N/A	N/A	N/A	N/A	N/A	U209	N	N/A
1,1,2-Trichloro-1,2,2-trifluoroethane	N	N/A	N/A	N/A	N/A	N/A	F001/F002	N/A	N	N/A
1,1,2-Trichloroethane	N	N/A	N/A	N/A	N/A	N/A	F002	U227 [k]	N	N/A
1,1-Dichloroethane	N	N/A	N/A	N/A	N/A	N/A	N/A	U076 [k]	N	N/A
1,1-Dichloroethylene	Y	Unknown	Unknown	N	N	D029	N/A	U078	D029	N/A
1,2-Dichlorobenzene [d]	N	N/A	N/A	N/A	N/A	N/A	F002	U070	N	N/A
1,2-Dichloroethane	Y	Unknown	Unknown	N	N	D028	N/A	U077 [k]	D028	N/A
1,4-Dichlorobenzene [d]	N	N/A	N/A	N/A	N/A	D027	N/A	U072	N	N/A
2-Ethoxyethanol	N	N/A	N/A	N/A	N/A	N/A	F005	U359 [k]	N	N/A
2-Nitropropane	N	N/A	N/A	N/A	N/A	N/A	F005	U171 [k]	N	N/A
Acetone	Y	Unknown	Y	N	N/A	N/A	F003	U002	N	N/A
Benzene	Y	Unknown	Unknown	N	N/A	D018	F005	U019	F005	N/A

Attachment 5 – Hazardous Constituents (continued)

Waste Stream Number: AERHDM

Compound	Suspected Present? (Y/N)	Suspected Concen-tration (ppm)	Used as a solvent? [a] (Y/N/NA)	Associated with packaging? (Y/N/NA)	TC constituent concentration less than regulatory level? [a] (Y/N/NA)	TC Hazardous Waste Number [a]	F-Listed Hazardous Waste Number [a]	U- or P-Listed Hazardous Waste Number [a]	EPA Hazardous Waste Number Assigned (N/Specify HWN)	State Hazardous Waste Number [b]
Volatile Organic Compounds (continued)										
Bromoform	N	N/A	N/A	N/A	N/A	N/A	N/A	U225 [k]	N	N/A
Butanol (n-Butyl alcohol)	Y	Unknown	Y	N	N/A	N/A	F003	U031 [k]	N	N/A
Carbon disulfide	N	N/A	N/A	N/A	N/A	N/A	F005	P022 [k]	N	N/A
Carbon tetrachloride	Y	Unknown	N (F001)	N	N/A	D019	F001	U211 [k]	D019	N/A
Chlorobenzene	N	N/A	N/A	N/A	N/A	D021	F002	U037	N	N/A
Chloroform	N	N/A	N/A	N/A	N/A	D022	N/A	U044	N	N/A
cis-1,2-Dichloroethylene [c]	N	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Cyclohexanone	N	N/A	N/A	N/A	N/A	N/A	F003	U057 [k]	N	N/A
Ethyl acetate	N	N/A	N/A	N/A	N/A	N/A	F003	U112 [k]	N	N/A
Ethyl benzene	Y	Unknown	N	N	N/A	N/A	F003	N/A	N	N/A
Ethyl ether	Y	Unknown	Y	N	N/A	N/A	F003	U117 [k]	N	N/A
Formaldehyde [g]	N	N/A	N/A	N/A	N/A	N/A	N/A	U122	N	N/A
Hydrazine [h]	N	N/A	N/A	N/A	N/A	N/A	N/A	U133	N	N/A
Isobutanol	Y	Unknown	Unknown	N	N/A	N/A	F005	U140 [k]	F005	N/A
Methanol	Y	Unknown	Y	N	N/A	N/A	F003	U154	N	N/A
Methyl ethyl ketone	N	N/A	N/A	N/A	N/A	D035	F005	U159	N	N/A
Methyl isobutyl ketone	N	N/A	N/A	N/A	N/A	N/A	F003	U161 [k]	N	N/A
Methylene chloride	N	N/A	N/A	N/A	N/A	N/A	F001/F002	U080 [k]	N	N/A
Pyridine [d]	N	N/A	N/A	N/A	N/A	D038	F005	U196	N	N/A
Tetrachloroethylene	Y	Unknown	Y	N	N/A	D039	F001/F002	U210	F002	N/A
Toluene	Y	Unknown	Y	N	N/A	N/A	F005	U220	F005	N/A
trans-1,2-Dichloroethylene	N	N/A	N/A	N/A	N/A	N/A	N/A	U079	N	N/A
Trichloroethylene	N	N/A	N/A	N/A	N/A	D040	F001/F002	U228	N	N/A
Trichlorofluoromethane	N	N/A	N/A	N/A	N/A	N/A	F001/F002	U121 [k]	N	N/A
Vinyl Chloride	N	N/A	N/A	N/A	N/A	D043	N/A	U043	N	N/A
Xylenes	Y	Unknown	Y	N	N/A	N/A	F003	U239	N	N/A

Attachment 5 – Hazardous Constituents (continued)

Waste Stream Number: AERHDM

Compound	Suspected Present? (Y/N)	Suspected Concen-tration (ppm)	Used as a solvent? [a] (Y/N/NA)	Associated with packaging? (Y/N/NA)	TC constituent concentration less than regulatory level? [a] (Y/N/NA)	TC Hazardous Waste Number [a]	F-Listed Hazardous Waste Number [a]	U- or P-Listed Hazardous Waste Number [a]	EPA Hazardous Waste Number Assigned (N/Specify HWN)	State Hazardous Waste Number [b]
Semivolatile Organic Compounds (CCP-PO-001 Table B3-6 & 40 CFR Part 261)										
2,4,5-Trichlorophenol	N	N/A	N/A	N/A	N/A	D041 [k]	F027 [k]	N/A	N	N/A
2,4,6-Trichlorophenol	N	N/A	N/A	N/A	N/A	D042 [k]	F027 [k]	N/A	N	N/A
2,4-Dinitrophenol	N	N/A	N/A	N/A	N/A	N/A	N/A	P048 [k]	N	N/A
2,4-Dinitrotoluene	N	N/A	N/A	N/A	N/A	D030	N/A	U105	N	N/A
Cresols	N	N/A	N/A	N/A	N/A	D026	F004	U052	N	N/A
Cresols (m)	N	N/A	N/A	N/A	N/A	D024 [k]	N/A	N/A	N	N/A
Cresols (o)	N	N/A	N/A	N/A	N/A	D023 [k]	N/A	N/A	N	N/A
Cresols (p)	N	N/A	N/A	N/A	N/A	D025 [k]	N/A	N/A	N	N/A
Hexachlorobenzene	N	N/A	N/A	N/A	N/A	D032	N/A	U127 [k]	N	N/A
Hexachlorobutadiene	N	N/A	N/A	N/A	N/A	D033	N/A	U128 [k]	N	N/A
Hexachloroethane	N	N/A	N/A	N/A	N/A	D034	N/A	U131 [k]	N	N/A
Nitrobenzene	N	N/A	N/A	N/A	N/A	D036	F004	U169 [k]	N	N/A
Pentachlorophenol	N	N/A	N/A	N/A	N/A	D037	F027 [k]	N/A	N	N/A
Pesticides and Herbicides (40 CFR Part 261)										
2,4,5-TP (Silvex)	N	N/A	N/A	N/A	N/A	D017 [k]	F027 [k]	N/A	N	N/A
2,4-D	N	N/A	N/A	N/A	N/A	D016 [k]	N/A	U240 [k]	N	N/A
Chlordane	N	N/A	N/A	N/A	N/A	D020 [k]	N/A	U036 [k]	N	N/A
Endrin	N	N/A	N/A	N/A	N/A	D012 [k]	N/A	P051 [k]	N	N/A
Heptachlor (and its epoxide)	N	N/A	N/A	N/A	N/A	D031 [k]	N/A	P059 [k]	N	N/A
Lindane	N	N/A	N/A	N/A	N/A	D013 [k]	N/A	U129 [k]	N	N/A
Methoxychlor	N	N/A	N/A	N/A	N/A	D014 [k]	N/A	U247 [k]	N	N/A
Toxaphene	N	N/A	N/A	N/A	N/A	D015 [k]	N/A	P123 [k]	N	N/A

Attachment 5 – Hazardous Constituents (continued)

Waste Stream Number: AERHDM

Compound	Suspected Present? (Y/N)	Suspected Concen-tration (ppm)	Used as a solvent? [a] (Y/N/NA)	Associated with packaging? (Y/N/NA)	TC constituent concentration less than regulatory level? [a] (Y/N/NA)	TC Hazardous Waste Number [a]	F-Listed Hazardous Waste Number [a]	U- or P-Listed Hazardous Waste Number [a]	EPA Hazardous Waste Number Assigned (N/Specify HWN)	State Hazardous Waste Number [b]
Other Constituents										
Wastewater treatment sludges from electroplating operations	N	N/A	N/A	N/A	N/A	N/A	F006	N/A	N	N/A
Spent cyanide plating bath solutions from electroplating operations	N	N/A	N/A	N/A	N/A	N/A	F007	N/A	N	N/A
Spent cyanides stripping and cleaning bath solutions from electroplating operations	N	N/A	N/A	N/A	N/A	N/A	F009	N/A	N	N/A
Total PCB Concentration [j]	N	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Additional EPA Hazardous Constituents (List)	N	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Note: If sampling homogeneous waste, identify all chemical constituents listed in tables B3-4, B3-6 and B3-8 of the WAP										
Additional State Hazardous Constituents [b] (List) [e]	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Potentially Flammable VOCs (List) [e,f] Acetone Benzene 1-Butanol 1,2-Dichloroethane 1,1-Dichloroethene Ethyl benzene Ethyl ether Methanol Toluene Xylenes	Y	Unknown	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Attachment 5 – Hazardous Constituents (continued)

Waste Stream Number: AERHDM

Compound	Suspected Present? (Y/N)	Suspected Concentration (ppm)	Used as a solvent? [d] (Y/N/NA)	Associated with packaging? (Y/N/NA)	TC constituent concentration less than regulatory level? [a] (Y/N/NA)	TC Hazardous Waste Number [a]	F-Listed Hazardous Waste Number [a]	U- or P-Listed Hazardous Waste Number [a]	EPA Hazardous Waste Number Assigned (N/Specify HWN)	State Hazardous Waste Number [b]
Other Constituents (cont.)										
Tentatively Identified Compounds (List) [e]	N	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

a Source: Title 40 Code of Federal Regulations Part 261, Identification and Listing of Hazardous Waste
b. Source: Cite applicable state regulation
c. Source: CCP-PO-001 CCP Transuranic Waste Characterization Quality Assurance Project Plan
d. Can also be analyzed as a semivolatile organic compound
e. Add rows or attach additional sheets as necessary
f. Flammable VOCs included in the CH-TRAMPAC
g. Required only for homogeneous solids and soil/gravel from LANL and SRS
h. Required only for homogeneous solids and soil/gravel from ORNL and SRS
i. Antimony, nickel, thallium, vanadium, and zinc are included in Table B3-8 of CCP-PO-001 but are not regulated under 40 CFR Part 261, and therefore, are not subject to AK evaluation per the WIPP-WAP Section B4.
j. Source: Title 40 Code of Federal Regulations Part 761, Polychlorinated Biphenyls (PCBs) Manufacturing, Processing, Distribution in Commerce, and Use Prohibitions.
k. This EPA hazardous waste Number is not permitted for WIPP disposal.

NOTE: If any of the information requested on this form is not available or not applicable, enter N/A in the appropriate box.

Acceptable Knowledge Expert: Kevin J. Peters, [signature] **Date:** 8/6/07
Print Sign

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Central Records / Records Custodian, 4021 National Parks Highway - MS: GSA 203, Carlsbad, New Mexico 88220

Telephone Number: 505-234-7523, 505-234-7233, 505-234-7617

Fax Number: 505-234-7014

[X] Original Record
[ ] Fax Record
[ ] Electronic Record

Attn:	Sheila Pearcy	From:	Lisa Price-Watson
Ship to:	CCP Central Records/CCP Records Custodian	Site:	Argonne Generated RH TRU Waste CCP-AK-ANLE-500
	4021 National Parks Highway – MS GSA 203	Company:	LANL-Carlsbad
	Carlsbad, NM 88220	Telephone Number:	(505) 628-8946
		Date Sent:	08/16/2007
Telephone Number:	505-234-7523		

Document Number	Title / Description	Record Date	Total Pages
NA	Attachment 8 – Acceptable Knowledge Document Waste Containers List (AERHDM)	08/08/2007	2
NA	Attachment 6 – Waste Form, Waste Material Parameters, Prohibited Items, and Packaging (AERHDM)	08/06/2007	3
NA	Attachment 5 – Hazardous Constituents (AERHDM)	08/06/2007	5
	N/A		N/A

Comments

~~These Attachments 1 and 4 supersede any Attachments 1 or 4 that may have already been submitted for these waste streams.~~

JPW 8/16/07

Acceptance/Rejection Signature and Date

Records Accepted [✓]	Sonia Gonzalez	Sonia Gonzalez	8-22-07
	Signature	Printed Name	Date
Records Rejected [ ]			
	Signature	Printed Name	Date

Reason for Rejection:

Re-submittal:

Signature	Printed Name	Date

TRANSACTION REPORT

P.01

AUG-22-2007 WED 11:11 AM

FOR: CCP RECORDS 15052347014

SEND

DATE	START	RECEIVER	TX TIME	PAGES	TYPE	NOTE	M#	DP
AUG-22	11:11 AM	LANL CARLSBAD	16"	1	FAX TX	OK	892	

TOTAL : 16S PAGES: 1

Controlled Copy

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Central Records / Records Custodian, 4021 National Parks Highway - MS: GSA 203, Carlsbad, New Mexico 88220

Telephone Number: 505-234-7523, 505-234-7233, 505-234-7617

Fax Number: 505-234-7014

[X] Original Record
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Attn:	Sheila Pearcy	From:	Lisa Price-Watson
Ship to:	CCP Central Records/CCP Records Custodian	Site:	Argonne Generated RH TRU Waste CCP-AK-ANLE-500
	4021 National Parks Highway – MS GSA 203	Company:	LANL-Carlsbad
	Carlsbad, NM 88220	Telephone Number:	(505) 628-8946
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NA	Attachment 5 – Hazardous Constituents (AERHDM)	08/06/2007	5
	NA		NA

AK8

Attachment 6 – Waste Form, Waste Material Parameters, Prohibited Items, and Packaging

Site(s): Argonne National Laboratory

Waste Stream Description: RH Debris from Hot Cell Operations at Argonne National Laboratory

Container ID Numbers: See CCP-TP-005, Attachment 8 for containers in this waste stream

Waste Stream Number: ~~AECHDM~~ 2/20/2012 AERHDM	
Physical Waste Form (e.g., debris, solidified waste)	Debris
Summary Category Group [a]	S5000
Waste Matrix Code Group [a]	Heterogeneous Debris Waste
Waste Matrix Code [b]	S5400
Waste Material Parameter Weights [c]	Estimated Waste Stream Weight Percent Average (attach evaluation justifying percentages)
Iron-based metals/alloys	25.3
Aluminum-based metals/alloys	12.1
Other metals	11.2
Other inorganic materials	15.9
Cellulosics	20.3
Rubber	5.5
Plastics (waste materials)	9.8
Organic matrix	0.0
Inorganic matrix	<1% - Includes K-Wing immobilized liquids
Soils/Gravels	0.0
Packaging Materials	Present (Y/N)?
Steel	Y
Plastics	Y
Prohibited Wastes [d,e,f,g]	Present (Y/N)?
Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of RTR or VE. Observable liquid shall be no more than 60 milliliters or 3 percent by volume, whichever is greater, in an internal container. Observable liquid shall not be present in a container with EPA HWN U134 assigned.	Y – Prior to Packaging
Non-radionuclide pyrophoric materials	N
Sealed containers > 4 liters	N
Hazardous waste not occurring as co-contaminants with TRU mixed waste (non-mixed hazardous waste)	N

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DATE REC'D 3-8-12

Attachment 6 – Waste Form, Waste Material Parameters, Prohibited Items, and Packaging (continued)

Waste Stream Number: ~~AECHDM~~ AERHDM da 2/20/2012	
Explosives	N
Compressed gases	N
Residual hydrofluoric acid (if U134 assigned to stream)	N
Residual PCB liquids [j]	N
Ignitables (EPA Hazardous Waste Number D001)	Y – Prior to Packaging
Corrosives (EPA Hazardous Waste Number D002)	Y- Prior to Packaging
Reactives (EPA Hazardous Waste Number D003)	Y – Prior to Packaging
Waste incompatible with backfill, seal and panel closure materials, container and packaging materials, shipping container materials, or other wastes [h]	N
Spent Nuclear fuel or high-level waste [i]	N
Any un-vented plastic bags > 4 liters that have been heat-sealed	N
Additional Information (if available)	Vented PVC bags used starting 1990.
Packaging	
Waste container type?	DOT 17H 30-gallon and 55-gallon drums
Liner type?	Polyethylene drum liners.
Is liner punctured?	Unsealed liner discs.
Is filter vent installed?	NFT HEPA-013 (30-gallon drums) NFT HEPA-019DS (55-gallon drums)
Maximum number of confinement layers	4 (two PVC bags, waste cans, and cardboard pouch spreader (w/ slip lid) inside of the 30-gallon drums)

a. Source: *CCP Transuranic Waste Characterization Quality Assurance Project Plan* (CCP-PO-001) Introduction.
b. Source: *Transuranic Waste Baseline Inventory Report* (DOE/CAO-95-1121) or DOE Waste Treatability Group Guidance (DOE/LLW-217). Note: the waste matrix code should not be assigned at the summary category group level.
c. Source: CCP-PO-001 – Table C3-1. Attach the Waste Material Parameter Evaluation Memorandum used to estimate values include in this Table (see Section 4.4.27).
d. Source: CCP-PO-001 – Section C-1c
e. Source: *Transuranic Waste Acceptance Criteria for the Waste Isolation Pilot Plant* (WAC)(DOE/WIPP-02-3122), Section 3
f. Source: *TRUPACT-II Content Codes* (TRUCON) (DOE/WIPP 89-004)
g. Source: *TRUPACT-II Authorized Methods for Payload Control (TRAMPAC)*, Washington TRU Solutions, LLC
h. This waste has been approved for disposal at the WIPP by the Permittee as documented by Appendix C1 of the WIPP RCRA Part B Permit Application and the Permittee's approval and assignment of the applicable TRUCON Codes for this waste stream.
i. Source: *Nuclear Waste Policy Act of 1982* (42 U.S.C. 10101)
j. Source: Polychlorinated Biphenyls (PCBs) manufacturing, Processing, Distribution and Commerce, and Use Prohibitions (40 CFR 761)

Acceptable Knowledge Expert: Kevin J. Peters / [signature] Date: 2/20/2012
Print Sign

MEMORANDUM TO CCP CENTRAL RECORDS

FROM: Kevin J. Peters
Date: February 20, 2012
RE: *Waste Material Parameter Evaluation for the Addition of K-Wing Immobilized liquids to Waste Stream AERHDM*

This memorandum was prepared to support the AKEs conclusion that the waste material parameter (WMP) evaluation previously conducted to estimate the expected amounts of the WMPs in waste stream AERHDM are valid and bounding for the 55-gallon debris drums generated in the K-wing containing carboys and pitchers of immobilized liquids, with the exception of inorganic matrix that will account for less than 1 percent of the waste stream total volume.

As described in Section 4.2.1 in AK Summary Report CCP-AK-ANLE-500, waste materials generated in the K-Wing at Argonne were included with AGHCF waste currently in waste stream AERHDM due to the same Argonne process of generation (post-irradiation fuel examination studies), similarity of the waste materials, and radiological similarity of the waste due to the examination of the same and similar fuel materials, based on the AKE's review of the entire AK record. The evaluation performed for AK Source Document C2027 was performed to document the conclusions made by the AKE and further document the commonality of the waste materials originating from fuel examination operations conducted in the AGHCF and K-Wing, by providing specific AK information, demonstrating the transfer, examination, and management of the same and similar fuel materials in these areas at Argonne.

Based on the visual inspection of the materials in the K-Wing hot cell (C2010, C2026, and U2001) the waste from this area is similar and consistent with AGHCF waste materials. For these reasons, the K-Wing materials combined with the AGHCF waste meet the WCPIP and WAP waste stream definition.

The WMP estimates described in Section 5.4.1.2 of Revision 9 of CCP-AK-ANLE-500 primarily addresses the relative amounts of routine debris waste from the K-Wing and AGHCF. As described, immobilized liquids generated in the K-Wing have been placed in 55-gallon drums containing predominantly the routine debris accounted for during the initial WMP evaluations and represent a very small fraction of the waste stream as a whole. Based on the number of carboys and pitchers of immobilized liquids placed in these containers (U2021), 144 gallons were generated. This supports the previous conclusions and would account for less than 1 percent by volume in the total waste stream volume. For this reason, the debris contained in these drums, and the debris in the waste stream as a whole, account for a vast majority of the materials contained in the waste stream. This is consistent with the observed contents of these waste containers documented on the VE Data Sheets reviewed to include these containers in waste stream AERHDM (C2029). However, since the immobilized liquids account for as much as 20 percent in some drums, the inorganic matrix will be added to Table 3 and a note added to the end of the table explaining these materials in the waste stream. In accordance with CCP-TP-005, this memorandum will be included with the most current version of Attachment 6, Waste Form, Waste Material Parameters, Prohibited Items, and Packaging for waste stream AERHCM.

AK9

Attachment 8 – Waste Containers List

Site(s): Argonne National Laboratory

Waste Stream Number(s): AERHDM

Waste Stream Description: Argonne Remote-Handled Debris Waste from the AGHCF and K-Wing Hot Cell Facilities

Number of Waste Containers in Waste Stream 293 – 30-gallon drums (33.2 m^3) and 60 – 55-gallon drums (12.5 m^3)

Total Existing Volume (m^3): 45.7 m^3

Is waste expected to be generated in the future?: Yes

If yes, Estimated Future Volume (m^3): 91 additional 30-gallon drums (10.3 m^3) and 15 additional 55-gallon drums (3.1 m^3). See DR023

Assumptions: A total of 459 containers will be generated (384 30-gal. and 75 55-gal.). See DR023 Volume estimates bases on total volume of the 30- and 55-gallon drums Generation Date is the Initial Closure date for each container.

Waste Stream Container Evaluation Memo(s) for Added Containers: C2029

Container Identification Number	Generation Date	Generation Point
786	10/19/1995	Alpha Gamma Hot Cell Facility
790	10/23/1995	Alpha Gamma Hot Cell Facility
810	10/31/2000	Alpha Gamma Hot Cell Facility
811	11/1/2000	Alpha Gamma Hot Cell Facility
812	5/1/2001	Alpha Gamma Hot Cell Facility
813	4/30/2001	Alpha Gamma Hot Cell Facility
814	4/26/2001	Alpha Gamma Hot Cell Facility
815	4/26/2001	Alpha Gamma Hot Cell Facility
816	4/25/2001	Alpha Gamma Hot Cell Facility
817	5/1/2001	Alpha Gamma Hot Cell Facility
818	4/27/2001	Alpha Gamma Hot Cell Facility
819	4/30/2001	Alpha Gamma Hot Cell Facility
820	4/25/2001	Alpha Gamma Hot Cell Facility
821	4/25/2001	Alpha Gamma Hot Cell Facility
822	4/25/2001	Alpha Gamma Hot Cell Facility
823	4/25/2001	Alpha Gamma Hot Cell Facility

CCP RECORDS ORIGINAL
DATE REC'D 7-20-11

Container Identification Number	Generation Date	Generation Point
824	4/24/2001	Alpha Gamma Hot Cell Facility
825	4/24/2001	Alpha Gamma Hot Cell Facility
826	4/24/2001	Alpha Gamma Hot Cell Facility
827	4/30/2001	Alpha Gamma Hot Cell Facility
828	4/24/2001	Alpha Gamma Hot Cell Facility
829	5/2/2001	Alpha Gamma Hot Cell Facility
830	5/1/2001	Alpha Gamma Hot Cell Facility
831	4/26/2001	Alpha Gamma Hot Cell Facility
832	4/26/2001	Alpha Gamma Hot Cell Facility
833	4/30/2001	Alpha Gamma Hot Cell Facility
834	4/30/2001	Alpha Gamma Hot Cell Facility
835	11/1/2000	Alpha Gamma Hot Cell Facility
836	11/1/2000	Alpha Gamma Hot Cell Facility
837	11/2/2000	Alpha Gamma Hot Cell Facility
838	11/10/2000	Alpha Gamma Hot Cell Facility
839	11/13/2000	Alpha Gamma Hot Cell Facility
840	6/7/2002	Alpha Gamma Hot Cell Facility
841	6/10/2002	Alpha Gamma Hot Cell Facility
842	6/5/2002	Alpha Gamma Hot Cell Facility
843	6/6/2002	Alpha Gamma Hot Cell Facility
844	6/5/2002	Alpha Gamma Hot Cell Facility
846	6/10/2002	Alpha Gamma Hot Cell Facility
847	6/6/2002	Alpha Gamma Hot Cell Facility
848	6/7/2002	Alpha Gamma Hot Cell Facility
849	6/4/2002	Alpha Gamma Hot Cell Facility
853	6/13/2002	Alpha Gamma Hot Cell Facility
854	6/12/2002	Alpha Gamma Hot Cell Facility
855	6/12/2002	Alpha Gamma Hot Cell Facility
856	5/29/2008	Alpha Gamma Hot Cell Facility
857	4/7/2008	Alpha Gamma Hot Cell Facility
858	4/30/2008	Alpha Gamma Hot Cell Facility
859	4/8/2008	Alpha Gamma Hot Cell Facility
860	5/1/2008	Alpha Gamma Hot Cell Facility

Container Identification Number	Generation Date	Generation Point
861	5/28/2008	Alpha Gamma Hot Cell Facility
862	3/30/2009	Alpha Gamma Hot Cell Facility
863	4/8/2008	Alpha Gamma Hot Cell Facility
864	4/2/2008	Alpha Gamma Hot Cell Facility
865	4/1/2008	Alpha Gamma Hot Cell Facility
866	10/1/2008	Alpha Gamma Hot Cell Facility
867	10/1/2008	Alpha Gamma Hot Cell Facility
868	11/10/2008	Alpha Gamma Hot Cell Facility
869	10/2/2008	Alpha Gamma Hot Cell Facility
870	11/10/2008	Alpha Gamma Hot Cell Facility
871	11/11/2008	Alpha Gamma Hot Cell Facility
872	11/12/2008	Alpha Gamma Hot Cell Facility
873	11/11/2008	Alpha Gamma Hot Cell Facility
874	10/2/2008	Alpha Gamma Hot Cell Facility
875	11/13/2008	Alpha Gamma Hot Cell Facility
876	3/19/2009	Alpha Gamma Hot Cell Facility
877	3/20/2009	Alpha Gamma Hot Cell Facility
878	3/23/2009	Alpha Gamma Hot Cell Facility
879	3/24/2009	Alpha Gamma Hot Cell Facility
880	3/24/2009	Alpha Gamma Hot Cell Facility
881	3/26/2009	Alpha Gamma Hot Cell Facility
882	3/27/2009	Alpha Gamma Hot Cell Facility
883	3/31/2009	Alpha Gamma Hot Cell Facility
884	3/31/2009	Alpha Gamma Hot Cell Facility
885	4/1/2009	Alpha Gamma Hot Cell Facility
886	4/1/2009	Alpha Gamma Hot Cell Facility
887	4/2/2009	Alpha Gamma Hot Cell Facility
888	4/2/2009	Alpha Gamma Hot Cell Facility
889	9/2/2009	Alpha Gamma Hot Cell Facility
890	9/8/2009	Alpha Gamma Hot Cell Facility
891	9/8/2009	Alpha Gamma Hot Cell Facility
892	9/9/2009	Alpha Gamma Hot Cell Facility
893	9/9/2009	Alpha Gamma Hot Cell Facility

Container Identification Number	Generation Date	Generation Point
894	9/10/2009	Alpha Gamma Hot Cell Facility
895	9/10/2009	Alpha Gamma Hot Cell Facility
896	9/10/2009	Alpha Gamma Hot Cell Facility
897	9/11/2009	Alpha Gamma Hot Cell Facility
898	11/4/2009	Alpha Gamma Hot Cell Facility
899	11/4/2009	Alpha Gamma Hot Cell Facility
900	11/5/2009	Alpha Gamma Hot Cell Facility
901	11/5/2009	Alpha Gamma Hot Cell Facility
902	11/5/2009	Alpha Gamma Hot Cell Facility
903	11/6/2009	Alpha Gamma Hot Cell Facility
904	11/6/2009	Alpha Gamma Hot Cell Facility
905	11/9/2009	Alpha Gamma Hot Cell Facility
906	11/30/2009	Alpha Gamma Hot Cell Facility
907	11/30/2009	Alpha Gamma Hot Cell Facility
908	12/1/2009	Alpha Gamma Hot Cell Facility
909	12/1/2009	Alpha Gamma Hot Cell Facility
910	12/2/2009	Alpha Gamma Hot Cell Facility
911	12/2/2009	Alpha Gamma Hot Cell Facility
912	12/2/2009	Alpha Gamma Hot Cell Facility
913	12/3/2009	Alpha Gamma Hot Cell Facility
914	12/3/2009	Alpha Gamma Hot Cell Facility
915	2/3/2010	Alpha Gamma Hot Cell Facility
916	2/3/2010	Alpha Gamma Hot Cell Facility
917	2/4/2010	Alpha Gamma Hot Cell Facility
918	2/4/2010	Alpha Gamma Hot Cell Facility
919	2/5/2010	Alpha Gamma Hot Cell Facility
920	2/5/2010	Alpha Gamma Hot Cell Facility
921	2/8/2010	Alpha Gamma Hot Cell Facility
922	2/8/2010	Alpha Gamma Hot Cell Facility
923	2/9/2010	Alpha Gamma Hot Cell Facility
924	3/9/2010	Alpha Gamma Hot Cell Facility
925	3/10/2010	Alpha Gamma Hot Cell Facility
926	3/11/2010	Alpha Gamma Hot Cell Facility

Container Identification Number	Generation Date	Generation Point
927	3/11/2010	Alpha Gamma Hot Cell Facility
928	3/15/2010	Alpha Gamma Hot Cell Facility
929	3/15/2010	Alpha Gamma Hot Cell Facility
930	3/16/2010	Alpha Gamma Hot Cell Facility
931	3/24/2010	Alpha Gamma Hot Cell Facility
932	3/25/2010	Alpha Gamma Hot Cell Facility
933	3/26/2010	Alpha Gamma Hot Cell Facility
934	4/22/2010	Alpha Gamma Hot Cell Facility
935	4/22/2010	Alpha Gamma Hot Cell Facility
936	4/23/2010	Alpha Gamma Hot Cell Facility
937	4/23/2010	Alpha Gamma Hot Cell Facility
938	4/26/2010	Alpha Gamma Hot Cell Facility
939	4/26/2010	Alpha Gamma Hot Cell Facility
940	4/26/2010	Alpha Gamma Hot Cell Facility
941	4/27/2010	Alpha Gamma Hot Cell Facility
942	4/27/2010	Alpha Gamma Hot Cell Facility
943	4/28/2010	Alpha Gamma Hot Cell Facility
944	5/25/2010	Alpha Gamma Hot Cell Facility
945	5/25/2010	Alpha Gamma Hot Cell Facility
946	5/26/2010	Alpha Gamma Hot Cell Facility
947	5/26/2010	Alpha Gamma Hot Cell Facility
948	5/26/2010	Alpha Gamma Hot Cell Facility
949	5/27/2010	Alpha Gamma Hot Cell Facility
950	5/27/2010	Alpha Gamma Hot Cell Facility
951	5/27/2010	Alpha Gamma Hot Cell Facility
952	6/21/2010	Alpha Gamma Hot Cell Facility
953	6/22/2010	Alpha Gamma Hot Cell Facility
954	6/22/2010	Alpha Gamma Hot Cell Facility
955	6/24/2010	Alpha Gamma Hot Cell Facility
956	6/22/2010	Alpha Gamma Hot Cell Facility
957	6/28/2010	Alpha Gamma Hot Cell Facility
958	6/30/2010	Alpha Gamma Hot Cell Facility
959	6/28/2010	Alpha Gamma Hot Cell Facility

Container Identification Number	Generation Date	Generation Point
960	6/25/2010	Alpha Gamma Hot Cell Facility
961	7/20/2010	Alpha Gamma Hot Cell Facility
962	7/21/2010	Alpha Gamma Hot Cell Facility
963	7/21/2010	Alpha Gamma Hot Cell Facility
964	7/22/2010	Alpha Gamma Hot Cell Facility
965	7/22/2010	Alpha Gamma Hot Cell Facility
966	7/22/2010	Alpha Gamma Hot Cell Facility
967	7/22/2010	Alpha Gamma Hot Cell Facility
968	7/26/2010	Alpha Gamma Hot Cell Facility
969	7/27/2010	Alpha Gamma Hot Cell Facility
971	7/28/2010	Alpha Gamma Hot Cell Facility
972	7/29/2010	Alpha Gamma Hot Cell Facility
973	7/29/2010	Alpha Gamma Hot Cell Facility
974	7/26/2010	Alpha Gamma Hot Cell Facility
975	8/12/2010	Alpha Gamma Hot Cell Facility
976	8/12/2010	Alpha Gamma Hot Cell Facility
977	8/17/2010	Alpha Gamma Hot Cell Facility
978	7/26/2010	Alpha Gamma Hot Cell Facility
979	8/17/2010	Alpha Gamma Hot Cell Facility
980	9/8/2010	Alpha Gamma Hot Cell Facility
981	9/8/2010	Alpha Gamma Hot Cell Facility
982	9/9/2010	Alpha Gamma Hot Cell Facility
983	9/9/2010	Alpha Gamma Hot Cell Facility
984	9/9/2010	Alpha Gamma Hot Cell Facility
985	9/9/2010	Alpha Gamma Hot Cell Facility
986	9/10/2010	Alpha Gamma Hot Cell Facility
987	9/10/2010	Alpha Gamma Hot Cell Facility
988	9/10/2010	Alpha Gamma Hot Cell Facility
989	10/21/2010	Alpha Gamma Hot Cell Facility
990	10/22/2010	Alpha Gamma Hot Cell Facility
991	10/22/2010	Alpha Gamma Hot Cell Facility
992	10/25/2010	Alpha Gamma Hot Cell Facility
993	10/25/2010	Alpha Gamma Hot Cell Facility

Container Identification Number	Generation Date	Generation Point
994	10/26/2010	Alpha Gamma Hot Cell Facility
995	12/14/2010	Alpha Gamma Hot Cell Facility
996	12/14/2010	Alpha Gamma Hot Cell Facility
997	12/15/2010	Alpha Gamma Hot Cell Facility
998	12/15/2010	Alpha Gamma Hot Cell Facility
999	12/15/2010	Alpha Gamma Hot Cell Facility
1000	12/16/2010	Alpha Gamma Hot Cell Facility
1001	12/16/2010	Alpha Gamma Hot Cell Facility
1002	12/22/2010	Alpha Gamma Hot Cell Facility
1003	2/14/2011	Alpha Gamma Hot Cell Facility
1004	2/15/2011	Alpha Gamma Hot Cell Facility
1005	5/31/2011	Alpha Gamma Hot Cell Facility
1006	6/2/2011	Alpha Gamma Hot Cell Facility
1007	6/3/2011	Alpha Gamma Hot Cell Facility
1008	2/15/2011	Alpha Gamma Hot Cell Facility
1009	2/16/2011	Alpha Gamma Hot Cell Facility
1010	6/3/2011	Alpha Gamma Hot Cell Facility
1011	2/17/2011	Alpha Gamma Hot Cell Facility
1012	6/6/2011	Alpha Gamma Hot Cell Facility
1013	6/7/2011	Alpha Gamma Hot Cell Facility
1014	2/17/2011	Alpha Gamma Hot Cell Facility
1015	6/9/2011	Alpha Gamma Hot Cell Facility
1016	2/17/2011	Alpha Gamma Hot Cell Facility
1017	1/24/2011	Alpha Gamma Hot Cell Facility
1018	1/24/2011	Alpha Gamma Hot Cell Facility
1019	1/25/2011	Alpha Gamma Hot Cell Facility
1020	1/25/2011	Alpha Gamma Hot Cell Facility
1021	1/25/2011	Alpha Gamma Hot Cell Facility
1022	1/26/2011	Alpha Gamma Hot Cell Facility
1023	1/26/2011	Alpha Gamma Hot Cell Facility
1024	1/27/2011	Alpha Gamma Hot Cell Facility
1025	1/27/2011	Alpha Gamma Hot Cell Facility
1026	1/27/2011	Alpha Gamma Hot Cell Facility

Container Identification Number	Generation Date	Generation Point
1028	3/21/2011	Alpha Gamma Hot Cell Facility
1029	6/8/2011	Alpha Gamma Hot Cell Facility
1030	6/9/2011	Alpha Gamma Hot Cell Facility
1031	3/22/2011	Alpha Gamma Hot Cell Facility
1032	3/22/2011	Alpha Gamma Hot Cell Facility
1033	3/23/2011	Alpha Gamma Hot Cell Facility
1034	3/23/2011	Alpha Gamma Hot Cell Facility
1036	3/23/2011	Alpha Gamma Hot Cell Facility
1037	3/24/2011	Alpha Gamma Hot Cell Facility
1038	3/7/2011	Alpha Gamma Hot Cell Facility
1039	3/7/2011	Alpha Gamma Hot Cell Facility
1040	3/8/2011	Alpha Gamma Hot Cell Facility
1041	3/8/2011	Alpha Gamma Hot Cell Facility
1042	3/8/2011	Alpha Gamma Hot Cell Facility
1043	3/9/2011	Alpha Gamma Hot Cell Facility
1044	3/9/2011	Alpha Gamma Hot Cell Facility
1045	3/9/2011	Alpha Gamma Hot Cell Facility
1046	3/10/2011	Alpha Gamma Hot Cell Facility
1047	3/10/2011	Alpha Gamma Hot Cell Facility
1048	3/10/2011	Alpha Gamma Hot Cell Facility
1049	3/11/2011	Alpha Gamma Hot Cell Facility
RW18870	11/6/2009	K-Wing Hot Cells
RW18871	11/12/2009	K-Wing Hot Cells
RW18872	11/14/2009	K-Wing Hot Cells
RW18873	11/17/2009	K-Wing Hot Cells
RW18874	11/20/2009	K-Wing Hot Cells
RW18875	12/3/2009	K-Wing Hot Cells
RW18876	12/8/2009	K-Wing Hot Cells
RW18877	12/15/2009	K-Wing Hot Cells
RW18878	12/17/2009	K-Wing Hot Cells
RW18879	3/10/2010	K-Wing Hot Cells
RW18880	3/23/2010	K-Wing Hot Cells
RW18881	4/7/2010	K-Wing Hot Cells

Container Identification Number	Generation Date	Generation Point
RW18882	4/9/2010	K-Wing Hot Cells
RW18883	4/12/2010	K-Wing Hot Cells
RW18884	4/13/2010	K-Wing Hot Cells
RW18885	4/14/2010	K-Wing Hot Cells
RW18886	4/15/2010	K-Wing Hot Cells
RW18887	4/16/2010	K-Wing Hot Cells
RW18888	4/20/2010	K-Wing Hot Cells
RW18889	4/22/2010	K-Wing Hot Cells
RW18890	4/26/2010	K-Wing Hot Cells
RW18891	4/28/2010	K-Wing Hot Cells
RW18892	4/29/2010	K-Wing Hot Cells
RW18893	5/5/2010	K-Wing Hot Cells
RW18894	5/5/2010	K-Wing Hot Cells
RW18895	5/6/2010	K-Wing Hot Cells
RW18896	5/7/2010	K-Wing Hot Cells
RW18897	5/10/2010	K-Wing Hot Cells
RW18898	5/11/2010	K-Wing Hot Cells
RW18899	5/13/2010	K-Wing Hot Cells
RW18900	5/17/2010	K-Wing Hot Cells
RW18901	5/17/2010	K-Wing Hot Cells
RW18902	5/19/2010	K-Wing Hot Cells
RW18903	9/22/2010	K-Wing Hot Cells
RW18904	6/4/2010	K-Wing Hot Cells
RW18905	6/4/2010	K-Wing Hot Cells
RW18906	6/8/2010	K-Wing Hot Cells
RW18907	9/24/2010	K-Wing Hot Cells
RW18908	9/28/2010	K-Wing Hot Cells
RW18909	9/30/2010	K-Wing Hot Cells
RW18910	10/6/2010	K-Wing Hot Cells
RW18911	10/13/2010	K-Wing Hot Cells
RW18912	10/19/2010	K-Wing Hot Cells
RW18913	10/26/2010	K-Wing Hot Cells
RW18914	10/28/2010	K-Wing Hot Cells

Container Identification Number	Generation Date	Generation Point
RW18915	11/2/2010	K-Wing Hot Cells
RW18916	12/17/2010	K-Wing Hot Cells
RW18917	12/21/2010	K-Wing Hot Cells
RW18918	1/5/2011	K-Wing Hot Cells
RW18919	1/7/2011	K-Wing Hot Cells
RW48249	1/17/2011	K-Wing Hot Cells
RW48250	1/19/2011	K-Wing Hot Cells
RW48251	2/11/2011	K-Wing Hot Cells
RW48252	2/16/2011	K-Wing Hot Cells
RW48253	3/4/2011	K-Wing Hot Cells
RW48254	2/22/2011	K-Wing Hot Cells
RW48255	2/24/2011	K-Wing Hot Cells
RW48256	3/2/2011	K-Wing Hot Cells
RW48257	3/9/2011	K-Wing Hot Cells
RW48258	3/15/2011	K-Wing Hot Cells

Acceptable Knowledge Expert: Kevin J. Peters / [signature] Date: 7/12/2011
Print Sign

AK10

Attachment 3 - Acceptable Knowledge Source Document Summary

Site(s): Argonne National Laboratory	Source Document Tracking Number: DR023
Waste Stream Number(s): AERHDM (Applicable only when site library is not in use)	
Acceptable Knowledge Documentation Type: ☐ TRU Waste Management Program Information ☑ Waste Stream-Specific Information ☐ Additional Information	Category: ☐ C - Correspondence ☑ DR - Discrepancy Resolution ☐ I - Internal procedures ☐ M - Miscellaneous ☐ P - Published plans, documents, and procedures ☐ U - Unpublished Documents
Title or Description of Source Document [a] : Acceptable Knowledge Discrepancy Resolution Concerning Underestimated Original Projections for AGHCF Debris, FEW, and K-Wing Debris Waste Materials	
Source Document Reference Information (author(s), document and revision number, date, publisher): Kevin Peters, 06/23/2010, Tech Specs	

AK # [b]	Source Doc. Page # [c]	AK Information Summary
WS1, WS2, WS3, WS9	Throughout	Nature of Discrepancy: As described in C2025 and AK Summary Report CCP-AK-ANLE-500, the original estimates for containers to be included in waste stream AERHDM included 124 30-gallon drums of AGHCF debris (44 original containers plus 80 additional containers to be generated), 100 30-gallon drums of AGHCF fuel examination waste (FEW), and 50 55-gallon drums originating from K-Wing operations for a projected total of 274 drums. Based on communications with Dan Pancake and Devin Hodge the original projections for AGHCF debris, FEW, and K-Wing debris waste materials were underestimated and need to be adjusted based on the current understanding of the inventory and packaging operations. Resolution: Dan Pancake and Devin Hodge were contacted and based on the remaining inventory, they are now estimating that the original projection of an additional 80 drums of AGHCF debris needs to increased to 220 drums, the FEW debris estimate (100 drums) needs to also be increased to 120 drums, and the K-wing debris waste (50 drums) needs to be increased to 75 drums; resulting in an increase of an additional 185 drums containers to the original projection of 274 drums. This increase would result in a total of 459 drum (384 30-gal. drums and 75 55-gal. drums). These volume adjustments have resulted from an underestimation of the waste volume and packaging configuration, NOT the addition of waste not currently described in the AK Summary Report. Based on this evaluation, the estimates will be adjusted as documented on the attached freeze file notification during the preparation of Revision 6 of AK Summary Report, CCP-AK-ANLE-500.

CCP RECORDS ORIGINAL
DATE REC'D 12-21-11

Attachment 3 - Acceptable Knowledge Source Document Summary (continued)

Site(s): Argonne National Laboratory	Source Document Tracking Number: DR023

Waste Stream Number(s): AERHDM
(Applicable only when site library is not in use)

Source Document Data Limitations (if any):

1. None

Acceptable Knowlege Expert:

Lisa Watson Date: 12/20/11
Print /Sign

a Provide description for non-titled information (i.e., container paperwork, MSDS sheets, etc)
b Obtain from Acceptable Knowledge Documentation Checklist
c For microfilm or microfiche, identify box, tape, reel number and location.

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Attachment 11 – Acceptable Knowledge Source Document Discrepancy Resolution

Waste Stream Number(s): AERHDM

Waste Stream Description: Argonne Remote-Handled Debris

AK Documentation Type: [ ] TRU Waste Management Program Information [X] Waste Stream Specific Information [ ] Supporting Information

AK Source Document Discrepancy Form Tracking Number: Waste Stream AERHDM Volume Projection Corrections - DR023

Tracking #	Category[a]	Title	Document/Rev#	Author	Date	Publisher	Page #
N/A	N/A	CCP Acceptable Knowledge Summary Report for Argonne Remote-Handled Debris Waste, Waste Stream: AERHDM	CCP-AK-ANLE-500, Rev. 5	CCP	1/14/2010	N/A	Sec. 4.2.1 (pg. 28); Sec. 5.2 (pg. 40)
C2025	Corr.	Communication with Dan Pancake: Inventory Update and the Management of Potentially Reactive and Pyrophoric Materials	N/A	K. Peters	12/1/2009	N/A	Pg. 1 of 2

Nature of Discrepancy: As described in C2025 and AK Summary Report CCP-AK-ANLE-500, the original estimates for containers to be included in waste stream AERHDM included 124 30-gallon drums of AGHCF debris (44 original containers plus **80** additional containers to be generated), **100** 30-gallon drums of AGHCF fuel examination waste (FEW), and **50** 55-gallon drums originating from K-Wing operations for a projected total of 274 drums. Based on communications with Dan Pancake and Devin Hodge the original projections for AGHCF debris, FEW, and K-Wing debris waste materials were underestimated and need to be adjusted based on the current understanding of the inventory and packaging operations.

Resolution: Dan Pancake and Devin Hodge were contacted and based on the remaining inventory, they are now estimating that the original projection of an additional **80** drums of AGHCF debris needs to increased to **220** drums, the FEW debris estimate (**100** drums) needs to also be increased to **120** drums, and the K-wing debris waste (**50** drums) needs to be increased to **75** drums; resulting in an increase of an additional 185 drums containers to the original projection of 274 drums. This increase would result in a total of **459** drum (384 30-gal. drums and 75 55-gal. drums).

These volume adjustments have resulted from an underestimation of the waste volume and packaging configuration, **NOT** the addition of waste not currently described in the AK Summary Report. Based on this evaluation, the estimates will be adjusted as documented on the attached freeze file notification during the preparation of Revision 6 of AK Summary Report, CCP-AK-ANLE-500.

Discrepancy Resolved:	[x] Yes [ ] No		
Acceptable Knowledge Expert:	Chis Chancellor for Kevin Peters (Print)	/ (Sign)	Date: 6/23/2010
Site Project Manager:	Frank Spinelli (Print)	/ (Sign)	Date: 6/24/10

[a] Published Document or Controlled Database (Pub.); Unpublished Data (Unpub.); Internal Procedure or Note (Proc.), Correspondence (Corr.) or Discrepancy (Disc.)

Freeze File Change to be Incorporated into Revision 6 of CCP-AK-ANLE-500

Add the following AK Source Document to Section 9.0:

DR023	Waste Stream AERHDM Volume Projection Corrections	N/A	K. J. Peters	6/23/2010

Incorporate the following changes into the first and second paragraph of Section 4.2.1:

Waste stream AERHDM originally consisted of 44 30-gallon drums (4.8 m^3) of RH TRU organic and inorganic debris packaged (inner waste cans) in the AGHCF between February 1993 and February 2002. It is estimated that an additional ~~180~~ **340** 30-gallon drums (~~19.8~~ **37.4** m^3) will be generated during packaging of the waste contained in the cells and ongoing operations in the AGHCF which includes approximately ~~100~~ **120** drums of similar debris including irradiated fuel test materials and residues (debris, fuel pin fragments, samples, capsules, and swarf) previously stored as accountable materials in the AGHCF. The container specific records have been reviewed for each container to verify the composition and origin of the waste stream inventory. It has been determined that every container presently included in waste stream AERHDM was generated from AGHCF operations and meets the WCPIP waste stream definition of waste material generated from a single process or activity which is similar in material, physical form, and radiological properties (References C333, C335, C2025, DR013, **DR023**, P2032, P2033, U076, U332, and U2003).

Freeze File Change to be Incorporated into Revision 6 of CCP-AK-ANLE-500 (Cont.)

Waste stream AERHDM also includes an estimated ~~50~~ **75** 55-gallon drums (~~10.4~~ **15.6** m^3) of RH TRU organic and inorganic debris to be packaged from the K-Wing hot cells. The waste will be generated during material packaging of solid material stored within the three K-Wing hot cells, solid material stored outside the hot cells in shielded rooms K-108 and K-116, and neutralized and solidified solutions stored within the hot cells. The K-Wing hot cells inventory and visual observations have been used to verify the composition and origin of the waste stream inventory. Most of the materials tested in the K-Wing hot cells originated from AGHCF experiments or consisted of reactor test specimens from the same commercial reactors (H.B. Robinson, Quad Cities, Big Rock Point, Limerick) also being examined in the AGHCF. For this reason, the examination wastes generated in the K-Wing and AGHCF meet the WCPIP waste stream definition of waste material generated from a single process or activity which is similar in material, physical form, and radiological properties (References C2006, C2007, C2009, **DR023,** P2011, P2013, P2014, U2001, U2003, U2004, and U2006).

Incorporate the following changes into the first paragraph of Section 5.2:

Waste stream AERHDM originally consisted of 44 30-gallon drums (4.8 m^3) of RH TRU organic and inorganic debris packaged between February 1993 and February 2002. It is estimated that an additional ~~180~~ **340** 30-gallon drums (~~19.8~~ **37.4** m^3) will be generated during packaging of the waste contained in the cells and ongoing operations in the AGHCF. It is also estimated that an additional ~~50~~ **75** 55-gallon drums (~~10.4~~ **15.6** m^3) will be generated during the packaging and cleanout of waste in the K-Wing hot cells. Note that some of the waste from the K-Wing may need to be packaged in 30-gallon drums due to limitations on weight capacity (800 pounds) or dose limit (<70 R/hr) (References C2009, C2025, DR013, **DR023**, P2012, U338, and U2003).

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Attachment 2 - CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220
Telephone Number: 575-234-7523 or 575-234-7431
Fax Number: 575-234-7033

- [x] Original Record
- [ ] Fax Record
- [ ] E-mail Record

Attn:	Sheila Pearcy	From:	Christopher Chancellor
Ship to:	CCP Central Records/ CCP Records Custodian 4021 National Parks Highway - MS GSA 212, Carlsbad, NM 88220	Site:	ANLE Waste at ANL ~~and INL~~ CJC 06/28/2010
		Company:	Los Alamos National Laboratory
		Telephone Number:	575-628-3914
Telephone Number:	575-234-7523	Date Sent:	06/28/2010

DR023	Attachment 3 - Acceptable Knowledge Source Document Summary for CCP-AK-ANLE-500 with attached source document below:	6/28/2010	2
NA	Acceptable Knowledge Discrepancy Resolution concerning underestimated original projections for AGHCF debris, FEW, and K-Wing debris waste materials	6/23/2010	3
	NA		

None

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

Records Accepted [x]	Tami Parker Signature	TAMI PARKER Printed Name	6/30/10 Date
Records Rejected [ ]	Signature	Printed Name	Date

Reason for Rejection:

Re-submittal:

Signature	Printed Name	Date

****
*** TX REPORT ***
****

TRANSMISSION OK

TX/RX NO	2870
DESTINATION TEL #	96283238
DESTINATION ID	LANL CBAD
ST. TIME	06/30 08:38
TIME USE	00'14
PAGES SENT	1
RESULT	OK

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Attachment 2 - CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220
Telephone Number: 575-234-7523 or 575-234-7431
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- [x] Original Record
- [ ] Fax Record
- [ ] E-mail Record

Attn:	Sheila Pearcy	From:	Christopher Chancellor
Ship to:	CCP Central Records/ CCP Records Custodian	Site:	ANLE Waste at ANL ~~and INL~~ CJC 06/30/2010
	4021 National Parks Highway - MS GSA 212, Carlsbad, NM 88220	Company:	Los Alamos National Laboratory
		Telephone Number:	575-628-3914
Telephone Number:	575-234-7523	Date Sent:	06/28/2010

DR023	Attachment 3 - Acceptable Knowledge Source Document Summary for CCP-AK-ANLE-500 with attached source document below:	6/28/2010	2
NA	Acceptable Knowledge Discrepancy Resolution concerning underestimated original projections for AGHCF debris, FEW, and K-Wing debris waste materials	6/23/2010	3
	NA		

None

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

Records Accepted [x] Tami Parker TAMI PARKER 6/30/10

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PAGE

Attachment 3 - Acceptable Knowledge Source Document Summary

Site(s): Argonne National Laboratory	Source Document Tracking Number: DR010

Waste Stream Number(s): AERHDM, ID-ANLE-S5000
(Applicable only when site library is not in use)

Acceptable Knowledge Documentation Type:	Category:
☑ TRU Waste Management Program Information	☐ C - Correspondence
☑ Waste Stream-Specific Information	☑ DR - Discrepancy Resolution
☑ Additional Information	☐ I - Internal procedures
	☐ M - Miscellaneous
	☐ P - Published plans, documents, and procedures
	☐ U - Unpublished Documents

Title or Description of Source Document [a] : Discrepancy Regarding the Volume of 7-Gallon Waste Cans

Source Document Reference Information (author(s), document and revision number, date, publisher): K. Peters, DR010, 6/7/2006, NA

AK # [b]	Source Doc. Page # [c]	AK Information Summary
PR7, WS2, WS9, S16	Throughout	Discrepancy report for 7- v. 7.5-gallon waste containers discrepancy between and within the ANL AK documentation. The report determines that the actual volume for these cans is closer to 7.5, however, the ANL convention of refering to these containers as 7-gallon cans will be used in the AK Summary Reports.

Source Document Data Limitations (if any):

1. Applicable to both AERHDM and ID-ANLE-S5000.

Acceptable Knowlege Expert:

Lisa Watsm, [signature] Date: 12/20/11

Print /Sign

a Provide description for non-titled information (i.e., container paperwork, MSDS sheets, etc)
b Obtain from Acceptable Knowledge Documentation Checklist
c For microfilm or microfiche, identify box, tape, reel number and location.

CCP RECORDS ORIGINAL
DATE REC'D 12-21-11

Attachment 11 - Acceptable Knowledge Source Document Discrepancy Resolution

Waste Stream Number(s): ID-ANLE-S5000 (CCP-AK-LANL-007)

Waste Stream Description: RH Debris Waste from Argonne National Laboratory-East Stored at INL

AK Documentation Type: ☒TRU Waste Management Program Information ☒Waste Stream Specific Information ☒Supplemental Information

AK Source Document Discrepancy Form Tracking Number: DR010

Tracking #	Category[a]	Title	Document/ Rev#	Author	Date	Publisher	Page #
C003	Corr.	Intra-Laboratory Memo to Harvey Welsh re: Dimensions of Intermediate TRU Waste Containers	N/A	D. Donahue	9/14/1989	ANL-E	1
P001	Pub.	AGHCF Operations Manual	IPS-2-00-00 Rev. 2	C. Schulz	9/10/1990	ANL-E	8, 9, 46
P006	Pub.	Safety Analysis for Twenty Year Retrievable Storage of Intermediate Gamma Level Transuranic Waste	N/A	W.D. Jackson	6/1/1976	ANL-E	7, 33 (A-1)
P007	Pub.	Transport, Handling, and Interim Storage of Intermediate-Level Transuranic Waste at the INEL	TREE-1172	J.C. Metzer A.M. Snyder	9/1977	DOE	17
P009	Pub.	TRU-RH Waste Certification Plan for Waste Management Operations	J0306-0033-SA Rev. 2	R.W. Ditch	11/10/86	ANL-E	15
P031	Pub.	Alpha-Gamma Hot Cell Facility (AGHCF) Safety Analysis Report	IPS-221-00-00	A.B. Cohen	1/1/1998	ANL-E	30, 31
U042	Unpub.	RH TRU 1976 to 1982, Book 1	N/A	N/A	Various	ANL-E	Throughout

Nature of Discrepancy:

AK sources and container documentation inconsistently identify the volume of the "7-gallon" waste containers within in the 30-gallon drums as 7.5 gallons or 7-gallon.

BEST AVAILABLE COPY

Resolution:
Based on a review of the AK documentation, these cans are identified as 7-gallon, 7.5-gallon, 28.4-Liter, intermediate (INT), and Medium (M). A review of the dimensions of the waste can was evaluated and it was determined that the volume of the cans was closer to 7.5 gallons; however based on discussions with ANL-E personnel (T. Bray see C336) all of the volumes for the waste cans are rounded off to some degree and the convention typically used is to refer to these containers as 7-gallon cans for the documentation developed at Argonne.

For consistency purposes these containers will be referred to as 7-gallon cans within the AK summary reports (CCP-AK-INL-500 and CCP-ANLE-500), with the understanding that the actual volume exceeds this value.

Discrepancy Resolved: ☒ Yes ☐ No

Acceptable Knowledge Expert: Kevin J. Peters / [signature] Date: 6/7/2006
Print Sign

Site Project Manager: Larry Porter / [signature] Date: 6/13/06
Print Sign

* Published Document or Controlled Database (Pub.); Unpublished Data (Unpub.); Internal Procedure or Note (Proc.); Correspondence (Corr.) or Discrepancy (Disc.)

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PAGE

Attachment 3 - Acceptable Knowledge Source Document Summary

Site(s): Argonne National Laboratory	Source Document Tracking Number: DR014
Waste Stream Number(s): AERHDM, ID-ANLE-S5000 (Applicable only when site library is not in use)	
Acceptable Knowledge Documentation Type: ☑ TRU Waste Management Program Information ☑ Waste Stream-Specific Information ☑ Additional Information	Category: ☐ C - Correspondence ☑ DR - Discrepancy Resolution ☐ I - Internal procedures ☐ M - Miscellaneous ☐ P - Published plans, documents, and procedures ☐ U - Unpublished Documents
Title or Description of Source Document [a] : Discrepancy Report for the RCRA Assignment of EPA HWNS to Waste Stream ID-ANLE-S5000	
Source Document Reference Information (author(s), document and revision number, date, publisher): Kevin Peters, DR014, 11/16/2006	

AK # [b]	Source Doc. Page # [c]	AK Information Summary
PR4, WS8, WS9, S10	Throughout	Nature of Discrepancy: Based on historic waste characterization, certification, and management operations conducted by Argonne and INL, the containers in waste stream ID-ANLE-S5000 have been and will continue to be managed as non-hazardous waste. Argonne has historically characterized this waste as non-hazardous culminating in a March 2003 report certifying a non-hazardous waste determination submitted by the DOE Chicago Operations Office to the Idaho Operations Office in March of 2003. This report concluded that there was no substantive basis for assigning RCRA HWNs to the RH-TRU wastes generated by ANL-E stored at INL (Reference C351). During CCP review of the AK source documentation, several sources identified the use of listed solvents (e.g. toluene and 1,1,1-trichloroethane) and the potential for the waste materials to contain RCRA compounds, especially toxic metals (e.g., lead and mercury). Resolution: To assign EPA HWNs, the available AK documentation was reviewed by CCP to assess chemical usage in the AGHCF and surrounding areas to identify hazardous materials potentially contaminating waste stream ID-ANLE-S5000. In addition, MSDSs and other manufacturer information was obtained for the commercial products to determine the presence of RCRA-regulated compounds. Even though this waste stream will continue to be managed as non-hazardous by INL, the WIPP-WAP requires a conservative assignment of EPA HWNs to TRU waste streams that lack analytical evidence demonstrating that these constituents would have not exceeded the regulatory thresholds; and therefore, the HWNs listed in the AK Summary Report (D004, D005, D006, D007, D008, D009, D010, D011, D019, D028, D029, F002, and F005) will be assigned to the containers in this waste stream prior to shipment to WIPP. The attached table includes the list of chemicals relating to the assigned HWNs and the references supporting the conservative assignment.

CCP ORIGINAL
DATE 4-2-12

Attachment 3 - Acceptable Knowledge Source Document Summary (continued)

Site(s): Argonne National Laboratory	Source Document Tracking Number: DR014
Waste Stream Number(s): AERHDM, ID-ANLE-S5000 (Applicable only when site library is not in use)	
Source Document Data Limitations (if any): 1. None.	
Acceptable Knowlege Expert: Sherry Auckland, [signature] Date: 3/22/2012 Print /Sign	

a Provide description for non-titled information (i.e., container paperwork, MSDS sheets, etc)
b Obtain from Acceptable Knowledge Documentation Checklist
c For microfilm or microfiche, identify box, tape, reel number and location.

Attachment 11 – Acceptable Knowledge Source Document Discrepancy Resolution

Waste Stream Number(s): ID-ANLE-S5000

Waste Stream Description: Heterogeneous Debris from Argonne AGHCF Operations

AK Documentation Type: [X] TRU Waste Management Program Information [X] Waste Stream Specific Information [X] Supplemental Information							
AK Source Document Discrepancy Form Tracking Number: DR014							
Tracking #	Category[a]	Title	Document/Rev#	Author	Date	Publisher	Page #
C340	Corr.	IT Shaw Discrepancy Report R3 - RH TRU Waste from ANL-E AGHCF, Re: Possible Presence of HEPA Filters	N/A	Cheryl Shulz	7/15/03	N/A	Throughout
C341	Corr.	IT Shaw Discrepancy Report R4 - RH TRU Waste from ANL-E- AGHCF, Re: Possible Presence of Lead in Waste	N/A	Cheryl Shulz	7/15/03	N/A	Throughout
C351	Corr.	Letter to W.E. Bergholz, DOE-Idaho Operations Office, Argonne National Laboratory-East Remote Handled (RH) Transuranic Waste Stored at the Radioactive Waste Management Complex (RWMC)	AAC.030320.0201	R.C. Wumderlich, DOE-Chicago Operations Office	3/20/2003	N/A	Throughout
N/A	Pub.	Central Characterization Project Acceptable Knowledge Summary Report For REMOTE-HANDLED TRANSURANIC DEBRIS WASTE FROM ARGONNE NATIONAL LABORATORY-EAST STORED AT THE IDAHO NATIONAL LABORATORY WASTE STREAM: ID-ANLE-S5000	CCP-AK-INL-500, Rev. 4	CCP	11/16/06	CCP	Table 4 See attached excerpts from Table 4 with associated references

Nature of Discrepancy:

Based on historic waste characterization, certification, and management operations conducted by Argonne and INL, the containers in waste stream ID-ANLE-S5000 have been and will continue to be managed as non-hazardous waste. Argonne has historically characterized this waste as non-hazardous culminating in a March 2003 report certifying a non-hazardous waste determination submitted by the DOE Chicago Operations Office to the Idaho Operations Office in March of 2003. This report concluded that there was no substantive basis for assigning RCRA HWNs to the RH-TRU wastes generated by ANL-E stored at INL (Reference C351). During CCP review of the AK source documentation, several sources identified the use of listed solvents (e.g. toluene and 1,1,1-trichloroethane) and the potential for the waste materials to contain RCRA compounds, especially toxic metals (e.g., lead and mercury).

Resolution:

To assign EPA HWNs, the available AK documentation was reviewed by CCP to assess chemical usage in the AGHCF and surrounding areas to identify hazardous materials potentially contaminating waste stream ID-ANLE-S5000. In addition, MSDSs and other manufacturer information was obtained for the commercial products to determine the presence of RCRA-regulated compounds.

Even though this waste stream will continue to be managed as non-hazardous by INL, the WIPP-WAP requires a conservative assignment of EPA HWNs to TRU waste streams that lack analytical evidence demonstrating that these constituents would have not exceeded the regulatory thresholds; and therefore, the HWNs listed in the AK Summary Report (D004, D005, D006, D007, D008, D009, D010, D011, D019, D028, D029, F002, and F005) will be assigned to the containers in this waste stream prior to shipment to WIPP. The attached table includes the list of chemicals relating to the assigned HWNs and the references supporting the conservative assignment.

Discrepancy Resolved: [X] Yes [ ] No

Acceptable Knowledge Expert: Kevin J. Peters / [signature] Date: 11/16/2006
Print Sign

Site Project Manager: Larry Porter / [signature] Date: 8/14/07
Print Sign

[a] Published Document or Controlled Database (Pub.); Unpublished Data (Unpub.); Internal Procedure or Note (Proc.); Correspondence (Corr.) or Discrepancy (Disc.)

Chemical/Material	Use/Description	AK Source	EPA HWNs
1,1,1-trichloroethane	Manipulator arm maintenance and cleaning. Cell cleaning solvent. Component of Hyprez lubricant (10-30%)	C012, C066, C137, C147, U065, U072	F002
1,1-dichloroethylene	Metallurgical reagent – no use specified.	C147	D029
1,2-dichloroethane	Metallurgical reagent – no use specified.	C147	D028
Arsenic	Contaminant of HEPA filters and clay absorbent.	C014, U083	D004
Barium	Contaminant of HEPA filters, clay absorbent, and fluorescent bulbs.	C035, C116, C160, U083, U084	D005
Benzene	Laboratory reagent – no use specified.	C147, U066	F005
Cadmium	Contaminant of HEPA filters. Component of neutron shielding, batteries, photography solutions, and other metal alloys.	C020, C066, C094, C116, C160, U015, U017, U072, U083	D006
Carbon tetrachloride	Immersion density measurements. Metallographic specimen and cell cleaning.	C066, C081, C137, C147	D019
Chromic acid	Metallography etchant acid.	C066, C137, C147, U006	D007
Chromium	Component of chromic acid etchant, fuel, stainless steel cladding, chromium plated measuring tapes, chromic oxide polishing abrasive, and HEPA filters.	C066, C116, C137, C160, U006, U068, U069, U070, U072, U074, U083, U084	D007
Hyprez	Petroleum distillate based lubricant containing 1,4-dioxane (0-1%) and 1,1,1-trichloroethane (10-30%)	C012, C029, C066, P062, P069, U072	F002
Isobutanol	Metallurgical reagent – no use specified.	C147	F005
Lead	Component of manipulator weights, metal scrap, lead-bismuth epoxy, lead solder, flashlight batteries, lead-acid batteries, sodium vapor lamps, drum numbering seals, and HEPA filter contaminant.	C013, C029, C066, C088, C091, C137, C143, C147, C148, C341, P023, P038, P039, U004, U006, U015, U017, U018, U019, U021, U022, U041, U072, U083	D008
Light bulbs	Broken fluorescent and mercury lamps.	U015, U017, U018, U019, U021	D009
Mercury	Component of mercury vapor lights, fluorescent lights, thermometers, and switches.	C013, C035, C066, C137, C147, C143, P070, U015, U017, U018, U019, U021, U022, U041, U083, U085	D009
Selenium	Irradiation experiment reagent. Contaminant of HEPA filter media.	U006, U083	D010
Silver	Component of silver nitrate etchant, mounting epoxy, containers, solder, photographic film and chemicals, and HEPA filter contaminant.	C020, C029, C066, C137, C147, U006, P061, P062, P068, U072, U083	D011
Silver nitrate	Metallography etchant reagent for Zircaloy metals.	C066, C137, P062, U006	D011
Tetrachloroethylene	Manipulator arm maintenance and cleaning. Cell cleaning solvent.	C066, C137, C147, U066	F002
Toluene	Manipulator arm maintenance and cleaning. Metallographic specimen and cell cleaning.	C012, C066, C137, C147, U066, P062	F005

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Attachment 2 - CCP Records Transmittal/Receiving Form

CCP Central Records / Records Custodian, 4021 National Parks Highway - MS: GSA 203, Carlsbad, New Mexico 88220

Telephone Number: 505-234-7523, 505-234-7233, 505-234-7617

Fax Number: 505-234-7014

- [x] Original Record
- [ ] Fax Record
- [ ] E-mail Record

Attn:	Sheila Pearcy	From:	Lisa Price-Watson
Ship to:	CCP Central Records/ CCP Records Custodian	Site:	ANLE Waste at ANLE and INL
	4021 National Parks Highway - MS GSA 203, Carlsbad, NM 88220	Company:	Los Alamos National Laboratory
		Telephone Number:	505-628-8946
Telephone Number:	505-234-7523	Date Sent:	8/16/07

Document Number	Title/Description	Record Date	Total Pages
DR14	Attachment 3 - Acceptable Knowledge Source Document Summary for CCP-AK-INL-500 and CCP-AK-ANLE-500	11/16/2007	2
	Discrepancy Report for the RCRA Assignment of EPA HWNs to Waste Stream ID-ANLE-S5000	11/16/2006	3
NA	NA	NA	NA

Comments

None

Acceptance/Rejection Signature and Date

Records Accepted [x] Sonia Gonzalez (Signature) Sonia Gonzalez (Printed Name) 8-22-07 (Date)

Records Rejected [ ] _____ Signature _____ Printed Name _____ Date

Reason for Rejection:

Re-submittal: _____ Signature _____ Printed Name _____ Date

P.01

TRANSACTION REPORT

AUG-22-2007 WED 11:11 AM

FOR: CCP RECORDS 15052347014

SEND

DATE	START	RECEIVER	TX TIME	PAGES	TYPE	NOTE	M#	DP
AUG-22	11:10 AM	LANL CARLSBAD	16"	1	FAX TX	OK	891	

TOTAL : 16S PAGES: 1

Controlled Copy

Attachment 2 - CCP Records Transmittal/Receiving Form

CCP Central Records / Records Custodian, 4021 National Parks Highway - MS: GSA 203, Carlsbad, New Mexico 88220

Telephone Number: 505-234-7523, 505-234-7233, 505-234-7617

Fax Number: 505-234-7014

- [x] Original Record
- [ ] Fax Record
- [ ] E-mail Record

Attn: Sheila Pearcy

Ship to: CCP Central Records/ CCP Records Custodian
4021 National Parks Highway - MS GSA 203, Carlsbad, NM 88220

Telephone Number: 505-234-7523

From: Lisa Price-Watson

Site: ANLE Waste at ANLE and INL

Company: Los Alamos National Laboratory

Telephone Number: 505-628-8946

Date Sent: 8/16/07

Document Number	Title/Description	Record Date	Total Pages
DR14	Attachment 3 - Acceptable Knowledge Source Document Summary for CCP-AK-INL-500 and CCP-AK-ANLE-500	11/16/2007	2
	Discrepancy Report for the RCRA Assignment of EPA HWNs to Waste Stream ID-ANLE-S6000	11/16/2006	3
NA	NA	NA	NA

DIVIDER

PAGE

Attachment 3 - Acceptable Knowledge Source Document Summary

Waste Stream Number(s): AERHDM, ID-ANLE-S5000	
Site(s): Argonne Generated RH TRU Waste	Source Document Tracking Number: DR016
Acceptable Knowledge Documentation Type: ☐ TRU Waste Management Program Information ☑ Waste Stream-Specific Information ☑ Supporting Information	Category: ☐ C - Correspondence ☑ D - Discrepancy Resolution ☐ P - Published Documents ☐ U - Unpublished Documents
Title of Source Document: Unsealed 1-gallon Waste Can Discrepancy Report	
Source Document Reference Information (author(s), document and revision number, date, publisher): K. Peters, NA, NA, 01/25/2007, NA	

AK # [a]	Source Doc. Page # [b]	AK Information Summary
WS9, S10	Throughout	Nature of Discrepancy: Section 5.5 of AK Summary Report CCP-AK-INL-500 implies that the 1-gallon waste collection cans (paint cans) used to accumulate waste items in the work stations would be "unsealed" when placed into the 7-gallon steel cans. During RTR examination of the AGHCF drums (See attached SPM notification), sealed 1-gallon paint cans are being observed. Resolution: To resolve this discrepancy, the AK source documentation was reviewed to determine the origin of this information. The source of this information was taken from the IT Shaw AK report (P049). Upon review of the sources used for this discussion in Section 5.5 of this report, it was determined that the sources referenced did not support the assertion that the paint cans were unsealed prior to placement in the steel waste cans. Additional review of the AK record was performed to attempt to clarify if the paint cans were sealed or unsealed. Reference C097 consists of an undated memo from the AGHCF Operations Chief to personnel in work station III generating grinding waste that would have been included in the waste stream. The memo states the following: "All grinding papers generated are to immediately be cut up and placed in a numbered 1-gal. waste can. When the waste can is getting full grinding operations must stop and the bowls must be emptied into that can. If the papers or residue are wet the can must be placed on a hot plate and dried. When it is completely dry the can is to be sealed and set aside for disposal." Other AGHCF sources identify the practice of sealing 1-gallon paint waste cans for disposal, including P067 that identifies sealed paint cans of high gamma level waste being placed in canisters. Other sources identify the use of unsealed 1-gallon cans an pails being utilized to transfer waste materials to be sorted and packaged, but no source specifically addressed the practice of putting unsealed containers in the 7-gallon waste cans. For this reason, the AK Summary Reports relating to AGHCF debris waste (CCP-AK-INL-500 and CCP-AK-ANLE-500) will be revised to clarify that sealed 1-gallon paint cans should be expected in waste streams ID-ANLE-S500 and AERHDM.

Attachment 3 - Acceptable Knowledge Source Document Summary (continued)

Site(s): Argonne Generated RH TRU Waste	Source Document Tracking Number: DR016
Source Document Data Limitations (if any): 1. None.	
Acceptable Knowlege Expert: Lisa Tiree Weber Print /Sign	Date: 8/14/07
[a] Obtain from Acceptable Knowledge Documentation Checklist [b] For microfilm or microfiche, identify box, tape, reel number and location.	

ORIGINAL

Attachment 11 – Acceptable Knowledge Source Document Discrepancy Resolution

Waste Stream Number(s): ID-ANLE-S5000, AERHDM

Waste Stream Description: Heterogeneous Debris from AGHCF Operations

AK Documentation Type: [ ] TRU Waste Management Program Information [X] Waste Stream Specific Information [X] Supplemental Information

AK Source Document Discrepancy Form Tracking Number: DR016 – Unsealed 1-gallon Waste Can Discrepancy Report

Tracking #	Category[a]	Title	Document/Rev#	Author	Date	Publisher	Page #
P049	Pub.	AK Documentation Report for INEEL-Stored Remote-Handled Transuranic Waste from Argonne National Laboratory-East	ITC-DOC-828599-02	IT Corporation	7/15/2003	N/A	70 of 77
N/A	Pub.	Central Characterization Project Acceptable Knowledge Summary Report For Remote-Handled Transuranic Debris Waste From Argonne National Laboratory-East Stored at the Idaho National Laboratory; Waste Stream: ID-ANLE-S5000	CCP-AK-INL-500, Rev. 4	CCP	11/16/2006	CCP	Section 5.5
C097	Corr.	Correspondence to AGHCF, Operational Personnel, Re: Work Station III Fissile Grinding Waste	N/A	Dennis Donahue	Not Dated	N/A	1 and 2
P067	Pub.	Procedure for High Gamma Level Transuranic Waste Handling at the AGHCF, MSD, ANL-E	M1002-0039-SP-00	ANL-E	12/30/1974	N/A	3 of 8

Nature of Discrepancy:

Section 5.5 of AK Summary Report CCP-AK-INL-500 implies that the 1-gallon waste collection cans (paint cans) used to accumulate waste items in the work stations would be "unsealed" when placed into the 7-gallon steel cans. During RTR examination of the AGHCF drums (See attached SPM notification), sealed 1-gallon paint cans are being observed.

Resolution:

To resolve this discrepancy, the AK source documentation was reviewed to determine the origin of this information. The source of this information was taken from the IT Shaw AK report (P049). Upon review of the sources used for this discussion in Section 5.5 of this report, it was determined that the sources referenced did not support the assertion that the paint cans were unsealed prior to placement in the steel waste cans.

Additional review of the AK record was performed to attempt to clarify if the paint cans were sealed or unsealed. Reference C097 consists of an undated memo from the AGHCF Operations Chief to personnel in work station III generating grinding waste that would have been included in the waste stream. The memo states the following:

"*All grinding papers generated are to immediately be cut up and placed in a numbered 1-gal. waste can. When the waste can is getting full grinding operations must stop and the bowls must be emptied into that can. If the papers or residue are wet the can must be placed on a hot plate and dried. When it is completely dry the can is to be sealed and set aside for disposal.*"

Other AGHCF sources identify the practice of sealing 1-gallon paint waste cans for disposal, including P067 that identifies sealed paint cans of high gamma level waste being placed in canisters.

Other sources identify the use of unsealed 1-gallon cans an pails being utilized to transfer waste materials to be sorted and packaged, but no source specifically addressed the practice of putting unsealed containers in the 7-gallon waste cans. For this reason, the AK Summary Reports relating to AGHCF debris waste (CCP-AK-INL-500 and CCP-AK-ANLE-500) will be revised to clarify that sealed 1-gallon paint cans should be expected in waste streams ID-ANLE-S500 and AERHDM.

Discrepancy Resolved: [X] Yes [ ] No

Acceptable Knowledge Expert: Kevin J. Peters / [signature] Date: 1/25/07
Print Sign

Site Project Manager: Larry Porter 5/13/10 / [signature] Date: 8/14/07
Print Sign

[a] Published Document or Controlled Database (Pub.); Unpublished Data (Unpub.); Internal Procedure or Note (Proc.); Correspondence (Corr.) or Discrepancy (Disc.)

-----Original Message-----
From: Porter, Larry [mailto:Larry.Porter@wipp.ws]
Sent: Sunday, January 21, 2007 7:34 AM
To: kevin; Schafer, Steve - LANL
Cc: DAmico, Eric; Quintana, Irene
Subject: Sealed one gallon paint cans

Kevin/Steve, we are seeing a discrepancy between AK and RTR. The one gallon cans seen so far in RTR are sealed. AK states "Individual waste items (collected at various WSs in waste collection cans) may be loose, plastic-bagged, contained in 4-in. diameter x 10-in. high portal cans or contained in unsealed 1-gallon paint cans." The cans are not greater than 4 liters and the contents of the drum meet the waste stream description, so an NCR has not been issued.

DIVIDER PAGE ONLY

Not part of page count

Attachment 2 - CCP Records Transmittal/Receiving Form

CCP Central Records / Records Custodian, 4021 National Parks Highway - MS: GSA 203, Carlsbad, New Mexico 88220

Telephone Number: 505-234-7523, 505-234-7233, 505-234-7617

Fax Number: 505-234-7014

- [x] Original Record
- [ ] Fax Record
- [ ] E-mail Record

Attn:	Sheila Pearcy	From:	Lisa Price-Watson
Ship to:	CCP Central Records/ CCP Records Custodian	Site:	ANLE Waste at ANLE and INL
	4021 National Parks Highway - MS GSA 203, Carlsbad, NM 88220	Company:	Los Alamos National Laboratory
		Telephone Number:	505-628-8946
Telephone Number:	505-234-7523	Date Sent:	8/14/07

Document Number	Title/Description	Record Date	Total Pages
DR016	Attachment 3 - Acceptable Knowledge Source Document Summary for CCP-AK-INL-500 and CCP-AK-ANLE-500	8/14/2007	2
	Unsealed 1-gallon Waste Can Discrepancy Report	1/25/2007	3
N/A	N/A	N/A	N/A

Comments

None

Acceptance/Rejection Signature and Date

Records Accepted [x]	Sonia Gonzalez (Signature)	Sonia Gonzalez (Printed Name)	8-22-07 (Date)
Records Rejected [ ]	Signature	Printed Name	Date

Reason for Rejection:

Re-submittal:

Signature	Printed Name	Date

TRANSACTION REPORT

P.01

AUG-22-2007 WED 11:10 AM

FOR: CCP RECORDS 15052347014

SEND

DATE	START	RECEIVER	TX TIME	PAGES	TYPE	NOTE	M#	DP
AUG-22	11:10 AM	LANL CARLSBAD	16"	1	FAX TX	OK	890	

TOTAL : 16S PAGES: 1

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CCP Central Records / Records Custodian, 4021 National Parks Highway - MS: GSA 203, Carlsbad, New Mexico 88220

Telephone Number: 505-234-7523, 505-234-7233, 505-234-7617

Fax Number: 505-234-7014

- [x] Original Record
- [ ] Fax Record
- [ ] E-mail Record

Attn:	Sheila Pearcy	From:	Lisa Price-Watson
Ship to:	CCP Central Records/ CCP Records Custodian 4021 National Parks Highway - MS GSA 203, Carlsbad, NM 88220	Site:	ANLE Waste at ANLE and INL
		Company:	Los Alamos National Laboratory
		Telephone Number:	505-628-8946
Telephone Number:	505-234-7523	Date Sent:	8/14/07

Document Number	Title/Description	Record Date	Total Pages
DR016	Attachment 3 - Acceptable Knowledge Source Document Summary for CCP-AK-INL-500 and CCP-AK-ANLE-500	8/14/2007	2
	Unsealed 1-gallon Waste Can Discrepancy Report	1/25/2007	3
NA	NA	NA	NA

DIVIDER

PAGE

Attachment 3 - Acceptable Knowledge Source Document Summary

Waste Stream Number(s): AERHDM, ID-ANLE-S5000

Site(s): Argonne Generated RH TRU Waste

Source Document Tracking Number: DR017

Acceptable Knowledge Documentation Type:
- [ ] TRU Waste Management Program Information
- [x] Waste Stream-Specific Information
- [x] Supporting Information

Category:
- [ ] C - Correspondence
- [x] D - Discrepancy Resolution
- [ ] P - Published Documents
- [ ] U - Unpublished Documents

Title of Source Document: Discrepancy involving free liquids in waste

Source Document Reference Information (author(s), document and revision number, date, publisher): Kevin Peters, DR0017, NA, 05/07/2007, NA

AK # [a]	Source Doc. Page # [b]	AK Information Summary
WS1, WS2, WS4, WS9, S16	Thorughout	Nature of Discrepancy: Based on a review of the AK documentation Section 5.5 of AK Summary Report CCP-AK-INL-500 states; "Residual liquids are not expected to be present in any waste container in waste stream ID-ANLE-S5000, due to the AGHCF standard practice of evaporating and/or absorbing all liquids as described in Section 5.4.2.3. The absence of liquids is further supported by the fact that safety limits in the AGHCF allowed only 3 liters total of hydrogenous liquids in AGHCF Areas I or III and the INL WAC have prohibited liquids in excess of 1 % since 1975. Additionally, none of the waste requisition forms (or other information provided by generators at the time of waste packaging) identifies liquids in any quantity." During RTR, containers 00683 and 00623 were rejected on NCR-RHINL-0100-07 and NCR-RHINLO101-07, respectively for prohibited amounts of free liquids (1/2 cup and 1 tablespoon) found in small internal bottles in the waste stream (see attached SPM notification and NCRs). Resolution: To resolve this discrepancy, the specific container documentation was reviewed for these containers (AK Reference U022). During the time frame that these containers were generated the Solid Radioactive Waste Disposal Requisitions and Transuranic Packaging and Survey forms completed by the generator identify if the waste is a combustible or noncombustible drum with generic waste descriptions. Containers 00623 and 00683 are both combustible containers described generically as "rags, paper, plastics". The generator marked the "No" box for "Liquids or Absorbed Liquids" on the requisition for both drums. Based on this information, it has been determined that even though the ANL-E waste management practices during this time frame would have prohibited liquids greater than 1 percent in the drum, they did not account for small amounts of free liquids in bottles (greater than 1 inch or 2.5 cm). Even though the amount of liquid does not exceed 1 percent in the payload container, prohibited amounts of esidual liquids exceeding 1 inch or 2.5 cm in internal containers should be expected during future RTR examination of containers in waste stream ID-ANL-S5000. For this reason, a teleconference with the SPM and involved RTR personnel was conducted on 5/2/2007 to verify that prohibited amounts of residual liquids should be expected, and those drums rejected during RTR. The AK Summary Reports relating to AGHCF debris waste (CCP-AK-INL-500 and CCP-AK-ANLE- 500) will be revised to clarify that residual liquids have been observed and are expected in internal containers in waste streams ID-ANLE-S500 and

ORIGINAL

Attachment 3 - Acceptable Knowledge Source Document Summary (continued)

Site(s): Argonne Generated RH TRU Waste			Source Document Tracking Number: DR017
AK # [a]	Source Doc. Page # [b]	AK Information Summary	
		AERHDM, and that these containers with prohibited amounts of residual liquids are not eligible for disposal at WIPP (see attached Freeze File Request).	
Source Document Data Limitations (if any):			
Acceptable Knowlege Expert: Lisa Price-Watson [signature] Print /Sign			Date: 5/9/07

[a] Obtain from Acceptable Knowledge Documentation Checklist
[b] For microfilm or microfiche, identify box, tape, reel number and location.

Attachment 11 – Acceptable Knowledge Source Document Discrepancy Resolution

Waste Stream Number(s): ID-ANLE-S5000, AERHDM

Waste Stream Description: Heterogeneous Debris from AGHCF Operations

AK Documentation Type: [ ] TRU Waste Management Program Information [X] Waste Stream Specific Information [X] Supplemental Information							
AK Source Document Discrepancy Form Tracking Number: DR017 – Prohibited Free Liquids in Bottles in Waste Stream ID-ANLE-S5000							
Tracking #	Category[a]	Title	Document/Rev#	Author	Date	Publisher	Page #
N/A	Pub.	Central Characterization Project Acceptable Knowledge Summary Report For Remote-Handled Transuranic Debris Waste From Argonne National Laboratory-East Stored at the Idaho National Laboratory; Waste Stream: ID-ANLE-S5000	CCP-AK-INL-500, Rev. 4	CCP	11/16/2006	CCP	Section 5.5, page 47
UC22	Unpub.	RH-TRU 1985-1987, Book 3, Drums 617 to 688	N/A	ANL-E	#00623 Oct. 1985 #00683 Dec. 1987	N/A	Pgs. 15, 16, & 22 Pgs. 142, 143, & 151
N/A	Unpub.	CCP Nonconformance Report: NCR-RHINL-0100-07 – Container 00683	Revision 1	Sway Andrews	5/3/07	N/A	1-3
N/A	Unpub	CCP Nonconformance Report: NCR-RHINL-0101-07 – Container 00623	Revision 1	Lashell Alada	5/3/07	N/A	1-3

Nature of Discrepancy:

Based on a review of the AK documentation Section 5.5 of AK Summary Report CCP-AK-INL-500 states; "Residual liquids are not expected to be present in any waste container in waste stream ID-ANLE-S5000, due to the AGHCF standard practice of evaporating and/or absorbing all liquids as described in Section 5.4.2.3. The absence of liquids is further supported by the fact that safety limits in the AGHCF allowed only 3 liters total of hydrogenous liquids in AGHCF Areas I or III and the INL WAC have prohibited liquids in excess of 1% since 1975. Additionally, none of the waste requisition forms (or other information provided by generators at the time of waste packaging) identifies liquids in any quantity."

During RTR, containers 00683 and 00623 were rejected on NCR-RHINL-0100-07 and NCR-RHINL0101-07, respectively for prohibited amounts of free liquids (1/2 cup and 1 tablespoon) found in small internal bottles in the waste stream (see attached SPM notification and NCRs).

Resolution:

To resolve this discrepancy, the specific container documentation was reviewed for these containers (AK Reference U022). During the time frame that these containers were generated the Solid Radioactive Waste Disposal Requisitions and Transuranic Packaging and Survey forms completed by the generator identify if the waste is a combustible or noncombustible drum with generic waste descriptions. Containers 00623 and 00683 are both combustible containers described generically as "rags, paper, plastics". The generator marked the "No" box for "Liquids or Absorbed Liquids" on the requisition for both drums.

Based on this information, it has been determined that even though the ANL-E waste management practices during this time frame would have prohibited liquids greater than 1 percent in the drum, they did not account for small amounts of free liquids in bottles (greater than 1 inch or 2.5 cm). Even though the amount of liquid does not exceed 1 percent in the payload container, prohibited amounts of residual liquids exceeding 1 inch or 2.5 cm in internal containers should be expected during future RTR examination of containers in waste stream ID-ANLE-S5000.

For this reason, a teleconference with the SPM and involved RTR personnel was conducted on 5/2/2007 to verify that prohibited amounts of residual liquids should be expected, and those drums rejected during RTR. The AK Summary Reports relating to AGHCF debris waste (CCP-AK-INL-500 and CCP-AK-ANLE-500) will be revised to clarify that residual liquids have been observed and are expected in internal containers in waste streams ID-ANLE-S500 and AERHDM, and that these containers with prohibited amounts of residual liquids are not eligible for disposal at WIPP (see attached Freeze File Request).

Discrepancy Resolved: [X] Yes [ ] No

Acceptable Knowledge Expert: Kevin J. Peters (Print) Sign Date: 5/4/2007

Site Project Manager: Larry Porter (Print) Sign Date: 5/2/07

[a] Published Document or Controlled Database (Pub.); Unpublished Data (Unpub.), Internal Procedure or Note (Proc.); Correspondence (Corr.) or Discrepancy (Disc.)

DR017

-----Original Message-----
From: Quintana, Irene [mailto:Irene.Quintana@wipp.ws]
Sent: Tuesday, May 01, 2007 10:22 AM
To: Peters, Kevin
Cc: DAmico, Eric
Subject: Containers 00683 and 00623

Kevin,

Containers 00683 and 00623 were rejected on NCR-RHINL-0100-07 and NCR-RHINL0101-07, respectively for liquids. I will be forwarding these NCRs to you once the NCRs are finished being revised to reflect Trend Code L. Because CCP-AK-INL-500 does not anticipate liquids in the waste stream, these NCRs are forwarded to you for further evaluation.

Thank you,

Irene Quintana
720-982-7174

Controlled Copy

Attachment 1 – CCP Nonconformance Report (NCR)

NCR No. NCR-RHINL-0100-07 Revision 1

1. Lot No./Heat No. or Serial No.: NA	2. Process (NDA, HSG, NDE, VE, Other): RH_NDE	3. Batch Data Report # (s): INLRHRTR07009
4. Order/Work Order/Job Control Number (as applicable): NA	5. PO #: NA 6. Supplier: NA	Container #(s): 00683

DESCRIPTION OF NONCONFORMANCE

7. (a) CCP HOLD TAGS SHALL BE APPLIED UNLESS JUSTIFIED AS FOLLOWS: Apply hold tag to ISC housing container 00683

☐ < 100 nCi/g ☒ Prohibited Item ☐ >500 ppmv Flamm. VOCs

☐ E-Flag ☐ Receiving Inspection ☐ Transportation ☐ WWIS ☐ Other

(b) Description of Nonconformance
CCP-TP-508, Rev. 1, Section 4.3.3 Step [E.1](a) Record a detailed description of the prohibited item (s) including location and volume of liquid, in the Comments field of Section 5, Waste Summary, of Attachment 2.

(c). Actual Condition
Liquid found in container, ~1/2-HALF CUP OF LIQUID IN PLASTIC CONTAINER AT OPPOSITE BOTTOM OF DRUM

Reason for revision: Correct Trend Code to L.

8. NCR Originator (Print name, sign, and date) Sway Andrews Sway Andrews 5-3-07	9. CCP QA Engineer or Designee Validation (Print name, sign, and date) B.J. FISHER B.J. Fisher 5/3/07

9a. Does this NCR have the potential to impact AK? ☒ YES ☐ NO ☐ INDETERMINATE
If YES or INDETERMINATE, then apply Trend Code L in Block 12.

10. Significant Condition? ☐ YES ☒ NO ☐ NA	11. Recurring Condition? ☐ YES ☒ NO (If YES, List NCRs/CARs)
12. Trend Code: L	13. Responsible Manager: Irene Quintana

Controlled Copy

Attachment 1 – CCP Nonconformance Report (NCR)

NCR No. NCR-RHINL-0101-07 Revision 1

1. Lot No./Heat No. or Serial No.: NA	2. Process (NDA, HSG, NDE, VE, Other): RH_NDE	3. Batch Data Report # (s): INLRHRTR07010
4. Order/Work Order/Job Control Number (as applicable): NA	5. PO #: NA 6. Supplier: NA	Container #(s): 00623

DESCRIPTION OF NONCONFORMANCE

7. (a) CCP HOLD TAGS SHALL BE APPLIED UNLESS JUSTIFIED AS FOLLOWS: Apply hold tag to ISC housing container 00623.

☐ < 100 nCi/g ☒ Prohibited Item ☐ >500 ppmv Flamm. VOCs

☐ E-Flag ☐ Receiving Inspection ☐ Transportation ☐ WWIS ☐ Other

(b) Description of Nonconformance
CCP-TP-508, Rev. 1, Section 4.3.3 Step [E.1](a) Record a detailed description of the prohibited item (s) including location and volume of liquid, in the Comments field of Section 5, Waste Summary, of Attachment 2.

(c). Actual Condition
Approximately one tablespoon of liquid found in glass bottle, which is greater than residual.

Reason for revision: Correct Trend Code to L.

8. NCR Originator (Print name, sign, and date) Lashell Alade 5-03-07	9. CCP QA Engineer or Designee Validation (Print name, sign, and date) A.J. FISHER 5/3/07
9a. Does this NCR have the potential to impact AK? ☒ YES ☐ NO ☐ INDETERMINATE If YES or INDETERMINATE, then apply Trend Code L in Block 12.	
10. Significant Condition? ☐ YES ☒ NO ☐ NA	11. Recurring Condition? ☐ YES ☒ NO (If YES, List NCRs/CARs)
12. Trend Code: L	13. Responsible Manager: Irene Quintana

-----Original Message-----
From: Kevin Peters [mailto:kpeters44@comcast.net]
Sent: Friday, May 04, 2007 10:23 AM
To: 'Montoya, Jason'
Subject: Freeze File change to CCP-AK-INL-500 and CCP-AK-ANLE-500

Jason,

Please insert this email into the Freeze Files for CCP-AK-INL-500 and CCP-AK-ANLE-500.

Based on RTR finding prohibited amounts of residual liquids in internal waste bottles described in Discrepancy Report DR017, a discussion will be added to the AK Summary Report describing that prohibited amounts of residual liquids have been observed during RTR and should be expected during future examination of containers the AGHCF debris waste streams and that these containers are not eligible for disposal at WIPP.

I will send you a copy of the signed Discrepancy Report once it is approved to also include in the files.

Thank you,

Kevin Peters
(303)980-0543

DIVIDER PAGE ONLY

Not part of page count

Attachment 2 - CCP Records Transmittal/Receiving Form

CCP Central Records / Records Custodian, 4021 National Parks Highway - MS: GSA 203, Carlsbad, New Mexico 88220

Telephone Number: 505-234-7523, 505-234-7233, 505-234-7617

Fax Number: 505-234-7014

- [x] Original Record
- [ ] Fax Record
- [ ] E-mail Record

Attn:	Sheila Pearcy	From:	Lisa Price Watson
Ship to:	CCP Central Records/ CCP Records Custodian	Site:	ANLE Waste at ANLE and INL
	4021 National Parks Highway - MS GSA 203, Carlsbad, NM 88220	Company:	Los Alamos National Laboratory
		Telephone Number:	505-628-8946
Telephone Number:	505-234-7523	Date Sent:	5/9/07

DR017	Attachment 3 - Acceptable Knowledge Source Document Summary for CCP-AK-INL-500 and CCP-AK-ANLE-500	5/9/2007	2
	Discrepancy involving free liquids in waste	5/7/2007	6
	NA		

None

Acceptance/Rejection Signature and Date

Records Accepted [x]	Christal Ingram (Signature)	CHRISTAL INGRAM (Printed Name)	5/14/07 (Date)
Records Rejected [ ]	(Signature)	(Printed Name)	(Date)

Reason for Rejection:

Re-submittal:

(Signature)	(Printed Name)	(Date)

TRANSACTION REPORT

P.01

MAY-14-2007 MON 04:16 PM

FOR: CCP RECORDS 15052347014

SEND

DATE	START	RECEIVER	TX TIME	PAGES	TYPE	NOTE	M#	DP
MAY-14	04:16 PM	LANL CARLSBAD	16"	1	FAX TX	OK	675	

TOTAL : 16S PAGES: 1

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Attachment 2 - CCP Records Transmittal/Receiving Form

CCP Central Records / Records Custodian, 4021 National Parks Highway - MS: GSA 203, Carlsbad, New Mexico 88220

Telephone Number: 505-234-7523, 505-234-7233, 505-234-7617

Fax Number: 505-234-7014

- [x] Original Record
- [ ] Fax Record
- [ ] E-mail Record

Attn: Sheila Pearcy

Ship to: CCP Central Records/ CCP Records Custodian 4021 National Parks Highway - MS GSA 203, Carlsbad, NM 88220

Telephone Number: 505-234-7523

From: Lisa Price Watson

Site: ANLE Waste at ANLE and INL

Company: Los Alamos National Laboratory

Telephone Number: 505-628-8946

Date Sent: 5/9/07

Document Number	Title/Description	Receipt Date	Total Pages
DR017	Attachment 3 - Acceptable Knowledge Source Document Summary for CCP-AK-INL-500 and CCP-AK-ANLE-500	5/9/2007	2
	Discrepancy involving free liquids in waste	5/7/2007	6
	NA		

AK11

AK11

Integrated Data Center

- Candidate Lots
- Electronic Data
- Exclusions
- Lot Reports
- BDR Data
- Candidates
- CAR Data
- CH AK Data
- Graded Approach
- MTE Data
- NCR Check
- NCR Data
- Reference Tables
- RH AK Data
- Software QA
- Training Data
- SPM Edit
- CCB Request
- CCB View Log
- Gamma Calculator

Page 1 of 1 (1 items)

Drag a column header here to group by that column

RW48268	ANL		NO AK DATA	EMPLACED_CNTR	NO

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Drag a column header here to group by that column

RW48268	ANLRHVE11017_QTR0311	VE	Complete
RW48268	ANLRHDTC11009	DTC	Complete
RW48268	ANLRHVE11017	VE	Complete

Page 1 of 1 (3 items) Page size: 10

Create Filter

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Drag a column header here to group by that column

RW48268	NO DATA		

Integrated Data Center

- Candidate Lots
- Electronic Data
- Exclusions
- Lot Reports

- BDR Data
- Candidates
- CAR Data
- CH AK Data

- Graded Approach
- MTE Data
- NCR Check
- NCR Data
- Reference Tables
- RH AK Data
- Software QA
- Training Data

- SPM Edit

- CCB Request
- CCB View Log
- Gamma Calculator

Page 1 of 1 (1 items)

Drag a column header here to group by that column

RW18904	ANL	NO AK DATA	NO AK DATA	EMPLACED_CNTR	NO

Page 1 of 1 (1 items) Page size: 10

Drag a column header here to group by that column

RW18904	ANLRHVE11010	VE	Complete

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Create Filter

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RW18904	NO DATA		

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Integrated Data Center

- Candidate Lots
- Electronic Data
- Exclusions
- Lot Reports

- BDR Data
- Candidates
- CAR Data
- CH AK Data

- Graded Approach
- MTE Data
- NCR Check
- NCR Data
- Reference Tables
- RH AK Data
- Software QA
- Training Data

- SPM Edit

- CCB Request
- CCB View Log
- Gamma Calculator

Page 1 of 1 (1 items)

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1182	ANL		NO AK DATA	EMPLACED_CNTR	NO

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Drag a column header here to group by that column

1182	ANLRHDTC13003	DTC	Complete
1182	ANLRHVE13002	VE	Complete

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Create Filter

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Drag a column header here to group by that column

1182	NO DATA		

Candidate Lots
Electronic Data
Exclusions
Lot Reports

BDR Data
Candidates
CAR Data
CH AK Data

Graded Approach
MTE Data
NCR Check
NCR Data
Reference Tables
RH AK Data
Software QA
Training Data

SPM Edit

CCB Request
CCB View Log
Gamma Calculator

Page 1 of 1 (1 items)

Drag a column header here to group by that column

1242	ANL		NO AK DATA	NO AK DATA	NO

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Drag a column header here to group by that column

1242	ANLRHDTC13007	DTC	Complete
1242	ANLRHVE13007	VE	Complete

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Create Filter

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1242	NO DATA		

Candidate Lots
Electronic Data
Exclusions
Lot Reports

BDR Data
Candidates
CAR Data
CH AK Data

Graded Approach
MTE Data
NCR Check
NCR Data
Reference Tables
RH AK Data
Software QA
Training Data

SPM Edit

CCB Request
CCB View Log
Gamma Calculator

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Drag a column header here to group by that column

1197	ANL		NO AK DATA	EMPLACED_CNTR	NO

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Drag a column header here to group by that column

1197	ANLRHDTC13004	DTC	Complete
1197	ANLRHVE13004	VE	Complete

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Create Filter

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Drag a column header here to group by that column

1197	NO DATA		

Candidate Lots
Electronic Data
Exclusions
Lot Reports

BDR Data
Candidates
CAR Data
CH AK Data

Graded Approach
MLE Data
NCR Check
NCR Data
Reference Tables
RH AK Data
Software QA
Training Data

SPM Edit

CCB Request
CCB View Log
Gamma Calculator

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Drag a column header here to group by that column

1099	ANL	NO AK DATA	EMPLACED_CNTR	NO

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1099	ANLE-RH-50-60	DG	Complete
1099	ANLRHVE12011	VE	Complete

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Create Filter

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1099	NO DATA

AK12

CONTAINEI	WASTESTR	AK_REPORT	WASTE_M/	VENTDATE	CLOSUREDATE	VENTDATE	CLOSURED.	WDS_STAT	DISPOSAL_DATE	INTERNAL_	INTERNAL_	INTERNAL_	COMMENT
1250	AERHDM	CCP-AK-ANLE-500	S5400	8/22/2013	8/22/2013					1173	1251		AGHCF Debris
1240	AERHDM	CCP-AK-ANLE-500	S5400	8/19/2013	8/19/2013					1236	1263		AGHCF FEW
1237	AERHDM	CCP-AK-ANLE-500	S5400	8/15/2013	8/15/2013					1232	1222		AGHCF FEW
1235	AERHDM	CCP-AK-ANLE-500	S5400	8/14/2013	8/14/2013					1196	1176		AGHCF FEW
1234	AERHDM	CCP-AK-ANLE-500	S5400	8/13/2013	8/13/2013					1167	1174		AGHCF FEW
1233	AERHDM	CCP-AK-ANLE-500	S5400	8/13/2013	8/13/2013					1199	1162		AGHCF FEW
1249	AERHDM	CCP-AK-ANLE-500	S5400	7/23/2013	7/23/2013					1206	1159		AGHCF Debris; Overpacked shielded container AE1249SC
1248	AERHDM	CCP-AK-ANLE-500	S5400	7/23/2013	7/23/2013					1147	1248		AGHCF Debris; Overpacked shielded container AE1248SC
1247	AERHDM	CCP-AK-ANLE-500	S5400	7/22/2013	7/22/2013					917	1127		AGHCF Debris; Overpacked shielded container AE1247SC
1246	AERHDM	CCP-AK-ANLE-500	S5400	7/22/2013	7/22/2013					1249	1106		AGHCF Debris; Overpacked shielded container AE1246SC
1245	AERHDM	CCP-AK-ANLE-500	S5400	7/19/2013	7/19/2013					1134	1244		AGHCF Debris; Overpacked shielded container AE1245SC
1244	AERHDM	CCP-AK-ANLE-500	S5400	7/18/2013	7/18/2013					1243	1242		AGHCF Debris; Overpacked shielded container AE1244SC
1243	AERHDM	CCP-AK-ANLE-500	S5400	7/18/2013	7/18/2013					1099	1219		AGHCF Debris; Overpacked shielded container AE1243SC
1226	AERHDM	CCP-AK-ANLE-500	S5400	7/17/2013	7/17/2013					1262	1126		AGHCF Debris
1222	AERHDM	CCP-AK-ANLE-500	S5400	7/16/2013	7/16/2013					1121	1264		AGHCF Debris
1225	AERHDM	CCP-AK-ANLE-500	S5400	7/15/2013	7/15/2013					1071	1144		AGHCF Debris
1224	AERHDM	CCP-AK-ANLE-500	S5400	7/12/2013	7/12/2013					1260	1102		AGHCF Debris
1223	AERHDM	CCP-AK-ANLE-500	S5400	7/11/2013	7/11/2013					1241	1239		AGHCF Debris
1218	AERHDM	CCP-AK-ANLE-500	S5400	7/10/2013	7/10/2013					1156	1105		AGHCF Debris
1219	AERHDM	CCP-AK-ANLE-500	S5400	7/9/2013	7/9/2013					1158	1103		AGHCF Debris
1220	AERHDM	CCP-AK-ANLE-500	S5400	7/8/2013	7/8/2013					1207	1120		AGHCF Debris
1221	AERHDM	CCP-AK-ANLE-500	S5400	7/3/2013	7/3/2013					1210	1165		AGHCF Debris
1217	AERHDM	CCP-AK-ANLE-500	S5400	6/18/2013	6/18/2013					1074	1202		AGHCF Debris
1242	AERHDM	CCP-AK-ANLE-500	S5400	5/30/2013	5/30/2013					1133	1021		AGHCF Debris; Loaded in shielded container AE1242SC pe
1241	AERHDM	CCP-AK-ANLE-500	S5400	5/30/2013	5/30/2013					949	1070		AGHCF Debris; Loaded in shielded container AE1241SC pe
1216	AERHDM	CCP-AK-ANLE-500	S5400	4/3/2013	4/3/2013			EMPLACED	8/2/2013 11:52	1130	1085		AGHCF FEW, Debris
1215	AERHDM	CCP-AK-ANLE-500	S5400	4/3/2013	4/3/2013			APPROVED_SHIP		1125	1058		AGHCF FEW, Debris
1214	AERHDM	CCP-AK-ANLE-500	S5400	4/2/2013	4/2/2013			EMPLACED	8/15/2013 14:54	1112	1151		AGHCF FEW, Debris
1213	AERHDM	CCP-AK-ANLE-500	S5400	4/2/2013	4/2/2013			EMPLACED	8/2/2013 11:52	1109	1104		AGHCF FEW, Debris
1212	AERHDM	CCP-AK-ANLE-500	S5400	4/1/2013	4/1/2013			EMPLACED	8/15/2013 14:54	1140	1122		AGHCF FEW, Debris
1211	AERHDM	CCP-AK-ANLE-500	S5400	4/1/2013	4/1/2013			RECEIVED_SHIP		1132	1131		AGHCF FEW, Debris
1210	AERHDM	CCP-AK-ANLE-500	S5400	3/29/2013	3/29/2013			EMPLACED	8/15/2013 14:54	1094	1124		AGHCF FEW, Debris
1209	AERHDM	CCP-AK-ANLE-500	S5400	3/28/2013	3/28/2013			APPROVED_SHIP		1141	1084		AGHCF FEW, Debris
1208	AERHDM	CCP-AK-ANLE-500	S5400	3/28/2013	3/28/2013			EMPLACED	8/2/2013 11:52	1023	1110		AGHCF FEW, Debris
1207	AERHDM	CCP-AK-ANLE-500	S5400	3/27/2013	3/27/2013			RECEIVED_SHIP		1128	1107		AGHCF FEW, Debris
1206	AERHDM	CCP-AK-ANLE-500	S5400	3/27/2013	3/27/2013			APPROVED_SHIP		1135	1111		AGHCF FEW, Debris
1205	AERHDM	CCP-AK-ANLE-500	S5400	3/27/2013	3/27/2013			RECEIVED_SHIP		1108	1149		AGHCF FEW, Debris
1204	AERHDM	CCP-AK-ANLE-500	S5400	3/1/2013	3/1/2013					1136	1129		AGHCF FEW
1203	AERHDM	CCP-AK-ANLE-500	S5400	2/28/2013	2/28/2013					1139	1090		AGHCF FEW
1202	AERHDM	CCP-AK-ANLE-500	S5400	2/28/2013	2/28/2013					1145	955		AGHCF FEW
1201	AERHDM	CCP-AK-ANLE-500	S5400	2/28/2013	2/28/2013			APPROVED_CERT		1020	1118		AGHCF Debris
1200	AERHDM	CCP-AK-ANLE-500	S5400	2/27/2013	2/27/2013					1146	1078		AGHCF FEW
1199	AERHDM	CCP-AK-ANLE-500	S5400	2/27/2013	2/27/2013			APPROVED_SHIP		1116	928		AGHCF Debris
1198	AERHDM	CCP-AK-ANLE-500	S5400	2/27/2013	2/27/2013					1137	1000		AGHCF FEW
1197	AERHDM	CCP-AK-ANLE-500	S5400	2/26/2013	2/26/2013			EMPLACED	7/25/2013 12:19	1026	1095		AGHCF Debris

1196	AERHDM	CCP-AK-ANLE-500	S5400	2/25/2013	2/25/2013				1138	1025	AGHCF FEW
1195	AERHDM	CCP-AK-ANLE-500	S5400	2/21/2013	2/21/2013		EMPLACED	7/25/2013 12:19	1119	1030	AGHCF Debris
1193	AERHDM	CCP-AK-ANLE-500	S5400	2/21/2013	2/21/2013		APPROVED_SHIP		1028	948	AGHCF Debris
1194	AERHDM	CCP-AK-ANLE-500	S5400	2/20/2013	2/20/2013				1082	1077	AGHCF FEW
1192	AERHDM	CCP-AK-ANLE-500	S5400	2/20/2013	2/20/2013				1079	1142	AGHCF FEW
1191	AERHDM	CCP-AK-ANLE-500	S5400	2/20/2013	2/20/2013		APPROVED_SHIP		1027	1018	AGHCF Debris
1190	AERHDM	CCP-AK-ANLE-500	S5400	2/20/2013	2/20/2013				1081	1089	AGHCF FEW
1189	AERHDM	CCP-AK-ANLE-500	S5400	2/20/2013	2/20/2013		EMPLACED	8/7/2013 14:25	1115	1024	AGHCF Debris
1188	AERHDM	CCP-AK-ANLE-500	S5400	2/19/2013	2/19/2013				1051	1080	AGHCF FEW
1187	AERHDM	CCP-AK-ANLE-500	S5400	2/19/2013	2/19/2013		EMPLACED	7/25/2013 12:19	941	1052	AGHCF Debris
1186	AERHDM	CCP-AK-ANLE-500	S5400	2/19/2013	2/19/2013				1069	1076	AGHCF FEW
1185	AERHDM	CCP-AK-ANLE-500	S5400	2/19/2013	2/19/2013		EMPLACED	8/7/2013 14:25	1096	1033	AGHCF Debris
1184	AERHDM	CCP-AK-ANLE-500	S5400	2/18/2013	2/18/2013				1113	1075	AGHCF FEW
1183	AERHDM	CCP-AK-ANLE-500	S5400	2/18/2013	2/18/2013		EMPLACED	8/7/2013 14:25	1063	927	AGHCF Debris
1181	AERHDM	CCP-AK-ANLE-500	S5400	1/31/2013		########	EMPLACED	7/9/2013 11:51	1114	1045	AGHCF Debris
1182	AERHDM	CCP-AK-ANLE-500	S5400	1/30/2013		########	EMPLACED	5/9/2013 11:20	1091	1086	AGHCF FEW
1180	AERHDM	CCP-AK-ANLE-500	S5400	1/30/2013		########			1087	1092	AGHCF FEW
1179	AERHDM	CCP-AK-ANLE-500	S5400	1/29/2013		########	APPROVED_CERT		912	1100	AGHCF Debris
1178	AERHDM	CCP-AK-ANLE-500	S5400	1/29/2013		########	EMPLACED	5/9/2013 11:20	931	1029	AGHCF FEW
1177	AERHDM	CCP-AK-ANLE-500	S5400	1/29/2013		########	EMPLACED	7/9/2013 11:51	1098	1022	AGHCF Debris
1176	AERHDM	CCP-AK-ANLE-500	S5400	1/28/2013		########	APPROVED_CERT		1017	993	AGHCF FEW
1175	AERHDM	CCP-AK-ANLE-500	S5400	1/28/2013		########	EMPLACED	7/11/2013 11:51	1097	929	AGHCF Debris
1174	AERHDM	CCP-AK-ANLE-500	S5400	1/24/2013		########	EMPLACED	5/9/2013 11:20	974	1088	AGHCF FEW
1173	AERHDM	CCP-AK-ANLE-500	S5400	1/24/2013		########	EMPLACED	7/11/2013 11:51	1083	947	AGHCF Debris
1172	AERHDM	CCP-AK-ANLE-500	S5400	1/24/2013		########			1016	990	AGHCF FEW
1171	AERHDM	CCP-AK-ANLE-500	S5400	1/23/2013		########	EMPLACED	7/9/2013 11:51	1062	1117	AGHCF Debris
1170	AERHDM	CCP-AK-ANLE-500	S5400	10/8/2012	10/8/2012		EMPLACED	4/30/2013 11:50	1015	1042	AGHCF FEW
1169	AERHDM	CCP-AK-ANLE-500	S5400	10/8/2012		########	EMPLACED	7/10/2013 12:34	1002	980	AGHCF FEW
1168	AERHDM	CCP-AK-ANLE-500	S5400	10/4/2012		########	EMPLACED	7/10/2013 12:34	1055	1060	AGHCF FEW
1167	AERHDM	CCP-AK-ANLE-500	S5400	10/3/2012		########	APPROVED_CERT		1056	964	AGHCF FEW
1166	AERHDM	CCP-AK-ANLE-500	S5400	10/3/2012	10/3/2012		EMPLACED	4/16/2013 10:24	930	1039	AGHCF FEW
1165	AERHDM	CCP-AK-ANLE-500	S5400	10/2/2012	10/2/2012		EMPLACED	4/24/2013 10:30	1041	983	AGHCF FEW
1164	AERHDM	CCP-AK-ANLE-500	S5400	10/2/2012	10/2/2012		EMPLACED	4/24/2013 10:30	1035	925	AGHCF FEW
1163	AERHDM	CCP-AK-ANLE-500	S5400	10/1/2012	10/1/2012		EMPLACED	1/15/2013 13:31	1006	1032	AGHCF FEW
1162	AERHDM	CCP-AK-ANLE-500	S5400	10/1/2012	10/1/2012		EMPLACED	1/15/2013 13:31	953	1064	AGHCF FEW
1159	AERHDM	CCP-AK-ANLE-500	S5400	9/29/2012	9/29/2012		EMPLACED	7/11/2013 11:51	1072	1059	AGHCF Debris
1161	AERHDM	CCP-AK-ANLE-500	S5400	9/28/2012	9/28/2012		EMPLACED	1/4/2013 12:09	1048	1044	AGHCF FEW
1160	AERHDM	CCP-AK-ANLE-500	S5400	9/27/2012	9/27/2012		EMPLACED	4/24/2013 10:30	938	954	AGHCF FEW
1158	AERHDM	CCP-AK-ANLE-500	S5400	9/27/2012	9/27/2012		EMPLACED	5/30/2013 13:00	1065	1034	AGHCF Debris

1157	AERHDM	CCP-AK-ANLE-500	S5400	9/26/2012	9/26/2012		EMPLACED	6/11/2013 12:09	1040	3041	AGHCF Debris
1156	AERHDM	CCP-AK-ANLE-500	S5400	9/18/2012	9/18/2012		EMPLACED	1/4/2013 12:09	1049	1050	AGHCF FEW
1155	AERHDM	CCP-AK-ANLE-500	S5400	9/17/2012	9/17/2012		EMPLACED	1/15/2013 13:31	1037	1038	AGHCF FEW
1154	AERHDM	CCP-AK-ANLE-500	S5400	9/17/2012	9/17/2012		EMPLACED	5/17/2013 12:21	994	1061	AGHCF FEW
1153	AERHDM	CCP-AK-ANLE-500	S5400	8/17/2012	8/17/2012		EMPLACED	5/1/2013 12:25	1014	960	AGHCF FEW
1152	AERHDM	CCP-AK-ANLE-500	S5400	8/17/2012	8/17/2012		EMPLACED	7/17/2013 12:33	1004	1073	AGHCF FEW
1151	AERHDM	CCP-AK-ANLE-500	S5400	8/15/2012	8/15/2012		EMPLACED	7/17/2013 12:33	998	1066	AGHCF FEW
1150	AERHDM	CCP-AK-ANLE-500	S5400	8/15/2012	8/15/2012		EMPLACED	5/1/2013 12:25	1007	1057	AGHCF FEW
1148	AERHDM	CCP-AK-ANLE-500	S5400	8/15/2012	8/15/2012		EMPLACED	5/1/2013 12:25	1013	970	AGHCF FEW
1146	AERHDM	CCP-AK-ANLE-500	S5400	8/14/2012	8/14/2012		EMPLACED	5/17/2013 12:21	1005	1053	AGHCF FEW
1149	AERHDM	CCP-AK-ANLE-500	S5400	8/9/2012	8/9/2012		EMPLACED	5/30/2013 13:00	1068	1036	AGHCF Debris
1147	AERHDM	CCP-AK-ANLE-500	S5400	8/8/2012	8/8/2012		EMPLACED	6/11/2013 12:09	1047	1043	AGHCF Debris
1138	AERHDM	CCP-AK-ANLE-500	S5400	8/8/2012	8/8/2012		EMPLACED	5/30/2013 13:00	1067	1046	AGHCF Debris
1145	AERHDM	CCP-AK-ANLE-500	S5400	5/29/2012	5/29/2012		EMPLACED	10/16/2012 13:16	905	972	AGHCF Debris
1144	AERHDM	CCP-AK-ANLE-500	S5400	5/29/2012	5/29/2012		EMPLACED	11/8/2012 13:29	978	976	AGHCF Debris
1143	AERHDM	CCP-AK-ANLE-500	S5400	5/29/2012	5/29/2012		EMPLACED	11/8/2012 13:29	904	910	AGHCF Debris
1142	AERHDM	CCP-AK-ANLE-500	S5400	5/25/2012	5/25/2012		EMPLACED	11/8/2012 13:29	973	971	AGHCF Debris
1141	AERHDM	CCP-AK-ANLE-500	S5400	5/25/2012	5/25/2012		EMPLACED	4/16/2013 10:24	957	981	AGHCF FEW
1140	AERHDM	CCP-AK-ANLE-500	S5400	5/24/2012	5/24/2012		EMPLACED	4/5/2013 13:03	963	958	AGHCF FEW
1139	AERHDM	CCP-AK-ANLE-500	S5400	5/22/2012	5/22/2012		EMPLACED	4/5/2013 13:03	979	982	AGHCF FEW
1137	AERHDM	CCP-AK-ANLE-500	S5400	5/22/2012	5/22/2012		EMPLACED	4/5/2013 13:03	967	996	AGHCF FEW
1136	AERHDM	CCP-AK-ANLE-500	S5400	5/21/2012	5/21/2012		EMPLACED	4/18/2013 11:06	1001	1009	AGHCF FEW
1135	AERHDM	CCP-AK-ANLE-500	S5400	5/18/2012	5/18/2012		EMPLACED	10/16/2012 13:16	991	943	AGHCF Debris
1134	AERHDM	CCP-AK-ANLE-500	S5400	5/18/2012	5/18/2012		EMPLACED	10/16/2012 13:16	987	914	AGHCF Debris
1133	AERHDM	CCP-AK-ANLE-500	S5400	5/17/2012	5/17/2012		EMPLACED	10/12/2012 12:26	988	965	AGHCF Debris
1132	AERHDM	CCP-AK-ANLE-500	S5400	5/16/2012	5/16/2012		EMPLACED	10/12/2012 12:26	1010	918	AGHCF Debris
1131	AERHDM	CCP-AK-ANLE-500	S5400	5/15/2012	5/15/2012		EMPLACED	10/30/2012 11:54	985	1012	AGHCF Debris
1130	AERHDM	CCP-AK-ANLE-500	S5400	5/15/2012	5/15/2012		EMPLACED	10/12/2012 12:26	951	913	AGHCF Debris
1129	AERHDM	CCP-AK-ANLE-500	S5400	5/14/2012	5/14/2012		EMPLACED	9/28/2012 12:29	952	989	AGHCF Debris
1128	AERHDM	CCP-AK-ANLE-500	S5400	5/14/2012	5/14/2012		EMPLACED	9/28/2012 12:29	1003	992	AGHCF Debris
1127	AERHDM	CCP-AK-ANLE-500	S5400	5/14/2012	5/14/2012		EMPLACED	9/28/2012 12:29	986	977	AGHCF Debris
1126	AERHDM	CCP-AK-ANLE-500	S5400	5/11/2012	5/11/2012		EMPLACED	9/27/2012 12:20	1011	995	AGHCF Debris
1125	AERHDM	CCP-AK-ANLE-500	S5400	5/10/2012	5/10/2012		EMPLACED	9/27/2012 12:20	962	968	AGHCF Debris
1124	AERHDM	CCP-AK-ANLE-500	S5400	5/10/2012	5/10/2012		EMPLACED	9/27/2012 12:20	924	915	AGHCF Debris
1123	AERHDM	CCP-AK-ANLE-500	S5400	5/10/2012	5/10/2012		EMPLACED	9/19/2012 11:10	997	945	AGHCF Debris
1122	AERHDM	CCP-AK-ANLE-500	S5400	5/9/2012	5/9/2012		EMPLACED	9/19/2012 11:10	984	999	AGHCF Debris
1121	AERHDM	CCP-AK-ANLE-500	S5400	5/4/2012	5/4/2012		EMPLACED	9/19/2012 11:10	1008	950	AGHCF Debris
1115	AERHDM	CCP-AK-ANLE-500	S5400	3/28/2012	3/28/2012		EMPLACED	7/11/2012 12:16	908	919	AGHCF FEW and metmounts
1120	AERHDM	CCP-AK-ANLE-500	S5400	3/27/2012	3/27/2012	4/4/2012 4/4/2012			789	900	AGHCF Debris and metmounts; 1120H being a 30g drum
1119	AERHDM	CCP-AK-ANLE-500	S5400	3/27/2012	3/27/2012		EMPLACED	8/24/2012 10:31	895	946	AGHCF Debris and metmounts
1118	AERHDM	CCP-AK-ANLE-500	S5400	3/27/2012	3/27/2012		EMPLACED	8/24/2012 10:31	926	899	AGHCF Debris and metmounts
1117	AERHDM	CCP-AK-ANLE-500	S5400	3/26/2012	3/26/2012		EMPLACED	8/24/2012 10:31	916	892	AGHCF Debris
1114	AERHDM	CCP-AK-ANLE-500	S5400	3/26/2012	3/26/2012		EMPLACED	7/11/2012 12:16	922	923	AGHCF FEW
1116	AERHDM	CCP-AK-ANLE-500	S5400	3/23/2012	3/23/2012		EMPLACED	7/17/2013 12:33	894	893	AGHCF Debris and metmounts
1113	AERHDM	CCP-AK-ANLE-500	S5400	3/23/2012	3/23/2012		EMPLACED	7/11/2012 12:16	911	890	AGHCF FEW and metmounts

1112	AERHDM	CCP-AK-ANLE-500	S5400	3/22/2012	3/22/2012			EMPLACED	4/16/2013 10:24	842	907	AGHCF FEW
1111	AERHDM	CCP-AK-ANLE-500	S5400	3/22/2012	3/22/2012			EMPLACED	8/21/2012 12:36	942	921	AGHCF FEW and metmounts
1110	AERHDM	CCP-AK-ANLE-500	S5400	3/20/2012	3/20/2012			EMPLACED	1/4/2013 12:09	891	940	AGHCF FEW and metmounts
1109	AERHDM	CCP-AK-ANLE-500	S5400	3/19/2012	3/19/2012			EMPLACED	5/17/2013 12:21	937	909	AGHCF FEW
1108	AERHDM	CCP-AK-ANLE-500	S5400	2/29/2012	2/29/2012			EMPLACED	6/11/2013 12:09	935	936	AGHCF Debris (metmounts)
1099	AERHDM	CCP-AK-ANLE-500	S5400	2/27/2012	2/27/2012			EMPLACED	4/30/2013 11:50	903	902	AGHCF FEW
1106	AERHDM	CCP-AK-ANLE-500	S5400	2/24/2012	2/24/2012			EMPLACED	10/30/2012 11:54	858	901	AGHCF Debris
1105	AERHDM	CCP-AK-ANLE-500	S5400	2/24/2012	2/24/2012			EMPLACED	8/21/2012 12:36	932	883	AGHCF FEW and metmounts
1104	AERHDM	CCP-AK-ANLE-500	S5400	2/24/2012	2/24/2012			EMPLACED	7/13/2012 13:37	852	886	AGHCF Debris
1103	AERHDM	CCP-AK-ANLE-500	S5400	2/23/2012	2/23/2012			EMPLACED	8/18/2012 11:58	920	939	AGHCF FEW and metmounts
1102	AERHDM	CCP-AK-ANLE-500	S5400	2/22/2012	2/22/2012			EMPLACED	7/13/2012 13:37	887	888	AGHCF Debris
1101	AERHDM	CCP-AK-ANLE-500	S5400	2/22/2012	2/22/2012			EMPLACED	4/18/2013 11:06	843	933	AGHCF FEW
1107	AERHDM	CCP-AK-ANLE-500	S5400	2/21/2012	2/21/2012			EMPLACED	8/21/2012 12:36	934	906	AGHCF FEW and metmounts
1100	AERHDM	CCP-AK-ANLE-500	S5400	2/21/2012	2/21/2012			EMPLACED	7/13/2012 13:37	896	889	AGHCF Debris
1098	AERHDM	CCP-AK-ANLE-500	S5400	2/21/2012	2/21/2012			EMPLACED	6/8/2012 11:58	898	897	AGHCF Debris
1092	AERHDM	CCP-AK-ANLE-500	S5400	2/3/2012	2/3/2012	4/3/2012	4/3/2012			850	840	AGHCF FEW; 1092H being a 30g drum overpacked into 55
1097	AERHDM	CCP-AK-ANLE-500	S5400	2/2/2012	2/2/2012			EMPLACED	6/8/2012 11:58	856	849	AGHCF Debris
1095	AERHDM	CCP-AK-ANLE-500	S5400	2/1/2012	2/1/2012			EMPLACED	6/8/2012 11:58	855	882	AGHCF Debris
1094	AERHDM	CCP-AK-ANLE-500	S5400	2/1/2012	2/1/2012			EMPLACED	4/27/2012 11:26	847	845	AGHCF FEW
1096	AERHDM	CCP-AK-ANLE-500	S5400	1/31/2012	1/31/2012			EMPLACED	5/2/2012 11:48	848	839	AGHCF FEW
1090	AERHDM	CCP-AK-ANLE-500	S5400	1/30/2012	1/30/2012			EMPLACED	4/30/2013 11:50	841	851	AGHCF FEW
1093	AERHDM	CCP-AK-ANLE-500	S5400	1/27/2012	1/27/2012			EMPLACED	6/7/2012 11:37	846	885	AGHCF Debris
1091	AERHDM	CCP-AK-ANLE-500	S5400	1/27/2012	1/27/2012			EMPLACED	6/7/2012 11:37	796	704	AGHCF Debris
1089	AERHDM	CCP-AK-ANLE-500	S5400	12/13/2011	12/13/2011			EMPLACED	7/10/2013 12:34	844	853	AGHCF FEW
1085	AERHDM	CCP-AK-ANLE-500	S5400	12/12/2011	12/12/2011			EMPLACED	5/2/2012 11:48	871	874	AGHCF FEW
1084	AERHDM	CCP-AK-ANLE-500	S5400	12/9/2011	12/9/2011			EMPLACED	4/18/2013 11:06	822	837	AGHCF FEW
1083	AERHDM	CCP-AK-ANLE-500	S5400	12/8/2011	12/8/2011			EMPLACED	8/18/2012 11:58	857	854	AGHCF FEW
1082	AERHDM	CCP-AK-ANLE-500	S5400	12/7/2011	12/7/2011	4/3/2012	4/3/2012			879	834	AGHCF FEW; 1082H being a 30g drum overpacked into 55
1081	AERHDM	CCP-AK-ANLE-500	S5400	12/6/2011	12/6/2011			EMPLACED	4/27/2012 11:26	866	833	AGHCF FEW
1079	AERHDM	CCP-AK-ANLE-500	S5400	12/6/2011	12/6/2011			EMPLACED	8/18/2012 11:58	875	873	AGHCF FEW
1080	AERHDM	CCP-AK-ANLE-500	S5400	12/5/2011	12/5/2011			EMPLACED	4/27/2012 11:26	864	880	AGHCF FEW
1078	AERHDM	CCP-AK-ANLE-500	S5400	12/2/2011	12/2/2011			EMPLACED	5/24/2012 11:09	884	877	AGHCF FEW
1077	AERHDM	CCP-AK-ANLE-500	S5400	12/1/2011	12/1/2011			EMPLACED	5/24/2012 11:09	878	870	AGHCF FEW
1088	AERHDM	CCP-AK-ANLE-500	S5400	11/30/2011	11/30/2011			EMPLACED	6/7/2012 11:37	867	860	AGHCF Debris
1087	AERHDM	CCP-AK-ANLE-500	S5400	11/30/2011	11/30/2011			EMPLACED	6/6/2012 11:58	865	869	AGHCF Debris
1076	AERHDM	CCP-AK-ANLE-500	S5400	11/29/2011	11/29/2011			EMPLACED	5/24/2012 11:09	838	863	AGHCF FEW
1075	AERHDM	CCP-AK-ANLE-500	S5400	11/28/2011	11/28/2011			EMPLACED	5/2/2012 11:48	862	859	AGHCF FEW
1086	AERHDM	CCP-AK-ANLE-500	S5400	11/23/2011	11/23/2011			EMPLACED	6/6/2012 11:58	861	639	AGHCF Debris
1074	AERHDM	CCP-AK-ANLE-500	S5400	11/22/2011	11/22/2011			EMPLACED	5/18/2012 11:17	868	872	AGHCF FEW
1061	AERHDM	CCP-AK-ANLE-500	S5400	10/20/2011	10/20/2011			EMPLACED	11/30/2011 11:34	815	876	AGHCF FEW
1068	AERHDM	CCP-AK-ANLE-500	S5400	10/19/2011	10/19/2011			EMPLACED	11/30/2011 11:34	835	820	AGHCF FEW
1067	AERHDM	CCP-AK-ANLE-500	S5400	10/19/2011	10/19/2011			EMPLACED	5/18/2012 11:17	832	825	AGHCF FEW
1066	AERHDM	CCP-AK-ANLE-500	S5400	10/17/2011	10/17/2011			EMPLACED	11/11/2011 11:27	829	831	AGHCF FEW
1065	AERHDM	CCP-AK-ANLE-500	S5400	10/17/2011	10/17/2011			EMPLACED	11/8/2011 11:57	808	814	AGHCF FEW
1072	AERHDM	CCP-AK-ANLE-500	S5400	10/14/2011	10/14/2011			EMPLACED	6/6/2012 11:58	769	783	AGHCF Debris
1063	AERHDM	CCP-AK-ANLE-500	S5400	10/14/2011	10/14/2011			EMPLACED	11/11/2011 11:27	823	818	AGHCF FEW
1035	AERHDM	CCP-AK-ANLE-500	S5400	10/13/2011	10/13/2011			EMPLACED	11/8/2011 11:57	821	813	AGHCF FEW

RW49893	AERHDM	CCP-AK-ANLE-500	S5400	9/30/2011	9/30/2011			EMPLACED	11/20/2012 11:28				K-Wing Debris
RW49822	AERHDM	CCP-AK-ANLE-500	S5400	9/28/2011	9/28/2011			EMPLACED	8/30/2012 11:52				K-Wing Debris
RW49821	AERHDM	CCP-AK-ANLE-500	S5400	9/22/2011	9/22/2011			EMPLACED	8/29/2012 11:47				K-Wing Debris
RW49820	AERHDM	CCP-AK-ANLE-500	S5400	9/21/2011	9/21/2011			EMPLACED	8/29/2012 11:47				K-Wing Debris
RW49819	AERHDM	CCP-AK-ANLE-500	S5400	9/16/2011	9/16/2011			EMPLACED	8/29/2012 11:47				K-Wing Debris
RW49818	AERHDM	CCP-AK-ANLE-500	S5400	9/14/2011	9/14/2011			EMPLACED	8/30/2012 11:52				K-Wing Debris
RW49817	AERHDM	CCP-AK-ANLE-500	S5400	9/8/2011	9/8/2011			EMPLACED	10/14/2011 12:34	6287			K Wing Debris
RW49816	AERHDM	CCP-AK-ANLE-500	S5400	9/7/2011	9/7/2011			EMPLACED	11/20/2012 11:28				K Wing Debris
RW49815	AERHDM	CCP-AK-ANLE-500	S5400	9/2/2011	9/2/2011			EMPLACED	10/13/2011 12:14	6289			K Wing Debris
RW49814	AERHDM	CCP-AK-ANLE-500	S5400	9/1/2011	9/1/2011			EMPLACED	10/13/2011 12:14	6285			K Wing Debris
RW49813	AERHDM	CCP-AK-ANLE-500	S5400	8/30/2011	8/30/2011			EMPLACED	10/12/2011 12:10	6288			K Wing Debris
RW48268	AERHDM	CCP-AK-ANLE-500	S5400	8/26/2011	8/26/2011			EMPLACED	10/12/2011 12:10	6283			K Wing Debris
RW48267	AERHDM	CCP-AK-ANLE-500	S5400	8/24/2011	8/24/2011			EMPLACED	10/12/2011 12:10	6281			K Wing Debris
RW48266	AERHDM	CCP-AK-ANLE-500	S5400	8/11/2011	8/11/2011					CB #1A			K-Wing Debris
RW48265	AERHDM	CCP-AK-ANLE-500	S5400	8/10/2011	8/10/2011					CB #1	CB #2		K-Wing Debris
RW48264	AERHDM	CCP-AK-ANLE-500	S5400	8/9/2011	8/9/2011					CB #5	CB #6		K-Wing Debris
RW48263	AERHDM	CCP-AK-ANLE-500	S5400	8/5/2011	8/5/2011			EMPLACED	10/13/2011 12:14	6282			K Wing Debris
RW48262	AERHDM	CCP-AK-ANLE-500	S5400	8/4/2011	8/4/2011			EMPLACED	10/14/2011 12:34	6284			K Wing Debris
RW48261	AERHDM	CCP-AK-ANLE-500	S5400	8/2/2011	8/2/2011			EMPLACED	10/14/2011 12:34				K Wing Debris
RW48260	AERHDM	CCP-AK-ANLE-500	S5400	7/28/2011	7/28/2011					CB #7	CB #8		K-Wing Debris
RW48259	AERHDM	CCP-AK-ANLE-500	S5400	7/26/2011	7/26/2011					CB #3	CB #4		K-Wing Debris
1053	AERHDM	CCP-AK-ANLE-500	S5400	7/22/2011	7/22/2011	4/2/2012	4/2/2012			785	812		AGHCF FEW; 1053H being a 30g drum overpacked into 5
1054	AERHDM	CCP-AK-ANLE-500	S5400	7/18/2011	7/18/2011			EMPLACED	10/20/2011 12:49	798	811		AGHCF FEW
1051	AERHDM	CCP-AK-ANLE-500	S5400	7/18/2011	7/18/2011			EMPLACED	10/20/2011 12:49	784	806		AGHCF FEW
1050	AERHDM	CCP-AK-ANLE-500	S5400	7/18/2011	7/18/2011			EMPLACED	10/19/2011 11:48	761	791		AGHCF FEW
1052	AERHDM	CCP-AK-ANLE-500	S5400	7/15/2011	7/15/2011	4/2/2012	4/2/2012			758	800		AGHCF FEW; 1052H being a 30g drum overpacked into 5
1027	AERHDM	CCP-AK-ANLE-500	S5400	7/15/2011	7/15/2011			EMPLACED	10/19/2011 11:48	760	807		AGHCF FEW
1058	AERHDM	CCP-AK-ANLE-500	S5400	7/13/2011	7/13/2011			EMPLACED	8/4/2011 11:48	810	805		AGHCF Debris (metmounts)
1030	AERHDM	CCP-AK-ANLE-500	S5400	6/9/2011	6/9/2011			EMPLACED	7/27/2011 11:57	797	775		AGHCF FEW Debris
1015	AERHDM	CCP-AK-ANLE-500	S5400	6/9/2011	6/9/2011			EMPLACED	10/26/2011 12:06	741	779		AGHCF Debris
1029	AERHDM	CCP-AK-ANLE-500	S5400	6/8/2011	6/8/2011			EMPLACED	10/19/2011 11:48	720	774		AGHCF FEW Debris
1013	AERHDM	CCP-AK-ANLE-500	S5400	6/7/2011	6/7/2011			EMPLACED	7/28/2011 10:11	763	778		AGHCF FEW Debris
1012	AERHDM	CCP-AK-ANLE-500	S5400	6/6/2011	6/6/2011			EMPLACED	7/15/2011 11:36	765	777		AGHCF FEW Debris
1010	AERHDM	CCP-AK-ANLE-500	S5400	6/3/2011	6/3/2011			EMPLACED	7/28/2011 10:11	762	773		AGHCF FEW Debris
1007	AERHDM	CCP-AK-ANLE-500	S5400	6/3/2011	6/3/2011			EMPLACED	7/27/2011 11:57	764	780		AGHCF FEW Debris
1006	AERHDM	CCP-AK-ANLE-500	S5400	6/2/2011	6/2/2011			EMPLACED	7/27/2011 11:57	772	781		AGHCF FEW Debris
1005	AERHDM	CCP-AK-ANLE-500	S5400	5/31/2011	5/31/2011			EMPLACED	7/14/2011 12:29	792	770		AGHCF FEW Debris
1037	AERHDM	CCP-AK-ANLE-500	S5400	3/24/2011	3/24/2011			EMPLACED	8/4/2011 11:48	742	757		AGHCF Debris (metmounts)
1036	AERHDM	CCP-AK-ANLE-500	S5400	3/23/2011	3/23/2011			EMPLACED	5/22/2011 12:21	747	751		AGHCF FEW
1034	AERHDM	CCP-AK-ANLE-500	S5400	3/23/2011	3/23/2011			EMPLACED	5/20/2011 10:29	749	748		AGHCF FEW
1033	AERHDM	CCP-AK-ANLE-500	S5400	3/23/2011	3/23/2011			EMPLACED	5/22/2011 12:21	745	752		AGHCF FEW
1032	AERHDM	CCP-AK-ANLE-500	S5400	3/22/2011	3/22/2011			EMPLACED	5/24/2011 11:23	746	756		AGHCF FEW
1031	AERHDM	CCP-AK-ANLE-500	S5400	3/22/2011	3/22/2011	4/3/2012	4/3/2012			739	755		AGHCF FEW; 1031H being a 30g drum overpacked into 5
1028	AERHDM	CCP-AK-ANLE-500	S5400	3/21/2011	3/21/2011			EMPLACED	7/14/2011 12:29	750	753		AGHCF FEW
RW48258	AERHDM	CCP-AK-ANLE-500	S5400	3/15/2011	3/15/2011			EMPLACED	8/9/2011 11:52				K Wing Debris
1049	AERHDM	CCP-AK-ANLE-500	S5400	3/11/2011	3/11/2011	4/2/2012	4/2/2012						1049H being a 30g drum overpacked into 55 gallon drum
1048	AERHDM	CCP-AK-ANLE-500	S5400	3/10/2011	3/10/2011			EMPLACED	5/12/2011 10:50				

1047	AERHDM	CCP-AK-ANLE-500	S5400	3/10/2011	3/10/2011			EMPLACED	5/11/2011 12:37			
1046	AERHDM	CCP-AK-ANLE-500	S5400	3/10/2011	3/10/2011			EMPLACED	5/11/2011 12:37			
RW48257	AERHDM	CCP-AK-ANLE-500	S5400	3/9/2011	3/9/2011			EMPLACED	8/9/2011 11:52			K Wing Debris
1045	AERHDM	CCP-AK-ANLE-500	S5400	3/9/2011	3/9/2011			EMPLACED	5/11/2011 12:37			
1044	AERHDM	CCP-AK-ANLE-500	S5400	3/9/2011	3/9/2011			EMPLACED	5/10/2011 12:56			
1043	AERHDM	CCP-AK-ANLE-500	S5400	3/9/2011	3/9/2011			EMPLACED	5/10/2011 12:56			
1042	AERHDM	CCP-AK-ANLE-500	S5400	3/8/2011	3/8/2011			EMPLACED	5/12/2011 10:50			
1041	AERHDM	CCP-AK-ANLE-500	S5400	3/8/2011	3/8/2011			EMPLACED	5/10/2011 12:56			
1040	AERHDM	CCP-AK-ANLE-500	S5400	3/8/2011	3/8/2011			EMPLACED	5/8/2011 11:44			
1039	AERHDM	CCP-AK-ANLE-500	S5400	3/7/2011	3/7/2011			EMPLACED	5/8/2011 11:44			
1038	AERHDM	CCP-AK-ANLE-500	S5400	3/7/2011	3/7/2011			EMPLACED	5/8/2011 11:44			
RW48253	AERHDM	CCP-AK-ANLE-500	S5400	3/4/2011	3/4/2011			EMPLACED	5/13/2011 12:16			K-Wing Debris
RW48256	AERHDM	CCP-AK-ANLE-500	S5400	3/2/2011	3/2/2011			EMPLACED	5/14/2011 13:52			K-Wing Debris
RW48255	AERHDM	CCP-AK-ANLE-500	S5400	2/24/2011	2/24/2011			EMPLACED	5/14/2011 13:52			K-Wing Debris
RW48254	AERHDM	CCP-AK-ANLE-500	S5400	2/22/2011	2/22/2011			EMPLACED	5/14/2011 13:52			K-Wing Debris
1016	AERHDM	CCP-AK-ANLE-500	S5400	2/17/2011	2/17/2011			EMPLACED	7/7/2011 12:09	711	712	AGHCF FEW
1014	AERHDM	CCP-AK-ANLE-500	S5400	2/17/2011	2/17/2011			EMPLACED	8/4/2011 11:48	726	723	AGHCF Debris (metmounts)
1011	AERHDM	CCP-AK-ANLE-500	S5400	2/17/2011	2/17/2011			EMPLACED	6/30/2011 13:27	727	716	AGHCF FEW
RW48252	AERHDM	CCP-AK-ANLE-500	S5400	2/16/2011	2/16/2011			EMPLACED	5/13/2011 12:16			K-Wing Debris
1009	AERHDM	CCP-AK-ANLE-500	S5400	2/16/2011	2/16/2011			EMPLACED	6/21/2011 12:15	725	724	AGHCF FEW
1008	AERHDM	CCP-AK-ANLE-500	S5400	2/15/2011	2/15/2011			EMPLACED	6/28/2011 13:02	719	717	AGHCF FEW
1004	AERHDM	CCP-AK-ANLE-500	S5400	2/15/2011	2/15/2011			EMPLACED	7/12/2011 11:59	715	713	AGHCF FEW
1003	AERHDM	CCP-AK-ANLE-500	S5400	2/14/2011	2/14/2011			EMPLACED	5/15/2011 13:31	721	718	AGHCF FEW
RW48251	AERHDM	CCP-AK-ANLE-500	S5400	2/11/2011	2/11/2011			EMPLACED	5/13/2011 12:16			K-Wing Debris
1026	AERHDM	CCP-AK-ANLE-500	S5400	1/27/2011	1/27/2011			EMPLACED	5/12/2011 10:50			
1025	AERHDM	CCP-AK-ANLE-500	S5400	1/27/2011	1/27/2011			EMPLACED	4/29/2011 12:22			
1024	AERHDM	CCP-AK-ANLE-500	S5400	1/27/2011	1/27/2011			EMPLACED	4/29/2011 12:22			
1023	AERHDM	CCP-AK-ANLE-500	S5400	1/26/2011	1/26/2011			EMPLACED	4/29/2011 12:22			
1022	AERHDM	CCP-AK-ANLE-500	S5400	1/26/2011	1/26/2011			EMPLACED	4/28/2011 14:13			
1021	AERHDM	CCP-AK-ANLE-500	S5400	1/25/2011	1/25/2011			EMPLACED	4/28/2011 14:13			
1020	AERHDM	CCP-AK-ANLE-500	S5400	1/25/2011	1/25/2011			EMPLACED	4/28/2011 14:13			
1019	AERHDM	CCP-AK-ANLE-500	S5400	1/25/2011	1/25/2011			EMPLACED	4/20/2011 12:40			
1018	AERHDM	CCP-AK-ANLE-500	S5400	1/24/2011	1/24/2011			EMPLACED	4/20/2011 12:40			
1017	AERHDM	CCP-AK-ANLE-500	S5400	1/24/2011	1/24/2011			EMPLACED	4/20/2011 12:40			
RW48250	AERHDM	CCP-AK-ANLE-500	S5400	1/19/2011	1/19/2011			EMPLACED	5/1/2011 12:03			
RW48249	AERHDM	CCP-AK-ANLE-500	S5400	1/17/2011	1/17/2011			EMPLACED	5/1/2011 12:03			
RW18919	AERHDM	CCP-AK-ANLE-500	S5400	1/7/2011	1/7/2011			EMPLACED	5/1/2011 12:03			
RW18918	AERHDM	CCP-AK-ANLE-500	S5400	1/5/2011	1/5/2011			EMPLACED	5/7/2011 11:03			
1002	AERHDM	CCP-AK-ANLE-500	S5400	12/22/2010	12/22/2010			EMPLACED	5/22/2011 12:21	678	672	AGHCF FEW
RW18917	AERHDM	CCP-AK-ANLE-500	S5400	12/21/2010	12/21/2010			EMPLACED	5/7/2011 11:03			
RW18916	AERHDM	CCP-AK-ANLE-500	S5400	12/17/2010	12/17/2010			EMPLACED	5/7/2011 11:03			
1001	AERHDM	CCP-AK-ANLE-500	S5400	12/16/2010	12/16/2010			EMPLACED	4/19/2011 12:31			
1000	AERHDM	CCP-AK-ANLE-500	S5400	12/16/2010	12/16/2010			EMPLACED	4/19/2011 12:31			
999	AERHDM	CCP-AK-ANLE-500	S5400	12/15/2010	12/15/2010	4/3/2012	4/3/2012					999H being a 30g drum overpacked into 55 gallon drum t
998	AERHDM	CCP-AK-ANLE-500	S5400	12/15/2010	12/15/2010			EMPLACED	4/16/2011 12:53			
997	AERHDM	CCP-AK-ANLE-500	S5400	12/15/2010	12/15/2010	4/3/2012	4/3/2012					997H being a 30g drum overpacked into 55 gallon drum t
996	AERHDM	CCP-AK-ANLE-500	S5400	12/14/2010	12/14/2010			EMPLACED	4/16/2011 12:53			

995	AERHDM	CCP-AK-ANLE-500	S5400	12/14/2010	12/14/2010			EMPLACED	4/16/2011 12:53			
RW18915	AERHDM	CCP-AK-ANLE-500	S5400	11/2/2010	11/2/2010			EMPLACED	11/24/2010 11:38			
RW18914	AERHDM	CCP-AK-ANLE-500	S5400	10/28/2010	10/28/2010			EMPLACED	11/20/2010 11:50			
RW18913	AERHDM	CCP-AK-ANLE-500	S5400	10/26/2010	10/26/2010			EMPLACED	8/30/2012 11:52			
994	AERHDM	CCP-AK-ANLE-500	S5400	10/26/2010	10/26/2010			EMPLACED	4/19/2011 12:31			
993	AERHDM	CCP-AK-ANLE-500	S5400	10/25/2010	10/25/2010			EMPLACED	11/23/2010 17:10			
992	AERHDM	CCP-AK-ANLE-500	S5400	10/25/2010	10/25/2010			EMPLACED	11/19/2010 11:09			
991	AERHDM	CCP-AK-ANLE-500	S5400	10/22/2010	10/22/2010	4/3/2012	4/3/2012					991H being a 30g drum overpacked into 55 gallon drum t
990	AERHDM	CCP-AK-ANLE-500	S5400	10/22/2010	10/22/2010			EMPLACED	11/19/2010 11:09			
989	AERHDM	CCP-AK-ANLE-500	S5400	10/21/2010	10/21/2010			EMPLACED	11/19/2010 11:09			
RW18912	AERHDM	CCP-AK-ANLE-500	S5400	10/19/2010	10/19/2010			EMPLACED	11/20/2010 11:50			
RW18911	AERHDM	CCP-AK-ANLE-500	S5400	10/13/2010	10/13/2010			EMPLACED	11/20/2010 11:50			
RW18910	AERHDM	CCP-AK-ANLE-500	S5400	10/6/2010	10/6/2010			EMPLACED	11/14/2010 11:26			
RW18909	AERHDM	CCP-AK-ANLE-500	S5400	9/30/2010	9/30/2010			EMPLACED	11/24/2010 11:38			
RW18908	AERHDM	CCP-AK-ANLE-500	S5400	9/28/2010	9/28/2010			EMPLACED	11/14/2010 11:26			
RW18907	AERHDM	CCP-AK-ANLE-500	S5400	9/24/2010	9/24/2010			EMPLACED	11/24/2010 11:38			
RW18903	AERHDM	CCP-AK-ANLE-500	S5400	9/22/2010	9/22/2010			EMPLACED	11/14/2010 11:26			
988	AERHDM	CCP-AK-ANLE-500	S5400	9/10/2010	9/10/2010	########	########	EMPLACED	11/23/2010 17:10			
987	AERHDM	CCP-AK-ANLE-500	S5400	9/10/2010	9/10/2010			EMPLACED	11/9/2010 12:19			
986	AERHDM	CCP-AK-ANLE-500	S5400	9/10/2010	9/10/2010			EMPLACED	11/9/2010 12:19			
985	AERHDM	CCP-AK-ANLE-500	S5400	9/9/2010	9/9/2010			EMPLACED	10/22/2010 12:30			
984	AERHDM	CCP-AK-ANLE-500	S5400	9/9/2010	9/9/2010			EMPLACED	11/9/2010 12:19			
983	AERHDM	CCP-AK-ANLE-500	S5400	9/9/2010	9/9/2010	########	########	EMPLACED	11/23/2010 17:10			
982	AERHDM	CCP-AK-ANLE-500	S5400	9/9/2010	9/9/2010			EMPLACED	10/22/2010 12:30			
981	AERHDM	CCP-AK-ANLE-500	S5400	9/8/2010	9/8/2010			EMPLACED	10/22/2010 12:30			
980	AERHDM	CCP-AK-ANLE-500	S5400	9/8/2010	9/8/2010			EMPLACED	10/19/2010 11:11			
979	AERHDM	CCP-AK-ANLE-500	S5400	8/17/2010	8/17/2010			EMPLACED	10/27/2010 12:45			
977	AERHDM	CCP-AK-ANLE-500	S5400	8/17/2010	8/17/2010			EMPLACED	11/3/2010 12:25			
976	AERHDM	CCP-AK-ANLE-500	S5400	8/12/2010	8/12/2010			EMPLACED	10/19/2010 11:11			
975	AERHDM	CCP-AK-ANLE-500	S5400	8/12/2010	8/12/2010			EMPLACED	10/19/2010 11:11			
973	AERHDM	CCP-AK-ANLE-500	S5400	7/29/2010	7/29/2010	########	########	EMPLACED	11/21/2010 10:38			
972	AERHDM	CCP-AK-ANLE-500	S5400	7/29/2010	7/29/2010			EMPLACED	11/3/2010 12:25			
971	AERHDM	CCP-AK-ANLE-500	S5400	7/28/2010	7/28/2010			EMPLACED	11/2/2010 12:16			
969	AERHDM	CCP-AK-ANLE-500	S5400	7/27/2010	7/27/2010			EMPLACED	11/2/2010 12:16			
978	AERHDM	CCP-AK-ANLE-500	S5400	7/26/2010	7/26/2010			EMPLACED	5/24/2011 11:23	626	631	AGHCF FEW
974	AERHDM	CCP-AK-ANLE-500	S5400	7/26/2010	7/26/2010			EMPLACED	11/3/2010 12:25			
968	AERHDM	CCP-AK-ANLE-500	S5400	7/26/2010	7/26/2010			EMPLACED	5/24/2011 11:23	619	621	AGHCF FEW
967	AERHDM	CCP-AK-ANLE-500	S5400	7/22/2010	7/22/2010	########	########	EMPLACED	11/21/2010 10:38			
966	AERHDM	CCP-AK-ANLE-500	S5400	7/22/2010	7/22/2010			EMPLACED	10/18/2010 19:10			
965	AERHDM	CCP-AK-ANLE-500	S5400	7/22/2010	7/22/2010			EMPLACED	10/18/2010 19:10			
964	AERHDM	CCP-AK-ANLE-500	S5400	7/22/2010	7/22/2010			EMPLACED	10/18/2010 19:10			
963	AERHDM	CCP-AK-ANLE-500	S5400	7/21/2010	7/21/2010			EMPLACED	10/15/2010 11:56			
962	AERHDM	CCP-AK-ANLE-500	S5400	7/21/2010	7/21/2010			EMPLACED	10/15/2010 11:56			
961	AERHDM	CCP-AK-ANLE-500	S5400	7/20/2010	7/20/2010			EMPLACED	10/15/2010 11:56			
958	AERHDM	CCP-AK-ANLE-500	S5400	6/30/2010	6/30/2010			EMPLACED	11/2/2010 12:16			
959	AERHDM	CCP-AK-ANLE-500	S5400	6/28/2010	6/28/2010	########	########	EMPLACED	11/21/2010 10:38			
957	AERHDM	CCP-AK-ANLE-500	S5400	6/28/2010	6/28/2010			EMPLACED	10/24/2010 10:53			

960	AERHDM	CCP-AK-ANLE-500	S5400	6/25/2010	6/25/2010			EMPLACED	10/27/2010 12:45	
955	AERHDM	CCP-AK-ANLE-500	S5400	6/24/2010	6/24/2010			EMPLACED	7/14/2011 12:29	
956	AERHDM	CCP-AK-ANLE-500	S5400	6/22/2010	6/22/2010			EMPLACED	6/22/2011 13:38	
954	AERHDM	CCP-AK-ANLE-500	S5400	6/22/2010	6/22/2010			EMPLACED	6/28/2011 13:02	
953	AERHDM	CCP-AK-ANLE-500	S5400	6/22/2010	6/22/2010			EMPLACED	6/30/2011 13:27	
952	AERHDM	CCP-AK-ANLE-500	S5400	6/21/2010	6/21/2010			EMPLACED	6/24/2011 10:38	
RW18906	AERHDM	CCP-AK-ANLE-500	S5400	6/8/2010	6/8/2010			EMPLACED	10/9/2010 11:28	
RW18905	AERHDM	CCP-AK-ANLE-500	S5400	6/4/2010	6/4/2010			EMPLACED	10/9/2010 11:28	
RW18904	AERHDM	CCP-AK-ANLE-500	S5400	6/4/2010	6/4/2010			EMPLACED	4/25/2012 12:26	Pot #103 K-Wing FEW and Debris
951	AERHDM	CCP-AK-ANLE-500	S5400	5/27/2010	5/27/2010			EMPLACED	6/26/2010 12:19	
950	AERHDM	CCP-AK-ANLE-500	S5400	5/27/2010	5/27/2010			EMPLACED	6/26/2010 12:19	
949	AERHDM	CCP-AK-ANLE-500	S5400	5/27/2010	5/27/2010			EMPLACED	6/25/2010 14:55	
948	AERHDM	CCP-AK-ANLE-500	S5400	5/26/2010	5/26/2010			EMPLACED	6/25/2010 14:55	
947	AERHDM	CCP-AK-ANLE-500	S5400	5/26/2010	5/26/2010			EMPLACED	6/25/2010 14:55	
946	AERHDM	CCP-AK-ANLE-500	S5400	5/26/2010	5/26/2010			EMPLACED	6/23/2010 12:19	
945	AERHDM	CCP-AK-ANLE-500	S5400	5/25/2010	5/25/2010			EMPLACED	6/23/2010 12:19	
944	AERHDM	CCP-AK-ANLE-500	S5400	5/25/2010	5/25/2010			EMPLACED	6/23/2010 12:19	
RW18902	AERHDM	CCP-AK-ANLE-500	S5400	5/19/2010	5/19/2010			EMPLACED	7/5/2012 12:27	
RW18901	AERHDM	CCP-AK-ANLE-500	S5400	5/17/2010	5/17/2010			EMPLACED	12/21/2012 12:14	
RW18900	AERHDM	CCP-AK-ANLE-500	S5400	5/17/2010	5/17/2010			EMPLACED	5/21/2013 12:13	
RW18899	AERHDM	CCP-AK-ANLE-500	S5400	5/13/2010	5/13/2010			EMPLACED	7/6/2012 12:07	
RW18898	AERHDM	CCP-AK-ANLE-500	S5400	5/11/2010	5/11/2010			EMPLACED	7/6/2012 12:07	
RW18897	AERHDM	CCP-AK-ANLE-500	S5400	5/10/2010	5/10/2010			EMPLACED	7/5/2012 12:27	
RW18896	AERHDM	CCP-AK-ANLE-500	S5400	5/7/2010	5/7/2010			EMPLACED	7/5/2012 12:27	
RW18895	AERHDM	CCP-AK-ANLE-500	S5400	5/6/2010	5/6/2010			EMPLACED	5/21/2013 12:13	
RW18894	AERHDM	CCP-AK-ANLE-500	S5400	5/5/2010	5/5/2010			EMPLACED	7/6/2012 12:07	
RW18893	AERHDM	CCP-AK-ANLE-500	S5400	5/5/2010	5/5/2010			EMPLACED	12/21/2012 12:14	
RW18892	AERHDM	CCP-AK-ANLE-500	S5400	4/29/2010	4/29/2010			EMPLACED	10/9/2010 11:28	
RW18891	AERHDM	CCP-AK-ANLE-500	S5400	4/28/2010	4/28/2010			EMPLACED	10/7/2010 14:38	
943	AERHDM	CCP-AK-ANLE-500	S5400	4/28/2010	4/28/2010			EMPLACED	6/24/2010 12:34	
942	AERHDM	CCP-AK-ANLE-500	S5400	4/27/2010	4/27/2010			EMPLACED	6/24/2010 12:34	
941	AERHDM	CCP-AK-ANLE-500	S5400	4/27/2010	4/27/2010	5/1/2010	5/1/2010			
RW18890	AERHDM	CCP-AK-ANLE-500	S5400	4/26/2010	4/26/2010			EMPLACED	10/7/2010 14:38	
940	AERHDM	CCP-AK-ANLE-500	S5400	4/26/2010	4/26/2010			EMPLACED	6/24/2010 12:34	
939	AERHDM	CCP-AK-ANLE-500	S5400	4/26/2010	4/26/2010			EMPLACED	6/22/2010 12:00	
938	AERHDM	CCP-AK-ANLE-500	S5400	4/26/2010	4/26/2010	5/1/2010	5/1/2010			
937	AERHDM	CCP-AK-ANLE-500	S5400	4/23/2010	4/23/2010			EMPLACED	6/22/2010 12:00	
936	AERHDM	CCP-AK-ANLE-500	S5400	4/23/2010	4/23/2010	5/1/2010	5/1/2010			
RW18889	AERHDM	CCP-AK-ANLE-500	S5400	4/22/2010	4/22/2010			EMPLACED	10/7/2010 14:38	
935	AERHDM	CCP-AK-ANLE-500	S5400	4/22/2010	4/22/2010			EMPLACED	6/22/2010 12:00	
934	AERHDM	CCP-AK-ANLE-500	S5400	4/22/2010	4/22/2010			EMPLACED	6/20/2010 10:29	
RW18888	AERHDM	CCP-AK-ANLE-500	S5400	4/20/2010	4/20/2010			EMPLACED	10/5/2010 11:40	
RW18887	AERHDM	CCP-AK-ANLE-500	S5400	4/16/2010	4/16/2010			EMPLACED	6/5/2013 12:50	
RW18886	AERHDM	CCP-AK-ANLE-500	S5400	4/15/2010	4/15/2010			EMPLACED	11/14/2012 12:04	
RW18885	AERHDM	CCP-AK-ANLE-500	S5400	4/14/2010	4/14/2010			EMPLACED	7/3/2012 12:30	
RW18884	AERHDM	CCP-AK-ANLE-500	S5400	4/13/2010	4/13/2010			EMPLACED	7/3/2012 12:30	
RW18883	AERHDM	CCP-AK-ANLE-500	S5400	4/12/2010	4/12/2010			EMPLACED	7/3/2012 12:30	

RW18882	AERHDM	CCP-AK-ANLE-500	S5400	4/9/2010	4/9/2010			EMPLACED	11/14/2012 12:04			
RW18881	AERHDM	CCP-AK-ANLE-500	S5400	4/7/2010	4/7/2010			EMPLACED	4/25/2012 12:26	Pot #102		K-Wing FEW and Debris
933	AERHDM	CCP-AK-ANLE-500	S5400	3/26/2010	3/26/2010			EMPLACED	10/24/2010 10:53			
932	AERHDM	CCP-AK-ANLE-500	S5400	3/25/2010	3/25/2010			EMPLACED	10/24/2010 10:53			
931	AERHDM	CCP-AK-ANLE-500	S5400	3/24/2010	3/24/2010			EMPLACED	10/27/2010 12:45			
RW18880	AERHDM	CCP-AK-ANLE-500	S5400	3/23/2010	3/23/2010			EMPLACED	4/24/2012 14:59	FEW #4		K-Wing FEW and Debris
930	AERHDM	CCP-AK-ANLE-500	S5400	3/16/2010	3/16/2010	5/1/2010	5/1/2010					
929	AERHDM	CCP-AK-ANLE-500	S5400	3/15/2010	3/15/2010			EMPLACED	6/18/2010 12:50			
928	AERHDM	CCP-AK-ANLE-500	S5400	3/15/2010	3/15/2010			EMPLACED	6/18/2010 12:50			
927	AERHDM	CCP-AK-ANLE-500	S5400	3/11/2010	3/11/2010			EMPLACED	6/18/2010 12:50			
926	AERHDM	CCP-AK-ANLE-500	S5400	3/11/2010	3/11/2010			EMPLACED	6/16/2010 11:46			
RW18879	AERHDM	CCP-AK-ANLE-500	S5400	3/10/2010	3/10/2010			EMPLACED	4/24/2012 14:59	Pot #101		K-Wing FEW and Debris
925	AERHDM	CCP-AK-ANLE-500	S5400	3/10/2010	3/10/2010			EMPLACED	6/16/2010 11:46			
924	AERHDM	CCP-AK-ANLE-500	S5400	3/9/2010	3/9/2010			EMPLACED	6/16/2010 11:46			
923	AERHDM	CCP-AK-ANLE-500	S5400	2/9/2010	2/9/2010	5/1/2010	5/1/2010					
922	AERHDM	CCP-AK-ANLE-500	S5400	2/8/2010	2/8/2010			EMPLACED	6/11/2010 10:31			
921	AERHDM	CCP-AK-ANLE-500	S5400	2/8/2010	2/8/2010			EMPLACED	6/11/2010 10:31			
920	AERHDM	CCP-AK-ANLE-500	S5400	2/5/2010	2/5/2010			EMPLACED	6/11/2010 10:31			
919	AERHDM	CCP-AK-ANLE-500	S5400	2/5/2010	2/5/2010			EMPLACED	6/10/2010 12:16			
918	AERHDM	CCP-AK-ANLE-500	S5400	2/4/2010	2/4/2010			EMPLACED	6/10/2010 12:16			
917	AERHDM	CCP-AK-ANLE-500	S5400	2/4/2010	2/4/2010			EMPLACED	6/10/2010 12:16			
916	AERHDM	CCP-AK-ANLE-500	S5400	2/3/2010	2/3/2010			EMPLACED	6/9/2010 12:31			
915	AERHDM	CCP-AK-ANLE-500	S5400	2/3/2010	2/3/2010			EMPLACED	6/9/2010 12:31			
RW18878	AERHDM	CCP-AK-ANLE-500	S5400	12/17/2009	12/17/2009			EMPLACED	4/24/2012 14:59	FEW #15		K-Wing FEW and Debris
RW18877	AERHDM	CCP-AK-ANLE-500	S5400	12/15/2009	12/15/2009			EMPLACED	4/18/2012 12:18	FEW #14	FEW #13	K-Wing FEW and Debris
RW18876	AERHDM	CCP-AK-ANLE-500	S5400	12/8/2009	12/8/2009			EMPLACED	4/18/2012 12:18	FEW #5	FEW #9	K-Wing FEW and Debris
RW18875	AERHDM	CCP-AK-ANLE-500	S5400	12/3/2009	12/3/2009			EMPLACED	4/18/2012 12:18	FEW #5		K-Wing FEW and Debris
914	AERHDM	CCP-AK-ANLE-500	S5400	12/3/2009	12/3/2009			EMPLACED	5/26/2010 10:30			
913	AERHDM	CCP-AK-ANLE-500	S5400	12/3/2009	12/3/2009	5/1/2010	5/1/2010					
912	AERHDM	CCP-AK-ANLE-500	S5400	12/2/2009	12/2/2009			EMPLACED	6/3/2010 12:46			
911	AERHDM	CCP-AK-ANLE-500	S5400	12/2/2009	12/2/2009			EMPLACED	6/3/2010 12:46			
910	AERHDM	CCP-AK-ANLE-500	S5400	12/2/2009	12/2/2009			EMPLACED	6/9/2010 12:31			
909	AERHDM	CCP-AK-ANLE-500	S5400	12/1/2009	12/1/2009			EMPLACED	5/26/2010 10:30			
908	AERHDM	CCP-AK-ANLE-500	S5400	12/1/2009	12/1/2009			EMPLACED	5/19/2010 10:59			
907	AERHDM	CCP-AK-ANLE-500	S5400	11/30/2009	11/30/2009			EMPLACED	5/19/2010 10:59			
906	AERHDM	CCP-AK-ANLE-500	S5400	11/30/2009	11/30/2009			EMPLACED	5/26/2010 10:30			
RW18874	AERHDM	CCP-AK-ANLE-500	S5400	11/20/2009	11/20/2009			EMPLACED	10/5/2010 11:40			
RW18873	AERHDM	CCP-AK-ANLE-500	S5400	11/17/2009	11/17/2009			EMPLACED	10/5/2010 11:40			
RW18872	AERHDM	CCP-AK-ANLE-500	S5400	11/14/2009	11/14/2009			EMPLACED	10/3/2010 12:13			
RW18871	AERHDM	CCP-AK-ANLE-500	S5400	11/12/2009	11/12/2009			EMPLACED	10/3/2010 12:13			
905	AERHDM	CCP-AK-ANLE-500	S5400	11/9/2009	11/9/2009			EMPLACED	5/19/2010 10:59			
RW18870	AERHDM	CCP-AK-ANLE-500	S5400	11/6/2009	11/6/2009			EMPLACED	10/3/2010 12:13			
904	AERHDM	CCP-AK-ANLE-500	S5400	11/6/2009	11/6/2009			EMPLACED	5/13/2010 15:10			
903	AERHDM	CCP-AK-ANLE-500	S5400	11/6/2009	11/6/2009			EMPLACED	5/13/2010 15:10			
902	AERHDM	CCP-AK-ANLE-500	S5400	11/5/2009	11/5/2009			EMPLACED	5/13/2010 15:10			
901	AERHDM	CCP-AK-ANLE-500	S5400	11/5/2009	11/5/2009			EMPLACED	6/20/2010 10:29			
900	AERHDM	CCP-AK-ANLE-500	S5400	11/5/2009	11/5/2009	5/1/2010	5/1/2010					

899	AERHDM	CCP-AK-ANLE-500	S5400	11/4/2009	11/4/2009		EMPLACED	6/20/2010 10:29
898	AERHDM	CCP-AK-ANLE-500	S5400	11/4/2009	11/4/2009		EMPLACED	6/3/2010 12:46
897	AERHDM	CCP-AK-ANLE-500	S5400	9/11/2009	9/11/2009		EMPLACED	10/28/2009
896	AERHDM	CCP-AK-ANLE-500	S5400	9/10/2009	9/10/2009		EMPLACED	10/28/2009
895	AERHDM	CCP-AK-ANLE-500	S5400	9/10/2009	9/10/2009		EMPLACED	10/28/2009
894	AERHDM	CCP-AK-ANLE-500	S5400	9/10/2009	9/10/2009		EMPLACED	10/27/2009
893	AERHDM	CCP-AK-ANLE-500	S5400	9/9/2009	9/9/2009		EMPLACED	10/27/2009
892	AERHDM	CCP-AK-ANLE-500	S5400	9/9/2009	9/9/2009		EMPLACED	10/27/2009
891	AERHDM	CCP-AK-ANLE-500	S5400	9/8/2009	9/8/2009		EMPLACED	10/22/2009
890	AERHDM	CCP-AK-ANLE-500	S5400	9/8/2009	9/8/2009		EMPLACED	10/22/2009
889	AERHDM	CCP-AK-ANLE-500	S5400	9/2/2009	9/2/2009		EMPLACED	10/22/2009
888	AERHDM	CCP-AK-ANLE-500	S5400	4/2/2009	4/2/2009	########	########	
887	AERHDM	CCP-AK-ANLE-500	S5400	4/2/2009	4/2/2009		EMPLACED	9/4/2009
886	AERHDM	CCP-AK-ANLE-500	S5400	4/1/2009	4/1/2009		EMPLACED	8/12/2009
885	AERHDM	CCP-AK-ANLE-500	S5400	4/1/2009	4/1/2009		EMPLACED	8/12/2009
884	AERHDM	CCP-AK-ANLE-500	S5400	3/31/2009	3/31/2009		EMPLACED	8/12/2009
883	AERHDM	CCP-AK-ANLE-500	S5400	3/31/2009	3/31/2009		EMPLACED	9/2/2009
862	AERHDM	CCP-AK-ANLE-500	S5400	3/30/2009	3/30/2009		EMPLACED	9/9/2009
882	AERHDM	CCP-AK-ANLE-500	S5400	3/27/2009	3/27/2009		EMPLACED	9/2/2009
881	AERHDM	CCP-AK-ANLE-500	S5400	3/26/2009	3/26/2009	########	########	
880	AERHDM	CCP-AK-ANLE-500	S5400	3/24/2009	3/24/2009		EMPLACED	9/9/2009
879	AERHDM	CCP-AK-ANLE-500	S5400	3/24/2009	3/24/2009		EMPLACED	9/8/2009
878	AERHDM	CCP-AK-ANLE-500	S5400	3/23/2009	3/23/2009	########	########	
877	AERHDM	CCP-AK-ANLE-500	S5400	3/20/2009	3/20/2009		EMPLACED	9/8/2009
876	AERHDM	CCP-AK-ANLE-500	S5400	3/19/2009	3/19/2009		EMPLACED	9/8/2009
875	AERHDM	CCP-AK-ANLE-500	S5400	11/13/2008	11/13/2008		EMPLACED	9/4/2009
872	AERHDM	CCP-AK-ANLE-500	S5400	11/12/2008	11/12/2008		EMPLACED	9/4/2009
873	AERHDM	CCP-AK-ANLE-500	S5400	11/11/2008	11/11/2008		EMPLACED	9/16/2009
871	AERHDM	CCP-AK-ANLE-500	S5400	11/11/2008	11/11/2008		EMPLACED	9/16/2009
870	AERHDM	CCP-AK-ANLE-500	S5400	11/10/2008	11/10/2008		EMPLACED	9/16/2009
868	AERHDM	CCP-AK-ANLE-500	S5400	11/10/2008	11/10/2008		EMPLACED	9/11/2009
874	AERHDM	CCP-AK-ANLE-500	S5400	10/2/2008	10/2/2008		EMPLACED	9/2/2009
869	AERHDM	CCP-AK-ANLE-500	S5400	10/2/2008	10/2/2008	########	########	
867	AERHDM	CCP-AK-ANLE-500	S5400	10/1/2008	10/1/2008		EMPLACED	9/11/2009
866	AERHDM	CCP-AK-ANLE-500	S5400	10/1/2008	10/1/2008		EMPLACED	9/11/2009
856	AERHDM	CCP-AK-ANLE-500	S5400	5/29/2008	5/29/2008		EMPLACED	8/26/2009
861	AERHDM	CCP-AK-ANLE-500	S5400	5/28/2008	5/28/2008	########	########	
860	AERHDM	CCP-AK-ANLE-500	S5400	5/1/2008	5/1/2008	########	########	
858	AERHDM	CCP-AK-ANLE-500	S5400	4/30/2008	4/30/2008		EMPLACED	8/6/2009
863	AERHDM	CCP-AK-ANLE-500	S5400	4/8/2008	4/8/2008	########	########	
859	AERHDM	CCP-AK-ANLE-500	S5400	4/8/2008	4/8/2008		EMPLACED	8/23/2009
857	AERHDM	CCP-AK-ANLE-500	S5400	4/7/2008	4/7/2008		EMPLACED	8/26/2009
864	AERHDM	CCP-AK-ANLE-500	S5400	4/2/2008	4/2/2008		EMPLACED	8/23/2009
865	AERHDM	CCP-AK-ANLE-500	S5400	4/1/2008	4/1/2008		EMPLACED	8/23/2009
853	AERHDM	CCP-AK-ANLE-500	S5400	6/13/2002	6/13/2002		EMPLACED	8/6/2009
855	AERHDM	CCP-AK-ANLE-500	S5400	6/12/2002	6/12/2002		EMPLACED	8/26/2009
854	AERHDM	CCP-AK-ANLE-500	S5400	6/12/2002	6/12/2002		EMPLACED	8/7/2009

846	AERHDM	CCP-AK-ANLE-500	S5400	6/10/2002	6/10/2002			EMPLACED	11/13/2008			
841	AERHDM	CCP-AK-ANLE-500	S5400	6/10/2002	6/10/2002			EMPLACED	8/7/2009			
848	AERHDM	CCP-AK-ANLE-500	S5400	6/7/2002	6/7/2002			EMPLACED	8/5/2009			
840	AERHDM	CCP-AK-ANLE-500	S5400	6/7/2002	6/7/2002			EMPLACED	11/18/2008			
847	AERHDM	CCP-AK-ANLE-500	S5400	6/6/2002	6/6/2002			EMPLACED	8/5/2009			
843	AERHDM	CCP-AK-ANLE-500	S5400	6/6/2002	6/6/2002			EMPLACED	11/19/2008			aka value was 00331 which was an valid AK value for RH I
844	AERHDM	CCP-AK-ANLE-500	S5400	6/5/2002	6/5/2002			EMPLACED	11/19/2008			
842	AERHDM	CCP-AK-ANLE-500	S5400	6/5/2002	6/5/2002			EMPLACED	11/18/2008			
849	AERHDM	CCP-AK-ANLE-500	S5400	6/4/2002	6/4/2002			EMPLACED	8/5/2009			
830	AERHDM	CCP-AK-ANLE-500	S5400	5/1/2001	5/1/2001			EMPLACED	9/25/2008			
817	AERHDM	CCP-AK-ANLE-500	S5400	5/1/2001	5/1/2001			EMPLACED	11/5/2008			
812	AERHDM	CCP-AK-ANLE-500	S5400	5/1/2001	5/1/2001			EMPLACED	9/18/2008			
834	AERHDM	CCP-AK-ANLE-500	S5400	4/30/2001	4/30/2001			EMPLACED	9/25/2008			
833	AERHDM	CCP-AK-ANLE-500	S5400	4/30/2001	4/30/2001	6/6/2007	6/6/2007					
827	AERHDM	CCP-AK-ANLE-500	S5400	4/30/2001	4/30/2001			EMPLACED	11/13/2008			
819	AERHDM	CCP-AK-ANLE-500	S5400	4/30/2001	4/30/2001	6/6/2007	6/6/2007					
813	AERHDM	CCP-AK-ANLE-500	S5400	4/30/2001	4/30/2001			EMPLACED	9/24/2008			
818	AERHDM	CCP-AK-ANLE-500	S5400	4/27/2001	4/27/2001	6/6/2007	6/6/2007					
832	AERHDM	CCP-AK-ANLE-500	S5400	4/26/2001	4/26/2001			EMPLACED	9/25/2008			
831	AERHDM	CCP-AK-ANLE-500	S5400	4/26/2001	4/26/2001			EMPLACED	11/6/2008			
815	AERHDM	CCP-AK-ANLE-500	S5400	4/26/2001	4/26/2001	6/5/2007	6/5/2007					
814	AERHDM	CCP-AK-ANLE-500	S5400	4/26/2001	4/26/2001			EMPLACED	9/24/2008			
823	AERHDM	CCP-AK-ANLE-500	S5400	4/25/2001	4/25/2001			EMPLACED	9/24/2008			
822	AERHDM	CCP-AK-ANLE-500	S5400	4/25/2001	4/25/2001	6/6/2007	6/6/2007					
821	AERHDM	CCP-AK-ANLE-500	S5400	4/25/2001	4/25/2001			EMPLACED	11/14/2008			
820	AERHDM	CCP-AK-ANLE-500	S5400	4/25/2001	4/25/2001	6/5/2007	6/5/2007					
816	AERHDM	CCP-AK-ANLE-500	S5400	4/25/2001	4/25/2001	6/5/2007	6/5/2007					
828	AERHDM	CCP-AK-ANLE-500	S5400	4/24/2001	4/24/2001			EMPLACED	11/6/2008			
826	AERHDM	CCP-AK-ANLE-500	S5400	4/24/2001	4/24/2001			EMPLACED	11/6/2008			
824	AERHDM	CCP-AK-ANLE-500	S5400	4/24/2001	4/24/2001			EMPLACED	11/5/2008			
839	AERHDM	CCP-AK-ANLE-500	S5400	11/13/2000	11/13/2000	6/6/2007	6/6/2007					
838	AERHDM	CCP-AK-ANLE-500	S5400	11/10/2000	11/10/2000			EMPLACED	8/6/2009			
837	AERHDM	CCP-AK-ANLE-500	S5400	11/2/2000	11/2/2000			EMPLACED	11/14/2008			
836	AERHDM	CCP-AK-ANLE-500	S5400	11/1/2000	11/1/2000			EMPLACED	11/18/2008			
835	AERHDM	CCP-AK-ANLE-500	S5400	11/1/2000	11/1/2000			EMPLACED	8/7/2009			
811	AERHDM	CCP-AK-ANLE-500	S5400	11/1/2000	11/1/2000			EMPLACED	11/5/2008			
810	AERHDM	CCP-AK-ANLE-500	S5400	10/31/2000	10/31/2000			EMPLACED	11/19/2008			
790	AERHDM	CCP-AK-ANLE-500	S5400	10/23/1995	10/23/1995	6/6/2007	6/6/2007					
786	AERHDM	CCP-AK-ANLE-500	S5400	10/19/1995	10/19/1995			EMPLACED	11/14/2008			
1073	AERHDM	CCP-AK-ANLE-500	S5400		9/20/2011	########		EMPLACED	11/4/2011 11:32	754	827	AGHCF Debris
1071	AERHDM	CCP-AK-ANLE-500	S5400		9/22/2011	########		EMPLACED	11/4/2011 11:32	776	782	AGHCF Debris
1070	AERHDM	CCP-AK-ANLE-500	S5400		9/26/2011	########		EMPLACED	11/4/2011 11:32	826	793	AGHCF Debris
1069	AERHDM	CCP-AK-ANLE-500	S5400		9/26/2011	########		EMPLACED	10/26/2011 12:06	790	836	AGHCF Debris
1064	AERHDM	CCP-AK-ANLE-500	S5400		9/26/2011	########		EMPLACED	10/21/2011 11:42	801	768	AGHCF FEW
1062	AERHDM	CCP-AK-ANLE-500	S5400		9/22/2011	########		EMPLACED	10/25/2011 11:46	830	824	AGHCF FEW
1060	AERHDM	CCP-AK-ANLE-500	S5400		9/21/2011	########		EMPLACED	10/21/2011 11:42	828	816	AGHCF FEW
1059	AERHDM	CCP-AK-ANLE-500	S5400		9/22/2011	########		EMPLACED	10/26/2011 12:06	788	795	AGHCF Debris

1057	AERHDM	CCP-AK-ANLE-500	S5400	9/21/2011	########	EMPLACED	10/20/2011 12:49	759	804	AGHCF FEW
1056	AERHDM	CCP-AK-ANLE-500	S5400	9/19/2011	########	EMPLACED	10/25/2011 11:46	799	803	AGHCF FEW
1055	AERHDM	CCP-AK-ANLE-500	S5400	9/19/2011	########	EMPLACED	10/25/2011 11:46	787	809	AGHCF FEW

AK12

NL

per IJoo 081413.
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per IJoo 081413.
per IJoo 081413.

:r IJoo email 062013
:r IJoo email 062013

overpacked into 55 gallon drum to HSG and ceritfy in WDS per KPeters email 042512.

; gallon drum to HSG and ceritfy in WDS per KPeters email 042512.

; gallon drum to HSG and ceritfy in WDS per KPeters email 042512.

; gallon drum to HSG and ceritfy in WDS per KPeters email 042512.

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o HSG and ceritfy in WDS per KPeters email 042512.

AK13

AK13
RW 48268

WMO-195 Radioactive and Mixed Waste Disposal Requisition

Division	Building	Room	Area
FMS-NOD	**205**	**K-116**	

Generator must have Sections 1-9 completed prior to submittal to WMO.

SECTION 1 - Container Type

Type of receptacle:	Volume	Units	Container Description
55 gal. = 208 L Drum	**55**	**Gallons**	

SECTION 2A - Radionuclides

Element & Isotope # (e.g., Co-60)	Value	Isotope UOM
Co60	3.67E-05	CURIES
Cs134	1.15E-03	CURIES
Eu154	4.81E-03	CURIES
U233	4.47E-06	CURIES
U234	3.16E-06	CURIES
U235	1.38E-07	CURIES
U238	2.29E-06	CURIES
Np237	2.86E-06	CURIES
Pu238	2.44E-02	CURIES
Pu239	2.64E-03	CURIES
Pu240	4.24E-03	CURIES
Pu241	2.12E-01	CURIES
Am241	2.77E-02	CURIES
Am243	1.15E-04	CURIES
Cm244	6.76E-03	CURIES
Cs137	4.42E-01	CURIES
Eu155	1.01E-03	CURIES
Pu242	1.38E-05	CURIES
Sr90	4.19E-01	CURIES

SECTION 2B - Transuranic Waste Only

Attachment WMO-195A must be completed when total TRU radionuclides are expected to exceed 100 nanocuries/gram of waste.

Attachment WMO-195A included? X Yes ___ No

SECTION 3 - Liquids Only

Enter the amount of solution: _____

pH of solution: _____

Flashpoint: ___ Flashpoint <= 140° F ___ Flashpoint > 140° F

Identify the chemical makeup of the liquid in Section 4

Scintillation Vials? ___ Yes ___ No

Number of Vials: _____

Number of mL/Vial: _____

SECTION 4 - Waste Constituents

List all waste constituents. Any waste constituents found in the waste container and not listed in this section will be returned to the waste generator. Attach additional comments if necessary.

Waste Constituent	% of Total Volume	% of Total Weight
Solids from K-Wing Hot Cells - details attached	100	
Totals	100	0

SECTION 5 - Explanation of Waste Composition Determination

Select the explanation which best describes how the isotopes and quantities are known.

___ 1. The radionuclides and quantities specified are based on the process knowledge of the difference in the amount of original radioactive material and the remaining amount of radioactive material.

___ 2. The radionuclides and quantities specified were determined by radioactive analysis of the waste. A copy of the analytical results should be attached.

___ 3. As materials were added to this waste container, they were recorded in my logbook. The log book # and logbook location should be specified in Section 6.

x 4. The quantities of radionuclides were calculated based on the surface dose rate.

___ 5. The radionuclides and quantities listed are given based on suspect contamination only. A conservative estimate as to the amount present is provided.

___ 6. Other: (Provide a thorough explanation.)

Arno dose-to-Ci model; details attached to Section 6

SECTION 6 - Additional Information and Comments

Use this space to provide additional waste constituents, radionuclides and quantities of each, or to provide comments that would be useful in handling the waste. Attach additional comments if necessary.

DOT: Type B solids, fissile excepted, less than HC3 quantity. Transport in accordance with HMTSM Packaging Approval 17. W. Naumann 8-30-2011

SECTION 7 - Health Physics Survey

Maximum Surface Dose Rate	2000	mrem/h γ RO20 - window closed
Maximum Dose Rate at 12 in. (30 cm)	800	mrem/h γ RO20 - window closed
Maximum Dose Rate on contact	2500	mrad/h RO20 - window open
Neutron Dose Rate	_____	mrem/h

Was loose alpha, beta, or gamma surface contamination detected? x No ___ Yes

Containers with loose surface contamination will not be picked up. Containers with a surface dose rate in excess of 200 mrem/h require special handling

Hollabaugh, Jared	8/29/2011	97481
Print Full Name	Date	Badge#

SECTION 8 - SPM (Accountable Materials)

I have been notified of accountable materials listed on this requisition.

SPM-23 #: NA Batch #: NA

Notify SPM prior to pickup? ___ Yes x No

Bracken, Andrew P.	25942	08/30/2011
Print Full Name	Badge #	Date

SECTION 9 - Generator Signature

I certify that i have provided the best available process knowledge and other characterization information for the waste described in this requisition.

Naumann, William R.	97304	08/30/2011
Print Full Name	Badge #	Date Submitted to WMO
_____		
Cost Code Not Required (Divisional Use Only)	28626 Phone #	

SECTION 10 - WMS Storage and Treatment Assignment

If the waste **is not** classified as TRU, do the following:

Storage Location: **331/4** Assigned By: **Grzymajlo, Jeffrey T.** Date: **08/30/2011**

Treatment Method Assigned By Date

EPA/WA State #s:
NA

Waste Stream ID:
ANL-WS-0001

If the waste **is** classified as TRU, do the following:

Waste Stream ID: **ANL-WS-0001**

Storage Location: **331/4** Assigned By: **Grzymajlo, Jeffrey T.** Date: **08/30/2011**

Treatment Method Assigned By Date

Sort/Segregate/Bulk/Package for Shipment **Grzymajlo, Jeffrey T.** **08/30/2011**

Does waste require a TRU calculation (if TRU isotopes are present and there is no attachment WMO-195A)?
X Yes __ No

Is this a compactible waste (volume reduction)?*
__ Yes X No

Is this waste requisition "storage only" waste ? (e.g. requires further characterization)
__ Yes X No

I have evaluated the waste described on this requisition and have determined that it meets the WMO/Waste Acceptance Criteria requirements.

Authorized for pickup by:

Grzymajlo, Jeffrey **97489** **08/30/2011**

Print Full Name Badge # Date

Peer Reviewer: **Cunningham, Walter F., Jr** Review Date: **08/30/2011**

SECTION 11 - WMO TRU Calculation

If a TRU calculation is required, enter the container weights.

Gross Weight **100** LBS

Tare Weight **83** LBS

Weighed by: **97304** **Naumann, William R.** **11/18/2010**

Badge # Name Date

Is this waste to be considered TRU based on calculation? __ Yes __ No

TRU calculation reviewed by:

Badge # Name Date

To be completed by WM personnel.

Gross Weight: _____ _____ (units)

Tare Weight: _____ _____ (units)

Weighed by: _____ _____ _____

Badge # Name Date

Is this waste to be considered TRU based on calculation? __ Yes __ No

TRU calculation reviewed by: _____ _____ _____

Badge # Name Date

SECTION 12 - WMO Storage Location

Building #	Location	Badge #	Name	Date
310	L310	040569	Beallis, Patrick R.	8/30/2011
331	L331-4	040569	Beallis, Patrick R.	8/30/2011
331	L331-YARD-RHTRU	040569	Beallis, Patrick R.	8/30/2011
310	L310	016442	Ray, Willis D.	10/3/2011
331	L331-4	016442	Ray, Willis D.	10/3/2011
331	L331-YARD-RHTRU	016442	Ray, Willis D.	10/3/2011
310	L310	43813	Smith, John T.	10/4/2011
331	L331-4	43813	Smith, John T.	10/4/2011
331	L331-YARD-RHTRU	43813	Smith, John T.	10/4/2011
310	L310	043813	Smith, John T.	10/5/2011
310	L310	97489	Grzymajlo, Jeffrey	10/5/2011
331	L331-4	043813	Smith, John T.	10/5/2011

331	L331-4	97489	Grzymajlo, Jeffrey	10/5/2011
331	L331-YARD-RHTRU	043813	Smith, John T.	10/5/2011
331	L331-YARD-RHTRU	97489	Grzymajlo, Jeffrey	10/5/2011
OFFSITE	OFFSITE	97489	Grzymajlo, Jeffrey	10/5/2011
OFFSITE	OFFSITE	97489	Grzymajlo, Jeffrey	10/6/2011

SECTION 13 - WMO Treatment

Treatment Method #	Storage or Shipping Container #	Badge #	Name	Date
Waste PickUp / Scanner Upload	48268	040569	Beallis, Patrick R.	8/30/2011
Waste PickUp / Scanner Upload	48268	040569	Beallis, Patrick R.	8/30/2011
Waste PickUp / Scanner Upload	48268	040569	Beallis, Patrick R.	8/30/2011
Relocation	48268	016442	Ray, Willis D.	10/3/2011
Relocation	48268	016442	Ray, Willis D.	10/3/2011
Relocation	48268	016442	Ray, Willis D.	10/3/2011
Relocation	48268	43813	Smith, John T.	10/4/2011
Relocation	48268	43813	Smith, John T.	10/4/2011
Relocation	48268	43813	Smith, John T.	10/4/2011
Relocation	48268	043813	Smith, John T.	10/5/2011
Sort/Segregate/Bulk/Package for Shipment	48268	97489	Grzymajlo, Jeffrey	10/5/2011
Relocation	48268	043813	Smith, John T.	10/5/2011
Relocation	48268	043813	Smith, John T.	10/5/2011
Sort/Segregate/Bulk/Package for Shipment	48268	97489	Grzymajlo, Jeffrey	10/5/2011
Sort/Segregate/Bulk/Package for Shipment	48268	97489	Grzymajlo, Jeffrey	10/5/2011
Relocation	STRU120003	97489	Grzymajlo, Jeffrey	10/5/2011
Shipment	STRU120003	97489	Grzymajlo, Jeffrey	10/6/2011

WMO-195A, TRANSURANIC WASTE DISPOSAL REQUISITION SUPPLEMENT

REQUISITION NUMBER RW_48268

Section 1 Description of Waste	Solids from BD205 K-Wing Hot Cells: Aluminum, steel, stainless steel , plastic, wood, glass, paper, rags, HEPA filter.	Packaging Date August 25, 2011

Section 2 Composition of the Waste	Material	Volume	Vol %	Vol %	Weight	Wt%	Notes
	Vol and Wt units		Waste	Total			
	Iron						
	Aluminum		20				
	Other metals		50				Steel, SS
	Nonmetallic inorganic		5				glass
	Cellulosic		15				Paper, wood, rags
	Plastic		10				
	Rubber						
	Other organic						
	Solidified in inorganic matrix						
	Solidified in organic matrix						
	Inorganic sludge						
	Soil and gravel						
	Total water						
	Solidification and sorbet media						
	Other (specify)						
	SUBTOTAL		100%				
	Packaging - steel						
	Packaging - plastic						
	Packaging - lead						
	Packaging - other						
	Subtotal		100%				
	SUBTOTAL						
	Void						
	TOTAL			100%		100%	

Section 3 Venting	Venting provisions	Yes / No	Number	P. O. and Serial Number
	Bag horsetail	No		
	Bag vent filter(s)	Yes	1	NUCFIL Model 034
	Container vent filter(s)	Yes	1	WIPP1-PO412166 / IJ-703

Section 4 Prohibited Waste Characteristics and Waste Form	Transuranic Waste shall not have any of the following characteristics:			
	Prohibited item or characteristic	Does the waste have this item or characteristic		Notes and explanations
		YES	NO	
	Pressure vessels		X	
	Sealed containers > 4 liters		X	
	Liquids		X	
	Pyrophoric materials		X	
	Explosives		X	
	Compressed gases		X	
	Corrosive materials		X	
	Reactive materials		X	
	Classified items		X	
	PCB's (> 50 ppm, specify wt%)		X	
	Asbestos (specify wt%)		X	

Section 5 Fissile and transuranic nuclides Note: nonfissile and non-TRU nuclides shall be listed on Form WMO-195, Radioactive and Mixed Waste Disposal Requisition.	Nuclide	Grams (wt)	Notes
	U 233	4.61E-04	
	U 235	6.35E-02	
	Np 235		
	Pu 236		
	Np 237	4.03E-03	
	Pu 238	1.44E-03	
	Pu 239	4.25E-02	
	Pu 240	1.84E-02	
	Pu 241	2.11E-03	
	Pu 242	3.52E-03	
	Am 241	8.15E-03	
	Am 242m		
	Am 243	5.73E-04	
	Cm 243		
	Cm 244	8.34E-05	
	Cm 245		
	Cm 247		
	Cm 249		
	Cf 250		
	Cf 251		
	Cf 252		
	Es 252		
	TOTAL	1.45E-01	

Section 6 Comments, explanations, and clarifications			
Section 7 Defense funding source for TRU waste	Was this waste generated in whole or in part through a defense-related function (Y / N)? Yes		
	Funding source: ARRA	Source Material: ATM, MOX, N-reactor	
	Project Name: UREX / NFRDP	Other:	No.:
	If NOT defense-related - a copy of the DOE approval to generate waste with no path for disposal must be attached (Y / N / NA) NA		
Section 8 Generator signature	Characterized and certified by: William Naumann (Print name) [signature] (Signature) 97304 (Badge No.) 8-30-2011 (Date)		

Section 9 WMO summary To be completed by WMO Technical Support			Notes
TRU Inventory (nci)			
Weight (grams)			
TRU Concentration (nCi/g)			
Thermal Power (W)			
FGE (g Pu 239 Eq)			
TRUCON Code			
TRUCON Code Thermal Power Limit (W) OK (Y / N)			
Defense Related (Y / N) NPD Approval (Y / N / NA)			
Prohibited items or materials (Y / N) NPD Approval (Y / N / NA)			
OK for TRUPACT-II (Y / N)			
OK for 8-120B (Y / N)			
OK for WIPP (Y / N)			

I certify that I have reviewed this requisition and that the information provided is adequate and consistent.

Accepted by _____ (Print name) _____ (Signature) _____ (Badge No.) _____ (Date)

RW 18904

WMO-195 Radioactive and Mixed Waste Disposal Requisition

Division	Building	Room	Area
NOD-205	**205**	**K-116**	

Generator must have Sections 1-9 completed prior to submittal to WMO

SECTION 1 - Container Type

Type of receptacle:	Volume	Units	Container Description
55 gal. = 208 L Drum	**55**	**Gallons**	

SECTION 2A - Radionuclides

Element & Isotope # (e g., Co-60)	Value	Isotope UOM
Ru106	9.76E-01	CURIES
Cs134	5.75E+00	CURIES
U233	7.05E-04	CURIES
U234	6.73E-04	CURIES
U235	1.62E-05	CURIES
U236	4.14E-06	CURIES
U238	1.63E-04	CURIES
Np237	2.15E-04	CURIES
Pu238	4.78E+00	CURIES
Pu239	3.89E-01	CURIES
Pu240	5.54E-01	CURIES
Pu241	4.63E+01	CURIES
Am241	2.64E+00	CURIES
Am242m	1.61E-02	CURIES
Am243	4.78E-02	CURIES
Cm243	2.11E-02	CURIES
Cm244	9.18E+00	CURIES
Cm245	3.21E-03	CURIES
Cs137	6.59E+01	CURIES
Pu242	7.23E-05	CURIES
Sr90	4.18E+01	CURIES

SECTION 2B - Transuranic Waste Only

Attachment WMO-195A must be completed when total TRU radionuclides are expected to exceed 100 nanocuries/gram of waste.

Attachment WMO-195A included? X Yes ___ No

SECTION 3 - Liquids Only

Enter the amount of solution: _____

pH of solution: _____

Flashpoint: ___ Flashpoint <= 140° F ___ Flashpoint > 140° F

Identify the chemical makeup of the liquid in Section 4

Scintillation Vials? ___ Yes X No

Number of Vials: _____

Number of mL/Vial: _____

SECTION 4 - Waste Constituents

List all waste constituents. Any waste constituents found in the waste container and not listed in this section will be returned to the waste generator. Attach additional comments if necessary.

Waste Constituent	% of Total Volume	% of Total Weight
FEW-103 shield pot with irratiated test materials	10	

Solids from K-Wing Hot Cells - details attached	90	
Totals	100	0

SECTION 5 - Explanation of Waste Composition Determination

Select the explanation which best describes how the isotopes and quantities are known.

___ 1. The radionuclides and quantities specified are based on the process knowledge of the difference in the amount of original radioactive material and the remaining amount of radioactive material.

___ 2. The radionuclides and quantities specified were determined by radioactive analysis of the waste. A copy of the analytical results should be attached.

___ 3. As materials were added to this waste container, they were recorded in my logbook. The log book # and logbook location should be specified in Section 6.

___ 4. The quantities of radionuclides were calculated based on the surface dose rate.

___ 5. The radionuclides and quantities listed are given based on suspect contamination only. A conservative estimate as to the amount present is provided.

x 6. Other: (Provide a thorough explanation.)

K-Wing dose-to-Ci method plus contribution of FEW segments - details atached to Section 6

SECTION 6 - Additional Information and Comments

Use this space to provide additional waste constituents, radionuclides and quantities of each, or to provide comments that would be useful in handling the waste. Attach additional comments if necessary.

Weight estimated DOT: Type B solids. Hazard Category 3 quantity of material. Transport in accordance with HMTSM Packaging Approval #17. Approved FMS-565 required for transport. W. Naumann 6-10-2010 Batch numbers 009-090-04566-00000 128-080-03535-03376 148-090-02471-00000 152-080-03504-03321 152-080-03504-03358 152-080-03505-03322 152-080-03505-03359 152-080-03505-03360 152-080-03506-03323 152-080-03506-03361 152-080-03507-03324 152-080-03507-03362 152-080-03507-03363 179-080-03376-00000 179-080-03377-00000 196-080-03494-00000 196-080-03499-00000 196-080-03499-03537 196-080-03494-03538 199-080-03508-03325 199-080-03508-03335 199-080-03509-03326 199-080-03509-03336 199-080-03510-03327 199-080-03510-03337 199-080-03511-03328 199-080-03511-03338 199-080-03512-03329 199-080-03513-03330 221-080-03516-03364 175-100-00074-00301 193-030-02116-01510 166-060-00642-00918

SECTION 7 - Health Physics Survey

Maximum Surface Dose Rate	43300 mrem/h γ RO20 - window closed
Maximum Dose Rate at 12 in. (30 cm)	17500 mrem/h γ RO20 - window closed
Maximum Dose Rate on contact	61600 mrad/h RO20 - window open
Neutron Dose Rate	0 mrem/h

Was loose alpha, beta, or gamma surface contamination detected? x No ___ Yes

Containers with loose surface contamination will not be picked up Containers with a surface dose rate in excess of 200 mrem/h require special handling.

Barber, William	6/4/2010	204621
Print Full Name	Date	Badge#

SECTION 8 - SPM (Accountable Materials)

I have been notified of accountable materials listed on this requisition.

SPM-23 #: C Batch #: TBD

Notify SPM prior to pickup? ___ Yes x No

Bracken, Andrew P.	25942	06/11/2010
Print Full Name	Badge #	Date

SECTION 9 - Generator Signature

I certify that I have provided the best available process knowledge and other characterization information for the waste described in this requisition.

Naumann, William R.	97304	06/11/2010
Print Full Name	Badge #	Date Submitted to WMO
Cost Code Not Required (Divisional Use Only)	28626 Phone #	

SECTION 10 - WMS Storage and Treatment Assignment

If the waste **is not** classified as TRU, do the following:

Storage Location: **331/4** Assigned By: **Tunning, Robert S.** Date: **06/11/2010**

Treatment Method Assigned By Date

EPA/WA State #s:
NA

Waste Stream ID:
ANL-WS-0001

If the waste **is** classified as TRU, do the following:

Waste Stream ID: **ANL-WS-0001**

Storage Location: **331/4** Assigned By: **Tunning, Robert S.** Date: **06/11/2010**

Treatment Method	Assigned By	Date
Sort/Segregate/Bulk/Package for Shipment	**Tunning, Robert S.**	**06/11/2010**

Does waste require a TRU calculation (if TRU isotopes are present and there is no attachment WMO-195A)?
X Yes __ No

Is this a compactible waste (volume reduction)?*
__ Yes X No

Is this waste requisition "storage only" waste ?
(e.g. requires further characterization)
__ Yes X No

I have evaluated the waste described on this requisition and have determined that it meets the WMO/Waste Acceptance Criteria requirements.

Authorized for pickup by:

Tunning, Robert S.	97474	06/11/2010
Print Full Name	Badge #	Date

Peer Reviewer: **Brandjes, Chris** Review Date: **06/11/2010**

SECTION 11 - WMO TRU Calculation

If a TRU calculation is required, enter the container weights.

Gross Weight 211 LBS

Tare Weight 61 LBS

Weighed by: 97304 Naumann, William R. 10/05/2009

Badge # Name Date

Is this waste to be considered TRU based on calculation? X Yes ___ No

TRU calculation reviewed by:

Badge # Name Date

To be completed by WM personnel.

Gross Weight: _____ _____ (units)

Tare Weight: _____ _____ (units)

Weighed by: _____ _____ _____

Badge # Name Date

Is this waste to be considered TRU based on calculation? __ Yes __ No

TRU calculation reviewed by: _____ _____ _____

Badge # Name Date

SECTION 12 - WMO Storage Location

Building #	Location	Badge #	Name	Date
310	L310	043813	Smith, John T.	6/14/2010
331	L331-4	043813	Smith, John T.	6/14/2010
331	L331-YARD	043813	Smith, John T.	6/14/2010
331	L331-YARD-RHTRU	043813	Smith, John T.	6/14/2010
310	L310	037772	McNamee, Daniel J.	9/24/2010
331	L331-4	037772	McNamee, Daniel J.	9/24/2010
331	L331-YARD	037772	McNamee, Daniel J.	9/24/2010
331	L331-YARD-RHTRU	037772	McNamee, Daniel J.	9/24/2010
310	L310	016442	Ray, Willis D.	3/30/2011
331	L331-4	016442	Ray, Willis D.	3/30/2011
331	L331-YARD	016442	Ray, Willis D.	3/30/2011
331	L331-YARD-RHTRU	016442	Ray, Willis D.	3/30/2011

310	L310	016442	Ray, Willis D.	10/3/2011
331	L331-4	016442	Ray, Willis D.	10/3/2011
331	L331-YARD	016442	Ray, Willis D.	10/3/2011
331	L331-YARD-RHTRU	016442	Ray, Willis D.	10/3/2011
310	L310	016442	Ray, Willis D.	3/26/2012
331	L331-4	016442	Ray, Willis D.	3/26/2012
331	L331-YARD	016442	Ray, Willis D.	3/26/2012
331	L331-YARD-RHTRU	016442	Ray, Willis D.	3/26/2012
310	L310	039007	Kuzma, David E.	3/31/2012
331	L331-4	039007	Kuzma, David E.	3/31/2012
331	L331-YARD	039007	Kuzma, David E.	3/31/2012
331	L331-YARD-RHTRU	039007	Kuzma, David E.	3/31/2012
310	L310	59324	Buck, John F.	4/18/2012
331	L331-4	59324	Buck, John F.	4/18/2012
331	L331-YARD	59324	Buck, John F.	4/18/2012
331	L331-YARD-RHTRU	59324	Buck, John F.	4/18/2012
OFFSITE	OFFSITE	59324	Buck, John F.	4/18/2012
OFFSITE	OFFSITE	53265	Guendling, Cynthia	4/19/2012

SECTION 13 - WMO Treatment

Treatment Method #	Storage or Shipping Container #	Badge #	Name	Date
Waste PickUp / Scanner Upload	18904	043813	Smith, John T.	6/14/2010
Waste PickUp / Scanner Upload	18904	043813	Smith, John T.	6/14/2010
Waste PickUp / Scanner Upload	18904	043813	Smith, John T.	6/14/2010
Waste PickUp / Scanner Upload	18904	043813	Smith, John T.	6/14/2010
Relocation	18904	037772	McNamee, Daniel J.	9/24/2010
Relocation	18904	037772	McNamee, Daniel J.	9/24/2010
Relocation	18904	037772	McNamee, Daniel J.	9/24/2010
Relocation	18904	037772	McNamee, Daniel J.	9/24/2010
Relocation	18904	016442	Ray, Willis D.	3/30/2011
Relocation	18904	016442	Ray, Willis D.	3/30/2011
Relocation	18904	016442	Ray, Willis D.	3/30/2011
Relocation	18904	016442	Ray, Willis D.	3/30/2011
Relocation	18904	016442	Ray, Willis D.	10/3/2011
Relocation	18904	016442	Ray, Willis D.	10/3/2011
Relocation	18904	016442	Ray, Willis D.	10/3/2011
Relocation	18904	016442	Ray, Willis D.	10/3/2011
Relocation	18904	016442	Ray, Willis D.	3/26/2012
Relocation	18904	016442	Ray, Willis D.	3/26/2012
Relocation	18904	016442	Ray, Willis D.	3/26/2012
Relocation	18904	016442	Ray, Willis D.	3/26/2012
Relocation	18904	039007	Kuzma, David E.	3/31/2012
Relocation	18904	039007	Kuzma, David E.	3/31/2012
Relocation	18904	039007	Kuzma, David E.	3/31/2012
Relocation	18904	039007	Kuzma, David E.	3/31/2012
Relocation	18904	59324	Buck, John F.	4/18/2012
Sort/Segregate/Bulk/Package for Shipment	18904	59324	Buck, John F.	4/18/2012
Relocation	18904	59324	Buck, John F.	4/18/2012

Relocation	18904	59324	Buck, John F.	4/18/2012
Relocation	18904	59324	Buck, John F.	4/18/2012
Sort/Segregate/Bulk/Package for Shipment	18904	59324	Buck, John F.	4/18/2012
Sort/Segregate/Bulk/Package for Shipment	18904	59324	Buck, John F.	4/18/2012
Sort/Segregate/Bulk/Package for Shipment	18904	59324	Buck, John F.	4/18/2012
Relocation	STRU120040	59324	Buck, John F.	4/18/2012
Shipment	STRU120040	53265	Guendling, Cynthia	4/19/2012

WMO-195A, TRANSURANIC WASTE DISPOSAL REQUISITION SUPPLEMENT

REQUISITION NUMBER RW_18904

Section 1 Description of Waste	Solids from BD205 K-Wing Hot Cells: FEW-103 shield pot with irradiated test materials; one IPNS target, plastic, glass, metal, paper, rags	Packaging Date: May 20 - June 3, 2010

Section 2 Composition of the Waste	Material	Volume	Vol %	Vol %	Weight	Wt%	Notes
	Vol and Wt units		Waste	Total			
	Iron						
	Aluminum						
	Other metals		25				
	Nonmetallic inorganic		20				glass
	Cellulosic		15				Paper, rags
	Plastic		35				
	Rubber						
	Other organic						
	Solidified in inorganic matrix						
	Solidified in organic matrix		5				
	Inorganic sludge		0				
	Soil and gravel		0				
	Total water		0				
	Solidification and sorbet media						
	Other (specify)						
	SUBTOTAL		100%				
	Packaging - steel						
	Packaging - plastic						
	Packaging - lead						
	Packaging - other						
	Subtotal		100%				
	SUBTOTAL						
	Void						
	TOTAL			100%		100%	

Section 3 Venting	Venting provisions	Yes / No	Number	P. O. and Serial Number
	Bag horsetail	No		
	Bag vent filter(s)	Yes		
	Container vent filter(s)	Yes	1	

Section 4	Transuranic Waste shall not have any of the following characteristics:			
Prohibited Waste Characteristics and Waste Form	Prohibited item or characteristic	Does the waste have this item or characteristic		Notes and explanations
		YES	NO	
	Pressure vessels		X	
	Sealed containers > 4 liters		X	
	Liquids		X	
	Pyrophoric materials		X	
	Explosives		X	
	Compressed gases		X	
	Corrosive materials		X	
	Reactive materials		X	
	Classified items		X	
	PCB's (> 50 ppm, specify wt%)		X	
	Asbestos (specify wt%)		X	

Section 5	Nuclide	Grams (wt)	Notes
Fissile and transuranic nuclides	U 233	7.266E-02	
	U 235	7.491E+00	
Note: nonfissile and non-TRU nuclides shall be listed on Form WMO-195, Radioactive and Mixed Waste Disposal Requisition.	Np 235		
	Pu 236		
	Np 237	3.022E-01	
	Pu 238	2.809E-01	
	Pu 239	6.274E+00	
	Pu 240	2.407E+00	
	Pu 241	4.629E-01	
	Pu 242	1.854E-02	
	Am 241	7.763E-01	
	Am 242m	1.605E-03	
	Am 243	2.388E-01	
	Cm 243	4.052E-04	
	Cm 244	1.133E-01	
	Cm 245	1.890E-02	
	Cm 247		
	Cm 249		
	Cf 250		
	Cf 251		
	Cf 252		
	Es 252		
	TOTAL	1.852E+01	

Section 6 Comments, explanations, and clarifications			
Section 7 Defense funding source for TRU waste	Was this waste generated in whole or in part through a defense-related function (Y / N)? Yes		
	Funding source: ARRA	Source Material: ATM, MOX, N-reactor	
	Project Name: UREX / NFRDP	Other:	No.:
	If NOT defense-related - a copy of the DOE approval to generate waste with no path for disposal must be attached (Y / N / NA) NA		
Section 8 Generator signature	Characterized and certified by: William Naumann (Print name) _____ (Signature) 97304 (Badge No.) 6-10-2010 (Date)		

Section 9 WMO summary To be completed by WMO Technical Support			Notes
TRU Inventory (nci)			
Weight (grams)			
TRU Concentration (nCi/g)			
Thermal Power (W)			
FGE (g Pu 239 Eq)			
TRUCON Code			
TRUCON Code Thermal Power Limit (W) OK (Y / N)			
Defense Related (Y / N) NPD Approval (Y / N / NA)			
Prohibited items or materials (Y / N) NPD Approval (Y / N / NA)			
OK for TRUPACT-II (Y / N)			
OK for 8-120B (Y / N)			
OK for WIPP (Y / N)			

I certify that I have reviewed this requisition and that the information provided is adequate and consistent.

Accepted by: _____ (Print name) _____ (Signature) _____ (Badge No.) _____ (Date)

Container 1242

RW 88896

WMO-195 Radioactive and Mixed Waste Disposal Requisition

Division	Building	Room	Area
NWM-NOD	**212**	**F-113**	**AGHCF**

Generator must have Sections 1-9 completed prior to submittal to WMO.

SECTION 1 - Container Type

Type of receptacle:	Volume	Units	Container Description
30 gal. = 114 L Drum	**30**	**Gallons**	

SECTION 2A - Radionuclides

Element & Isotope # (e.g., Co-60)	Value	Isotope UOM
Ru106	7.13E-10	CURIES
Cs134	4.40E-06	CURIES
U235	5.01E-06	CURIES
U238	7.79E-07	CURIES
Pu238	7.39E-03	CURIES
Pu239	5.68E-02	CURIES
Pu240	2.81E-02	CURIES
Pu241	6.45E-02	CURIES
Am241	3.56E-02	CURIES
Am242m	9.86E-05	CURIES
Am243	1.00E-05	CURIES
Cm244	3.65E-04	CURIES
Cs137	6.02E-01	CURIES
Pu242	1.28E-05	CURIES
Sr90	5.14E-01	CURIES

SECTION 2B - Transuranic Waste Only

Attachment WMO-195A must be completed when total TRU radionuclides are expected to exceed 100 nanocuries/gram of waste.

Attachment WMO-195A included? X Yes ___ No

SECTION 3 - Liquids Only

Enter the amount of solution: _____

pH of solution: _____

Flashpoint: ___ Flashpoint <= 140° F ___ Flashpoint > 140° F

Identify the chemical makeup of the liquid in Section 4.

Scintillation Vials? ___ Yes X No

Number of Vials: _____

Number of mL/Vial: _____

SECTION 4 - Waste Constituents

List all waste constituents. Any waste constituents found in the waste container and not listed in this section will be returned to the waste generator. Attach additional comments if necessary.

Waste Constituent	% of Total Volume	% of Total Weight
See attached VE packaging logs	100	
Totals	100	0

SECTION 5 - Explanation of Waste Composition Determination

Select the explanation which best describes how the isotopes and quantities are known.

___ 1. The radionuclides and quantities specified are based on the process knowledge of the difference in the amount of original radioactive

material and the remaining amount of radioactive material.

___ 2. The radionuclides and quantities specified were determined by radioactive analysis of the waste. A copy of the analytical results should be attached.

___ 3. As materials were added to this waste container, they were recorded in my logbook. The log book # and logbook location should be specified in Section 6.

x 4. The quantities of radionuclides were calculated based on the surface dose rate.

___ 5. The radionuclides and quantities listed are given based on suspect contamination only. A conservative estimate as to the amount present is provided.

___ 6. Other: (Provide a thorough explanation.)

SECTION 6 - Additional Information and Comments

Use this space to provide additional waste constituents, radionuclides and quantities of each, or to provide comments that would be useful in handling the waste. Attach additional comments if necessary.

Drum 1242 contains cans 1133 and 1021. DOT: Type B solids, fissile excepted. Transport in accordance with Transportation DSA Packaging Approval 19. Less than HC3 quantity of material; FMS-565 required for transport through 212 Radiological facility. W. Naumann 5-28-2013

SECTION 7 - Health Physics Survey

Maximum Surface Dose Rate	3100	mrem/h γ RO20 - window closed
Maximum Dose Rate at 12 in. (30 cm)	1100	mrem/h γ RO20 - window closed
Maximum Dose Rate on contact	_____	mrad/h RO20 - window open
Neutron Dose Rate	_____	mrem/h

Was loose alpha, beta, or gamma surface contamination detected? x No ___ Yes

Containers with loose surface contamination will not be picked up. Containers with a surface dose rate in excess of 200 mrem/h require special handling.

Hodges, George	5/30/2013	217145
Print Full Name	Date	Badge#

SECTION 8 - SPM (Accountable Materials)

I have been notified of accountable materials listed on this requisition

SPM-23 #: **TBD** Batch #: **VARIOUS**

Notify SPM prior to pickup? **x** Yes ___ No

Finney, Brent A.	**55405**	**05/28/2013**
Print Full Name	Badge #	Date

SECTION 9 - Generator Signature

I certify that I have provided the best available process knowledge and other characterization information for the waste described in this requisition.

Lang, Teresa A.	**28096**	**05/30/2013**
Print Full Name	Badge #	Date Submitted to WMO
_____	**27776**	
Cost Code Not Required (Divisional Use Only)	Phone #	

SECTION 10 - WMS Storage and Treatment Assignment

If the waste **is not** classified as TRU, do the following:

Storage Location: **331/4** Assigned By: **Naumann, William R.** Date: **05/30/2013**

Treatment Method Assigned By Date

EPA/WA State #s:
NA

Waste Stream ID:
ANL-WS-0001

If the waste **is** classified as TRU, do the following:

Waste Stream ID: **ANL-WS-0001**

Storage Location: **331/4** Assigned By: **Naumann, William R.** Date: **05/30/2013**

Treatment Method Assigned By Date

Shipment **Naumann, William R.** **05/28/2013**

Does waste require a TRU calculation (if TRU isotopes are present and there is no attachment WMO-195A)?
X Yes __ No

Is this a compactible waste (volume reduction)?*
__ Yes X No

Is this waste requisition "storage only" waste ? (e.g. requires further characterization)
__ Yes X No

I have evaluated the waste described on this requisition and have determined that it meets the WMO/Waste Acceptance Criteria requirements.

Authorized for pickup by:

Naumann, William R.	97304	05/30/2013
Print Full Name	Badge #	Date

Peer Reviewer: **Grzymajlo, Jeffrey T.** Review Date: **05/30/2013**

SECTION 11 - WMO TRU Calculation

If a TRU calculation is required, enter the container weights.

Gross Weight 130 LBS

Tare Weight 42 LBS

Weighed by:

Badge # Name Date

Is this waste to be considered TRU based on calculation? X Yes ___ No

TRU calculation reviewed by: 97304 Naumann, William R. 05/30/2013

Badge # Name Date

To be completed by WM personnel.

Gross Weight: _____ _____ (units)

Tare Weight: _____ _____ (units)

Weighed by: _____ _____ _____

Badge # Name Date

Is this waste to be considered TRU based on calculation? __ Yes __ No

TRU calculation reviewed by: _____ _____ _____

Badge # Name Date

SECTION 12 - WMO Storage Location

Building #	Location	Badge #	Name	Date
331	L331-4	043813	Smith, John T.	5/30/2013
331	L331-4			

SECTION 13 - WMO Treatment

Treatment Method #	Storage or Shipping Container #	Badge #	Name	Date
Waste PickUp / Scanner Upload	88896	043813	Smith, John T.	5/30/2013
Shipment	88896			

WMO-195A, TRANSURANIC WASTE DISPOSAL REQUISITION SUPPLEMENT

REQUISITION NUMBER RW 88896

Section 1 Description of Waste	Campaign 35A SRW drum 1242	Packaging Date: 11/01/2012

Section 2 Composition of the Waste	Material	Volume	Vol %	Vol %	Weight	Wt%	Notes
	Vol and Wt units		Waste	Total			
	Iron						
	Aluminum						
	Other metals	steel	75				
	Nonmetallic inorganic						
	Cellulosic		10				
	Plastic		10				
	Rubber		5				
	Other organic						
	Solidified in inorganic matrix						
	Solidified in organic matrix						
	Inorganic sludge						
	Soil and gravel						
	Total water						
	Solidification and sorbet media						
	Other (specify)						
	SUBTOTAL		100%				
	Packaging - steel						
	Packaging - plastic						
	Packaging - lead						
	Packaging - other						
	Subtotal		100%				
	SUBTOTAL						
	Void						
	TOTAL		100	100%		100%	

Section 3 Venting	Venting provisions	Yes / No	Number	P. O. and Serial Number
	Bag horsetail	no		
	Bag vent filter(s)	yes	one	Nuc-Fil 019DS
	Container vent filter(s)	yes	one	416725 HM-928

Section 4	Transuranic Waste shall not have any of the following characteristics:			
Prohibited Waste Characteristics and Waste Form	Prohibited item or characteristic	Does the waste have this item or characteristic		Notes and explanations
		YES	NO	
	Pressure vessels		no	
	Sealed containers > 4 liters		no	
	Liquids		no	
	Pyrophoric materials		no	
	Explosives		no	
	Compressed gases		no	
	Corrosive materials		no	
	Reactive materials		no	
	Classified items		no	
	PCB's (> 50 ppm, specify wt%)		no	
	Asbestos (specify wt%)		no	

Section 5	Nuclide	Grams (wt)	Notes
Fissile and transuranic nuclides	U 233		
	U 235	2.3181E+00	
Note: nonfissile and non-TRU nuclides shall be listed on Form WMO-195, Radioactive and Mixed Waste Disposal Requisition.	Np 235		
	Pu 236		
	Np 237		
	Pu 238	4.3131E-04	
	Pu 239	9.1492E-01	
	Pu 240	1.2372E-01	
	Pu 241	6.2636E-04	
	Pu 242	3.2502E-03	
	Am 241	1.0396E-02	
	Am 242m	9.4115E-06	
	Am 243	5.0115E-05	
	Cm 243		
	Cm 244	4.5092E-06	
	Cm 245		
	Cm 247		
	Cm 249		
	Cf 250		
	Cf 251		
	Cf 252		
	Es 252		
	TOTAL		

Section 6 Comments, explanations, and clarifications	This waste was packaged as part of the ANL AGHCF RH-TRU SRW project. Waste to be shipped to Wipp.		
Section 7 Defense funding source for TRU waste	Was this waste generated in whole or in part through a defense-related function (Y / N)? Y		
	Funding source: ARRA	Source Material: various	
	Project Name: AGHCF	Other: N/A	No.: N/A
	If NOT defense-related - a copy of the DOE approval to generate waste with no path for disposal must be attached (Y / N / NA) N/A		
Section 8 Generator signature	Characterized and certified by: Teresa A. Lang (Print name) Teresa A Lang (Signature) 28096 (Badge No.) 5/30/13 (Date)		

Section 9 WMO summary To be completed by WMO Technical Support			Notes
TRU Inventory (nci)			
Weight (grams)			
TRU Concentration (nCi/g)			
Thermal Power (W)			
FGE (g Pu 239 Eq)			
TRUCON Code			
TRUCON Code Thermal Power Limit (W) OK (Y / N)			
Defense Related (Y / N) NPD Approval (Y / N / NA)			
Prohibited items or materials (Y / N) NPD Approval (Y / N / NA)			
OK for TRUPACT-II (Y / N)			
OK for 8-120B (Y / N)			
OK for WIPP (Y / N)			

I certify that I have reviewed this requisition and that the information provided is adequate and consistent.

Accepted by: _____ (Print name) _____ (Signature) _____ (Badge No.) _____ (Date)

Container 1182

RW 88066

WMO-195 Radioactive and Mixed Waste Disposal Requisition

Division	Building	Room	Area
NWM-NOD	**212**	**F-113**	**AGHCF**

Generator must have Sections 1-9 completed prior to submittal to WMO.

SECTION 1 - Container Type

Type of receptacle:	Volume	Units	Container Description
30 gal. = 114 L Drum	**30**	**Gallons**	

SECTION 2A - Radionuclides

Element & Isotope # (e.g., Co-60)	Value	Isotope UOM
Co60	1.42E-04	GRAMS
Kr85	4.72E-05	GRAMS
Ru106	4.91E-09	GRAMS
Cs134	5.82E-07	GRAMS
Pm147	1.04E-05	GRAMS
Eu154	1.78E-04	GRAMS
U235	1.03E+00	GRAMS
U238	1.57E+02	GRAMS
Pu238	8.96E-02	GRAMS
Pu239	5.29E+01	GRAMS
Pu240	1.44E+01	GRAMS
Pu241	4.27E-01	GRAMS
Am241	1.18E+00	GRAMS
Am242m	5.41E-06	GRAMS
Cm242	1.50E-08	GRAMS
Cm244	2.11E-04	GRAMS
Cs137	1.80E-01	GRAMS
Pu242	6.55E-01	GRAMS
Sr90	4.11E-02	GRAMS

SECTION 2B - Transuranic Waste Only

Attachment WMO-195A must be completed when total TRU radionuclides are expected to exceed 100 nanocuries/gram of waste.

Attachment WMO-195A included? X Yes ___ No

SECTION 3 - Liquids Only

Enter the amount of solution: _____

pH of solution: _____

Flashpoint: ___ Flashpoint <= 140° F ___ Flashpoint > 140° F

Identify the chemical makeup of the liquid in Section 4.

Scintillation Vials? ___ Yes ___ No

Number of Vials: _____

Number of mL/Vial: _____

SECTION 4 - Waste Constituents

List all waste constituents. Any waste constituents found in the waste container and not listed in this section will be returned to the waste generator. Attach additional comments if necessary.

Waste Constituent	% of Total Volume	% of Total Weight
See attached VE packaging logs	100	
Totals	100	0

SECTION 5 - Explanation of Waste Composition Determination

Select the explanation which best describes how the isotopes and quantities are known.

___ 1. The radionuclides and quantities specified are based on the process knowledge of the difference in the amount of original radioactive material and the remaining amount of radioactive material.

___ 2. The radionuclides and quantities specified were determined by radioactive analysis of the waste. A copy of the analytical results should be attached.

___ 3. As materials were added to this waste container, they were recorded in my logbook. The log book # and logbook location should be specified in Section 6.

___ 4. The quantities of radionuclides were calculated based on the surface dose rate.

___ 5. The radionuclides and quantities listed are given based on suspect contamination only. A conservative estimate as to the amount present is provided.

x 6. Other: (Provide a thorough explanation.)
Values for each actinide and fission product are scaled using Gram Quantity Input for U-235. Quantity values were derived from NOD-155-00-00, Revised Estimate of the Radioactive Inventory in the AGHCF. Values listed are based on calculations that provide MFP quantities on April 1, 2010.

SECTION 6 - Additional Information and Comments

Use this space to provide additional waste constituents, radionuclides and quantities of each, or to provide comments that would be useful in handling the waste. Attach additional comments if necessary.

Drum 1182 contains SP 8265 and SP 8263. Gross weight is estimated based on weight of shield pots; weight of shield pots (61 lbs. each) is included in the tare weight. DOT: Type B solids, fissile; CSI=14.6 Transport in accordance with Transportation DSA Packaging Approval 19. Hazard Category 3 quantity of material; FMS-565 required for transport. W. Naumann 1-14-2012

SECTION 7 - Health Physics Survey

Maximum Surface Dose Rate	619	mrem/h γ RO20 - window closed
Maximum Dose Rate at 12 in. (30 cm)	302	mrem/h γ RO20 - window closed
Maximum Dose Rate on contact	_____	mrad/h RO20 - window open
Neutron Dose Rate	_____	mrem/h

Was loose alpha, beta, or gamma surface contamination detected? x No ___ Yes

Containers with loose surface contamination will not be picked up. Containers with a surface dose rate in excess of 200 mrem/h require special handling

Hodges, George	1/30/2013	217145
Print Full Name	Date	Badge#

SECTION 8 - SPM (Accountable Materials)

I have been notified of accountable materials listed on this requisition.

SPM-23 #: E Batch #: TBD

Notify SPM prior to pickup? ___ Yes x No

Drazkowski, Robert J.	59514	01/14/2013
Print Full Name	Badge #	Date

SECTION 9 - Generator Signature

I certify that I have provided the best available process knowledge and other characterization information for the waste described in this requisition.

Lang, Teresa A.	28096	01/14/2013
Print Full Name	Badge #	Date Submitted to WMO
Cost Code Not Required (Divisional Use Only)	27776 Phone #	

SECTION 10 - WMS Storage and Treatment Assignment

If the waste **is not** classified as TRU, do the following:

Storage Location: **331/4** Assigned By: **Naumann, William R.** Date: **01/14/2013**

Treatment Method Assigned By Date

EPA/WA State #s:
NA

Waste Stream ID:
ANL-WS-0001-FEW

If the waste **is** classified as TRU, do the following:

Waste Stream ID: **ANL-WS-0001-FEW**

Storage Location: **331/4** Assigned By: **Naumann, William R.** Date: **01/14/2013**

Treatment Method	Assigned By	Date
Shipment	**Naumann, William R.**	**01/14/2013**

Does waste require a TRU calculation (if TRU isotopes are present and there is no attachment WMO-195A)?
X Yes __ No

Is this a compactible waste (volume reduction)?*
__ Yes X No

Is this waste requisition "storage only" waste ? (e.g. requires further characterization)
__ Yes X No

I have evaluated the waste described on this requisition and have determined that it meets the WMO/Waste Acceptance Criteria requirements.

Authorized for pickup by:

Naumann, William R.	97304	01/14/2013
Print Full Name	Badge #	Date

Peer Reviewer: **Grzymajlo, Jeffrey T.** Review Date: **01/14/2013**

SECTION 11 - WMO TRU Calculation

If a TRU calculation is required, enter the container weights.

Gross Weight 225 LBS

Tare Weight 164 LBS

Weighed by:

Badge # Name Date

Is this waste to be considered TRU based on calculation? X Yes __ No

TRU calculation reviewed by: 97304 Naumann, William R. 01/31/2013

Badge # Name Date

To be completed by WM personnel.

Gross Weight: _____ _____ (units)

Tare Weight: _____ _____ (units)

Weighed by: _____ _____ _____

Badge # Name Date

Is this waste to be considered TRU based on calculation? __ Yes __ No

TRU calculation reviewed by: _____ _____ _____

Badge # Name Date

SECTION 12 - WMO Storage Location

Building #	Location	Badge #	Name	Date
310	L310	043813	Smith, John T.	1/31/2013
331	L331-4	043813	Smith, John T.	1/31/2013
331	L331-YARD	043813	Smith, John T.	1/31/2013
331	L331-YARD-RHTRU	043813	Smith, John T.	1/31/2013
310	L310	053265	Guendling, Cynthia	4/4/2013
331	L331-4	053265	Guendling, Cynthia	4/4/2013
331	L331-YARD	053265	Guendling, Cynthia	4/4/2013
331	L331-YARD-RHTRU	053265	Guendling, Cynthia	4/4/2013
310	L310	059324	Buck, John F.	4/23/2013
331	L331-4	059324	Buck, John F.	4/23/2013
331	L331-YARD	059324	Buck, John F.	4/23/2013
331	L331-YARD-RHTRU	059324	Buck, John F.	4/23/2013

310	L310	59204	Cunningham, Paula D.	4/25/2013
331	L331-4	59204	Cunningham, Paula D.	4/25/2013
331	L331-YARD	59204	Cunningham, Paula D.	4/25/2013
331	L331-YARD-RHTRU	59204	Cunningham, Paula D.	4/25/2013
OFFSITE	OFFSITE	59204	Cunningham, Paula D.	4/25/2013
OFFSITE	OFFSITE	59204	Cunningham, Paula D.	4/29/2013
310	L310			
331	L331-4			
331	L331-YARD			
331	L331-YARD-RHTRU			

SECTION 13 - WMO Treatment

Treatment Method #	Storage or Shipping Container #	Badge #	Name	Date
Waste PickUp / Scanner Upload	88066	043813	Smith, John T.	1/31/2013
Waste PickUp / Scanner Upload	88066	043813	Smith, John T.	1/31/2013
Waste PickUp / Scanner Upload	88066	043813	Smith, John T.	1/31/2013
Waste PickUp / Scanner Upload	88066	043813	Smith, John T.	1/31/2013
Relocation	88066	053265	Guendling, Cynthia	4/4/2013
Relocation	88066	053265	Guendling, Cynthia	4/4/2013
Relocation	88066	053265	Guendling, Cynthia	4/4/2013
Relocation	88066	053265	Guendling, Cynthia	4/4/2013
Relocation	88066	059324	Buck, John F.	4/23/2013
Relocation	88066	059324	Buck, John F.	4/23/2013
Relocation	88066	059324	Buck, John F.	4/23/2013
Relocation	88066	059324	Buck, John F.	4/23/2013
Sort/Segregate/Bulk/Package for Shipment	88066	59204	Cunningham, Paula D.	4/25/2013
Sort/Segregate/Bulk/Package for Shipment	88066	59204	Cunningham, Paula D.	4/25/2013
Sort/Segregate/Bulk/Package for Shipment	88066	59204	Cunningham, Paula D.	4/25/2013
Sort/Segregate/Bulk/Package for Shipment	88066	59204	Cunningham, Paula D.	4/25/2013
Relocation	STRU130042	59204	Cunningham, Paula D.	4/25/2013
Shipment	STRU130042	59204	Cunningham, Paula D.	4/29/2013
Shipment	88066			
Shipment	88066			
Shipment	88066			
Shipment	88066			

WMO-195A, TRANSURANIC WASTE DISPOSAL REQUISITION SUPPLEMENT

REQUISITION NUMBER RW 88066

Section 1 Description of Waste	Campaign 32 RH-TRU FEW drum 1182	Packaging Date: 11/28/2012

Section 2 Composition of the Waste	Material	Volume	Vol %	Vol %	Weight	Wt%	Notes
	Vol and Wt units		Waste	Total			
	Iron						
	Aluminum						
	Other metals	steel	100				
	Nonmetallic inorganic						
	Cellulosic						
	Plastic						
	Rubber						
	Other organic						
	Solidified in inorganic matrix						
	Solidified in organic matrix						
	Inorganic sludge						
	Soil and gravel						
	Total water						
	Solidification and sorbet media						
	Other (specify)						
	SUBTOTAL		100%				
	Packaging - steel						
	Packaging - plastic						
	Packaging - lead						
	Packaging - other						
	Subtotal		100%				
	SUBTOTAL						
	Void				[redacted]		
	TOTAL		100	100%		100%	

Section 3 Venting	Venting provisions	Yes / No	Number	P. O. and Serial Number
	Bag horsetail	no		[redacted]
	Bag vent filter(s)	yes	one	1A-34847 AL-1223
	Container vent filter(s)	yes	one	NucFil-013

Section 4 Prohibited Waste Characteristics and Waste Form	Transuranic Waste shall not have any of the following characteristics:			
	Prohibited item or characteristic	Does the waste have this item or characteristic		Notes and explanations
		YES	NO	
	Pressure vessels		no	
	Sealed containers > 4 liters		no	
	Liquids		no	
	Pyrophoric materials		no	
	Explosives		no	
	Compressed gases		no	
	Corrosive materials		no	
	Reactive materials		no	
	Classified items		no	
	PCB's (> 50 ppm, specify wt%)		no	
	Asbestos (specify wt%)		no	

Section 5 Fissile and transuranic nuclides Note: nonfissile and non-TRU nuclides shall be listed on Form WMO-195, Radioactive and Mixed Waste Disposal Requisition.	Nuclide	Grams (wt)	Notes
	U 233		
	U 235	1.03E+00	
	Np 235		
	Pu 236		
	Np 237		
	Pu 238	8.96E-02	
	Pu 239	5.29E+01	
	Pu 240	1.44E+01	
	Pu 241	4.27E-01	
	Pu 242	6.55E-01	
	Am 241	1.18E+00	
	Am 242m	5.41E-06	
	Am 243		
	Cm 243		
	Cm 244	2.11E-04	
	Cm 245		
	Cm 247		
	Cm 249		
	Cf 250		
	Cf 251		
	Cf 252		
	Es 252		
	TOTAL		

Section 6 Comments, explanations, and clarifications	This waste was packaged as part of the ANL AGHCF ARRA RH-TRU FEW program. Waste to be shipped to WIPP.		
Section 7 Defense funding source for TRU waste	Was this waste generated in whole or in part through a defense-related function (Y / N)? Y		
	Funding source: ARRA	Source Material: various	
	Project Name: AGHCF	Other: N/A	No.: N/A
	If NOT defense-related - a copy of the DOE approval to generate waste with no path for disposal must be attached (Y / N / NA) N/A		
Section 8 Generator signature	Characterized and certified by: Teresa A. Lang (Print name) Teresa A. Lang (Signature) 28096 (Badge No.) 1/7/13 (Date)		

Section 9 WMO summary To be completed by WMO Technical Support			Notes
TRU Inventory (nci)			
Weight (grams)			
TRU Concentration (nCi/g)			
Thermal Power (W)			
FGE (g Pu 239 Eq)			
TRUCON Code			
TRUCON Code Thermal Power Limit (W) OK (Y / N)			
Defense Related (Y / N) NPD Approval (Y / N / NA)			
Prohibited Items or materials (Y / N) NPD Approval (Y / N / NA)			
OK for TRUPACT-II (Y / N)			
OK for 8-120B (Y / N)			
OK for WIPP (Y / N)			

I certify that I have reviewed this requisition and that the information provided is adequate and consistent.

Accepted by: _____ (Print name) _____ (Signature) _____ (Badge No.) _____ (Date)

Container 1197

RW 88851

WMO-195 Radioactive and Mixed Waste Disposal Requisition

Division	Building	Room	Area
NWM-NOD	212	F-113	AGHCF

Generator must have Sections 1-9 completed prior to submittal to WMO.

SECTION 1 - Container Type

Type of receptacle:	Volume	Units	Container Description
30 gal. = 114 L Drum	**30**	**Gallons**	

SECTION 2A - Radionuclides

Element & Isotope # (e.g., Co-60)	Value	Isotope UOM
Ru106	7.64E-10	CURIES
Cs134	4.72E-06	CURIES
U235	5.37E-06	CURIES
U238	8.35E-07	CURIES
Pu238	7.92E-03	CURIES
Pu239	6.08E-02	CURIES
Pu240	3.01E-02	CURIES
Pu241	6.91E-02	CURIES
Am241	3.82E-02	CURIES
Am242m	1.06E-04	CURIES
Am243	1.07E-05	CURIES
Cm244	3.91E-04	CURIES
Cs137	6.45E-01	CURIES
Pu242	1.37E-05	CURIES
Sr90	5.51E-01	CURIES

SECTION 2B - Transuranic Waste Only

Attachment WMO-195A must be completed when total TRU radionuclides are expected to exceed 100 nanocuries/gram of waste.

Attachment WMO-195A included? X Yes ___ No

SECTION 3 - Liquids Only

Enter the amount of solution: _____

pH of solution: _____

Flashpoint: ___ Flashpoint <= 140° F ___ Flashpoint > 140° F

Identify the chemical makeup of the liquid in Section 4.

Scintillation Vials? ___ Yes X No

Number of Vials: _____

Number of mL/Vial: _____

SECTION 4 - Waste Constituents

List all waste constituents. Any waste constituents found in the waste container and not listed in this section will be returned to the waste generator. Attach additional comments if necessary.

Waste Constituent	% of Total Volume	% of Total Weight
See attached VE packaging logs	100	
Totals	100	0

SECTION 5 - Explanation of Waste Composition Determination

Select the explanation which best describes how the isotopes and quantities are known.

___ 1. The radionuclides and quantities specified are based on the process knowledge of the difference in the amount of original radioactive

material and the remaining amount of radioactive material.

___ 2. The radionuclides and quantities specified were determined by radioactive analysis of the waste. A copy of the analytical results should be attached.

___ 3. As materials were added to this waste container, they were recorded in my logbook. The log book # and logbook location should be specified in Section 6.

x 4. The quantities of radionuclides were calculated based on the surface dose rate.

___ 5. The radionuclides and quantities listed are given based on suspect contamination only. A conservative estimate as to the amount present is provided.

___ 6. Other: (Provide a thorough explanation.)

SECTION 6 - Additional Information and Comments

Use this space to provide additional waste constituents, radionuclides and quantities of each, or to provide comments that would be useful in handling the waste. Attach additional comments if necessary.

Drum 1197 contains cans 1095 and 1026. This drum is RCRA waste due to the presence of a lead brick. D008 waste code applies. DOT: Type B solids, fissile excepted. Transport in accordance with Transportation DSA Packaging Approval 19. Less than HC3 quantity of material; FMS-565 required for transport through BD212 Radiological facility. W. Naumann 2-18-2013

SECTION 7 - Health Physics Survey

Maximum Surface Dose Rate	6400	mrem/h γ RO20 - window closed
Maximum Dose Rate at 12 in. (30 cm)	2400	mrem/h γ RO20 - window closed
Maximum Dose Rate on contact	_____	mrad/h RO20 - window open
Neutron Dose Rate	_____	mrem/h

Was loose alpha, beta, or gamma surface contamination detected? x No ___ Yes

Containers with loose surface contamination will not be picked up. Containers with a surface dose rate in excess of 200 mrem/h require special handling.

Hodges, George	2/26/2013	217145
Print Full Name	Date	Badge#

SECTION 8 - SPM (Accountable Materials)

I have been notified of accountable materials listed on this requisition.

SPM-23 #: E Batch #: TBD

Notify SPM prior to pickup? ___ Yes x No

Drazkowski, Robert J.	59514	02/18/2013
Print Full Name	Badge #	Date

SECTION 9 - Generator Signature

I certify that I have provided the best available process knowledge and other characterization information for the waste described in this requisition.

Lang, Teresa A.	28096	02/18/2013
Print Full Name	Badge #	Date Submitted to WMO
_____	27776	
Cost Code Not Required (Divisional Use Only)	Phone #	

SECTION 10 - WMS Storage and Treatment Assignment

If the waste **is not** classified as TRU, do the following:

Storage Location: **331/4** Assigned By: **Naumann, William R.** Date: **02/18/2013**

Treatment Method Assigned By Date

EPA/WA State #s:
D008

Waste Stream ID:
ANL-WS-0001

If the waste **is** classified as TRU, do the following:

Waste Stream ID: **ANL-WS-0001**

Storage Location: **331/4** Assigned By: **Naumann, William R.** Date: **02/18/2013**

Treatment Method	Assigned By	Date
Shipment	**Naumann, William R.**	**02/18/2013**

Does waste require a TRU calculation (if TRU isotopes are present and there is no attachment WMO-195A)?
X Yes __ No

Is this a compactible waste (volume reduction)?*
__ Yes X No

Is this waste requisition "storage only" waste ? (e.g. requires further characterization)
__ Yes X No

I have evaluated the waste described on this requisition and have determined that it meets the WMO/Waste Acceptance Criteria requirements.

Authorized for pickup by:

Naumann, William R.	97304	02/18/2013
Print Full Name	Badge #	Date

Peer Reviewer: **Grzymajlo, Jeffrey T.** Review Date: **02/19/2013**

SECTION 11 - WMO TRU Calculation

If a TRU calculation is required, enter the container weights.

Gross Weight 150 LBS

Tare Weight 42 LBS

Weighed by:

Badge # Name Date

Is this waste to be considered TRU based on calculation? X Yes ___ No

TRU calculation reviewed by: 97304 Naumann, William R. 02/26/2013

Badge # Name Date

To be completed by WM personnel.

Gross Weight: _____ _____ (units)

Tare Weight: _____ _____ (units)

Weighed by: _____ _____ _____

Badge # Name Date

Is this waste to be considered TRU based on calculation? __ Yes __ No

TRU calculation reviewed by: _____ _____ _____

Badge # Name Date

SECTION 12 - WMO Storage Location

Building #	Location	Badge #	Name	Date
310	L310	043813	Smith, John T.	2/27/2013
331	L331-4	043813	Smith, John T.	2/27/2013
331	L331-YARD	043813	Smith, John T.	2/27/2013
331	L331-YARD-RHTRU	043813	Smith, John T.	2/27/2013
310	L310	053265	Guendling, Cynthia	4/4/2013
331	L331-4	053265	Guendling, Cynthia	4/4/2013
331	L331-YARD	053265	Guendling, Cynthia	4/4/2013
331	L331-YARD-RHTRU	053265	Guendling, Cynthia	4/4/2013
310	L310	043813	Smith, John T.	7/3/2013
331	L331-4	043813	Smith, John T.	7/3/2013
331	L331-YARD	043813	Smith, John T.	7/3/2013
331	L331-YARD-RHTRU	043813	Smith, John T.	7/3/2013

310	L310	059324	Buck, John F.	7/9/2013
331	L331-4	059324	Buck, John F.	7/9/2013
331	L331-YARD	059324	Buck, John F.	7/9/2013
331	L331-YARD-RHTRU	059324	Buck, John F.	7/9/2013
310	L310	59204	Cunningham, Paula D.	7/12/2013
331	L331-4	59204	Cunningham, Paula D.	7/12/2013
331	L331-YARD	59204	Cunningham, Paula D.	7/12/2013
331	L331-YARD-RHTRU	59204	Cunningham, Paula D.	7/12/2013
OFFSITE	OFFSITE	59204	Cunningham, Paula D.	7/12/2013
OFFSITE	OFFSITE	59204	Cunningham, Paula D.	7/15/2013
310	L310			
331	L331-4			
331	L331-YARD			
331	L331-YARD-RHTRU			

SECTION 13 - WMO Treatment

Treatment Method #	Storage or Shipping Container #	Badge #	Name	Date
Waste PickUp / Scanner Upload	88851	043813	Smith, John T.	2/27/2013
Waste PickUp / Scanner Upload	88851	043813	Smith, John T.	2/27/2013
Waste PickUp / Scanner Upload	88851	043813	Smith, John T.	2/27/2013
Waste PickUp / Scanner Upload	88851	043813	Smith, John T.	2/27/2013
Relocation	88851	053265	Guendling, Cynthia	4/4/2013
Relocation	88851	053265	Guendling, Cynthia	4/4/2013
Relocation	88851	053265	Guendling, Cynthia	4/4/2013
Relocation	88851	053265	Guendling, Cynthia	4/4/2013
Relocation	88851	043813	Smith, John T.	7/3/2013
Relocation	88851	043813	Smith, John T.	7/3/2013
Relocation	88851	043813	Smith, John T.	7/3/2013
Relocation	88851	043813	Smith, John T.	7/3/2013
Relocation	88851	059324	Buck, John F.	7/9/2013
Relocation	88851	059324	Buck, John F.	7/9/2013
Relocation	88851	059324	Buck, John F.	7/9/2013
Relocation	88851	059324	Buck, John F.	7/9/2013
Sort/Segregate/Bulk/Package for Shipment	88851	59204	Cunningham, Paula D.	7/12/2013
Sort/Segregate/Bulk/Package for Shipment	88851	59204	Cunningham, Paula D.	7/12/2013
Sort/Segregate/Bulk/Package for Shipment	88851	59204	Cunningham, Paula D.	7/12/2013
Sort/Segregate/Bulk/Package for Shipment	88851	59204	Cunningham, Paula D.	7/12/2013
Relocation	STRU130125	59204	Cunningham, Paula D.	7/12/2013
Shipment	STRU130125	59204	Cunningham, Paula D.	7/15/2013
Shipment	88851			
Shipment	88851			
Shipment	88851			
Shipment	88851			

WMO-195A, TRANSURANIC WASTE DISPOSAL REQUISITION SUPPLEMENT

REQUISITION NUMBER RW 88851

Section 1 Description of Waste	Campaign 33 C RH-TRU debri drum 1197				Packaging Date: 11/1/12		
Section 2 Composition of the Waste	Material	Volume	Vol %	Vol %	Weight	Wt%	Notes
	Vol and Wt units		Waste	Total			
	Iron						
	Aluminum						
	Other metals	steel, lead	35, 30				
	Nonmetallic inorganic						
	Cellulosic		15				
	Plastic		15				
	Rubber		5				
	Other organic						
	Solidified in Inorganic matrix						
	Solidified in organic matrix						
	Inorganic sludge						
	Soil and gravel						
	Total water						
	Solidification and sorbet media						
	Other (specify)						
	SUBTOTAL		100%				
	Packaging - steel						
	Packaging - plastic						
	Packaging - lead						
	Packaging - other						
	Subtotal		100%				
	SUBTOTAL						
	Void						
	TOTAL		100	100%		100%	

Section 3 Venting	Venting provisions	Yes / No	Number	P. O. and Serial Number
	Bag horsetail	no		
	Bag vent filter(s)	yes	one	NucFil 013
	Container vent filter(s)	yes	one	2A-43703 JL-295

Section 4	Transuranic Waste shall not have any of the following characteristics:			
Prohibited Waste Characteristics and Waste Form	Prohibited item or characteristic	Does the waste have this item or characteristic		Notes and explanations
		YES	NO	
	Pressure vessels		no	
	Sealed containers > 4 liters		no	
	Liquids		no	
	Pyrophoric materials		no	
	Explosives		no	
	Compressed gases		no	
	Corrosive materials		no	
	Reactive materials		no	
	Classified items		no	
	PCB's (> 50 ppm, specify wt%)		no	
	Asbestos (specify wt%)		no	

Section 5	Nuclide	Grams (wt)	Notes
Fissile and transuranic nuclides	U 233		
	U 235	2.48E+00	
	Np 235		
Note: nonfissile and non-TRU nuclides shall be listed on Form WMO-195, Radioactive and Mixed Waste Disposal Requisition.	Pu 236		
	Np 237		
	Pu 238	4.62E-04	
	Pu 239	9.81E-01	
	Pu 240	1.33E-01	
	Pu 241	6.71E-04	
	Pu 242	3.48E-03	
	Am 241	1.11E-02	
	Am 242m	1.01E-05	
	Am 243	5.37E-05	
	Cm 243		
	Cm 244	4.83E-06	
	Cm 245		
	Cm 247		
	Cm 249		
	Cf 250		
	Cf 251		
	Cf 252		
	Es 252		
	TOTAL		

Section 6 Comments, explanations, and clarifications	This waste was packaged as part of the ANL AGHCF ARRA RH-TRU program. Waste to be shipped to WIPP.		
Section 7 Defense funding source for TRU waste	Was this waste generated in whole or in part through a defense-related function (Y / N)? Y		
	Funding source: ARRA	Source Material: various	
	Project Name: AGHCF	Other: N/A	No.: N/A
	If NOT defense-related - a copy of the DOE approval to generate waste with no path for disposal must be attached (Y / N / NA) N/A		
Section 8 Generator signature	Characterized and certified by: Teresa A. Lang (Print name) Teresa A. Lang (Signature) 78076 (Badge No.) 2/18/13 (Date)		

Section 9 WMO summary To be completed by WMO Technical Support			Notes
TRU Inventory (nci)			
Weight (grams)			
TRU Concentration (nCi/g)			
Thermal Power (W)			
FGE (g Pu 239 Eq)			
TRUCON Code			
TRUCON Code Thermal Power Limit (W) OK (Y / N)			
Defense Related (Y / N) NPD Approval (Y / N / NA)			
Prohibited items or materials (Y / N) NPD Approval (Y / N / NA)			
OK for TRUPACT-II (Y / N)			
OK for 8-120B (Y / N)			
OK for WIPP (Y / N)			

I certify that I have reviewed this requisition and that the information provided is adequate and consistent.

Accepted by: _____ (Print name) _____ (Signature) _____ (Badge No.) _____ (Date)

AK14

Nuclear Waste Partnership LLC

A URS-led partnership with B&W and AREVA

QA:12:00239
UFC:2300.00

INTER-OFFICE CORRESPONDENCE

DATE: December 3, 2012

FROM: J. E. Hoff
W. W. Allen FOR
LOCATION: Quality Assurance

TO: Distribution
LOCATION: Various

SUBJECT: TRANSMITTAL AND CLOSURE OF NWP QUALITY ASSURANCE AUDIT I12-12 CENTRAL CHARACTERIZATION PROJECT QUALITY ASSURANCE PROGRAM

At the time this audit was performed, Washington TRU Solutions LLC (WTS) was the Managing and Operating Contractor of the Waste Isolation Pilot Plant (WIPP). However, on October 1, 2012, Nuclear Waste Partnership LLC (NWP) assumed the role as the Managing and Operating Contractor of the WIPP. Therefore, this report is being issued under the company name of NWP. References to WTS and NWP throughout this document can be considered interchangeable.

Nuclear Waste Partnership LLC (NWP), Quality Assurance (QA) Audit I12-12, *Central Characterization Project Quality Assurance Program*, was performed in two segments (on August 13 through 16 and September 24, 2012 at the Central Characterization Project office in Carlsbad and September 10 through 12, 2012 at Idaho National Laboratory (INL), to evaluate the adequacy and effective implementation of the Central Characterization Project (CCP) QA Program for compliance with DOE/CBFO-94-1012, *U.S. Department of Energy Carlsbad Field Office Quality Assurance Program Document;* WIPP Procedure (WP) 13-1, *WTS Quality Assurance Program Description*; and associated implementing procedure requirements as applicable.

The previous audit of the CCP QA Program (I11-05) resulted in no findings; therefore, an evaluation of the effectiveness of corrective actions was not required.

The results of this audit conclude that the required activities related to the CCP QA Program are adequately and effectively implemented to ensure that program requirements are met. This audit resulted in one finding, one condition corrected during the audit (CDA), and three observations. The finding will be documented on WIPP Form (WF) 12-205 and resultant corrective actions will be tracked and closed through the WIPP Issues Management Process System (IMPS). The CDA and observations require no response. Therefore, this audit is considered closed with the issuance of this report.

A copy of the Audit Report is attached for your information. If you have any questions regarding this audit, please contact Mr. Dale Hood at Extension 8754.

YHS

Attachment

Distribution December 3, 2012 QA:12:00239

NWP:

E. Gulbransen	ED
R. D. Reeves	ED
M. L. Sensibaugh	ED
W. F. Verlanic	ED

cc:	W. W. Allen	ED
	V. K. Cannon	ED
	R. C. Carrasco	ED
	D. W. Freeman	ED
	J. J. Garcia	ED
	M. S. Hendrickson	ED
	L. E. Hernandez	ED
	T. D. Hood	ED
	F. M. Ito	ED
	M. D. Keathley	ED
	A. S. Miller	ED
	M. A. Mullins	451-27
	C. E. Nesser	ED
	D. K. Ploetz	ED
	T. R. Reynolds	ED
	M. F. Sharif	ED
	Quality Assurance Audit I12-12 File	

NUCLEAR WASTE PARTNERSHIP LLC
QUALITY ASSURANCE AUDIT REPORT
Central Characterization Project Quality Assurance Program
I12-12

I. EXECUTIVE SUMMARY:

Nuclear Waste Partnership LLC (NWP), Quality Assurance (QA) Audit I12-12, *Central Characterization Project Quality Assurance Program*, was performed in two segments (on August 13 through 16 and September 24, 2012 at the Central Characterization Project office in Carlsbad and September 10 through 12, 2012 at Idaho National Laboratory (INL), to evaluate the adequacy and effective implementation of the Central Characterization Project (CCP) QA Program for compliance with DOE/CBFO-94-1012, *U.S. Department of Energy Carlsbad Field Office Quality Assurance Program Document;* WIPP Procedure (WP) 13-1, *WTS Quality Assurance Program Description*; and associated implementing procedure requirements as applicable. At the time the audit was performed, it was conducted as a Washington TRU Solutions LLC (WTS) audit; subsequent to the audit performance, NWP has assumed the role of managing contractor of the Waste Isolation Pilot Plant (WIPP), therefore this report is being issued under the company name of NWP. References to WTS and NWP throughout this document can be considered interchangeable.

The previous audit of the CCP QA Program (I11-05) resulted in no findings; therefore, an evaluation of the effectiveness of corrective actions was not required.

The results of this audit conclude that the required activities related to the CCP QA Program are adequately and effectively implemented to ensure that program requirements are met. This audit resulted in one finding, one condition corrected during the audit (CDA), and three observations. The finding will be documented on WIPP Form (WF) 12-205 and resultant corrective actions will be tracked and closed through the WIPP Issues Management Process System (IMPS). The CDA and observations require no response. Therefore, this audit is considered closed with the issuance of this report.

II. AUDIT DETAILS:

Purpose and Scope:

The purpose of this audit was to evaluate the adequacy and effective implementation of approximately one half of the CCP QA Program as well as activities associated with Acceptable Knowledge (AK) which are assessed every year. On alternate years, opposite halves of the QA Program are evaluated. The criteria evaluated during this audit included:

- Organization;
- QA Program;
- Document Control;
- Design Control;
- Procurement Document Control;
- Instructions, Procedures, and Drawings;
- Control of Purchased Items and Services;
- QA Records; and,
- Independent Assessment/Audits.

Additionally, each year's audit includes a site visit to one of the waste generating sites at which CCP is active. This audit included an evaluation of the activities at INL. During this portion of the audit, all applicable criteria of the CCP QA Program were evaluated.

The approach to this audit included observation of processes, documentation reviews, personnel interviews, and evaluations of associated procedures in order to determine the adequacy and effective implementation of the related program requirements. Where deemed appropriate, elements of the Integrated Safety Management System (ISMS) and Conduct of Operations were also evaluated.

Criteria Used:

- DOE/CBFO-94-1012, Revision 11, *U.S. Department of Energy Carlsbad Field Office Quality Assurance Program Document*
- ASME/NQA-1-1989
- WIPP Procedure (WP) 13-1, Revision 31, *Washington TRU Solutions LLC Quality Assurance Program Description*
- WP 15-GM.03, Revision 4, *Integrated Safety Management System Description*
- WP 04-CO.01, Revision 1, *Conduct of Operations*

Audit Team:

Lead Auditor:
Mr. T. D. Hood, QA, Oversight Programs

Auditors:
Mr. A. S. Miller, Engineering, Geotechnical and Mine Engineering
Ms. C. E. Nesser, QA, Assurance Programs

Auditor-in-Training:
Ms. L. E. Hernandez, QA, Assurance Programs

Inclusive Dates of Audit:

August 13 through 16 and September 24, 2012 (CCP offices in Carlsbad)
September 10 through 12, 2012 (INL)

Location of Audit:

Skeen-Whitlock Building
Carlsbad, New Mexico

Idaho National Laboratory
Idaho Falls, Idaho

Safety and Security:

The audit activities at the CCP office in Carlsbad, New Mexico, took place in an office environment, with no personal protection equipment (PPE) being necessary. The audit activities at INL involved the NWP Audit Team's presence in areas where PPE consisting of steel-toed shoes, eye protection, orange vests, and/or hard hats was required. The NWP Audit Team members complied with all safety requirements.

During the audit, records storage locations were observed to be adequately designated and their access controlled via authorized access signs and/or locked cabinets.

Conclusions:

The NWP Audit Team concluded that the portions of the CCP QA Program subject to this audit are satisfactorily implemented, with the exceptions documented in Finding I12-12-F-01. This finding is not considered a significant hindrance to overall implementation of the QA Program. The NWP Audit Team commends the professionalism, knowledge, competence, and courtesy displayed by all personnel contacted during the audit.

The NWP Audit Team observed that the CCP organization's structure and responsibilities are established via organization charts and procedural guidance. It was noted that several CCP documents portray a CCP QA. During a recent re-organization of the NWP QA, the CCP QA was merged with QA's Assurance Programs group; therefore, there is no longer a distinct CCP QA. The NWP Audit Team verified that the procedure inaccuracies created as a result of the QA organizational changes were previously recognized and that procedure changes are in process (refer to I12-12-O-01).

The NWP Audit Team verified that the CCP QA Program is established and adequately defined via project plans, interface documents, and procedures. The QA Program was verified to adequately implement applicable upper tier documents, including the CBFO *Quality Assurance Program Document* (QAPD). It was noted that CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*, is credited for being the document that invokes the CBFO QAPD, but CCP-PO-002, *CCP Transuranic Waste Certification Plan*, better describes the QA programmatic requirements (although it isn't referenced in CCP-PO-001 or otherwise given credit for invoking the QA program). The NWP Audit Team verified that there were efforts underway to update and improve these documents and to more appropriately invoke WP 13-1 (refer to I12-12-O-02).

The NWP Audit Team assessed the Document Control activities conducted by Document Services personnel at the Skeen-Whitlock Building and the generation and control of instructions, procedures and drawings. The NWP Audit Team verified that adequate controls are in place to assure that documents prescribing programmatic requirements and procedural guidance are published and current revisions made available to personnel, the documents are reviewed and approved by appropriate personnel for technical and quality adequacy, and changes to controlled documents receive the same review and approval as the original documents. It was noted that during the review process for proposed changes to controlled documents, the review and approval is not always conducted in accordance with procedural requirements (refer to I12-12-F-01).

The NWP Audit Team confirmed that applicable upper-tier requirements from DOE/CBFO-94-1012 and WP 13-1 are adequately addressed in implementing procedures.

The NWP Audit Team verified that CCP personnel properly maintain design configuration and control for the CCP managed equipment utilized during characterization activities.

The NWP Audit Team assessed the procurement processes associated with CCP, as well as the control of purchased product. The NWP Audit Team verified that procurement documents contain adequate descriptions of procured items and associated requirements, both technical and quality-related. Procurement documents were verified to have the required reviews by interested parties. Procured items were verified to be received, inspected, and utilized according to procedural requirements.

The NWP Audit Team verified that QA records are adequately identified, classified, generated and completed, validated, collected, stored, maintained, protected, and transmitted as necessary. This includes hard copy records as well as electronic records.

The NWP Audit Team verified that assessments (i.e., surveillances and management assessments) are scheduled; conducted by independent, qualified personnel; and reported to interested parties. The process was verified to produce identification of conditions adverse to quality and their resolution. It was noted that audits are not conducted, other than an annual internal audit (which is this audit). It was verified that the combination of the surveillances, management assessments, and annual internal audits provide an adequate assessment of the QA Program's implementation.

The NWP Audit Team reviewed various documents related to AK processes to verify compliance with requirements from CCP-TP-005, Revision 24, *CCP Acceptable Knowledge Documentation* and the WIPP Hazardous Waste Facility Permit. One concern was noted and adequately addressed during the audit (refer to I12-12-CDA-01).

The NWP Audit Team traveled to the INL to assess the CCP activities conducted at INL. For this audit, the NWP Audit Team evaluated personnel qualifications, instructions, procedures, document control, material identification and control, inspection and testing, control of measuring and test equipment, inspection and test status, nonconforming item control, corrective action, software control, and records. The NWP Audit Team verified that the CCP QA Program is effectively implemented in the areas to which it applies at INL. One observation made by the NWP Audit Team, related to measuring equipment control, is documented as I12-12-O-03.

The audit also included evaluations for the appropriate application of the Integrated Safety Management System (ISMS). Evidence was observed during the course of the audit that supports the positive application of three ISMS Core Functions. Specifically, the NWP Audit Team was able to confirm the application of the following ISMS Core Functions:

- Core Function Number 1, *Define the Scope of Work* – Procedures are established for the CCP QA Program;
- Core Function Number 4, *Perform Work Within Controls* - Procedures are established to assure processes are conducted appropriately; and
- Core Function Number 5, *Provide Feedback and Continuous Improvement* – Periodic assessments of the CCP QA Program are conducted, and necessary corrective actions are taken when adverse conditions are identified.

This audit resulted in the identification of one finding, one CDA, and three observations. The finding will be documented on WF 12-205 and resultant corrective actions will be tracked and closed through IMPS. The CDA and observations require no response. Therefore, this audit is considered closed with the issuance of this report.

FINDINGS:

I12-12-F-01

Condition(s) Noted:

Changes to controlled documents are not always conducted in accordance with established requirements. When a revision to a controlled CCP document is proposed, Document Services distributes the revised document as Draft A. If reviewers' comments result in further changes being made, the document is re-distributed as Draft B, then C, etc. until no further comments are made. Some reviewers approve earlier versions than the final draft, and do not always get a chance to review/approve the final draft. In practice, whether to re-distribute updated drafts to all the reviewers is at the originator's discretion. It appears that the strict definition of minor changes (Section 4.5.1 of CCP-QP-010) may not be adhered to during these draft changes. Also, the requirement that QA be an approver of certain minor changes (refer to Section 4.5.4 of CCP-QP-010) is not in compliance in those cases where QA does not approve the final draft version.

Requirement(s) Not Met:

CCP-QP-010, Revision 23, *CCP Document Preparation, Approval, and Control,* Section 4.5.1, states:
"Editorial or minor changes may be made to all CCP documents **except** CCP-PO-001, CCP-PO-002, CCP-PO-003, CCP-PO-016, CCP-PO-401, CCP-PO-505, and CCP-QP-001 without the same level of review and approval as the original document." The following items are considered editorial or minor changes:

- Correcting grammar or spelling (the meaning has not changed);
- Renumbering sections or attachments;
- Updating organization titles;
- Changes to non-quality affecting schedules;
- Revising or reformatting forms, providing the original intent of the form has not been altered;
- Attachments marked "Example," "Sample," or exhibits that are clearly intended to be representative only, in part, "Hard copy records shall be stamped, initialed or signed, and dated."

CCP-QP-010, Revision 23, Section 4.5.4, states: All minor Host site-specific changes shall be evaluated and approved by the Site Project Manager and CCP QA before implementation.

CONDITIONS CORRECTED DURING THE AUDIT (CDAs):

I12-12-CDA-01

Condition(s) Noted:

During characterization activities at Oak Ridge National Laboratory, waste was encountered with contents that didn't match the existing AK, resulting in the reassignment of a drum from one Waste Stream to OR-SWSA-CH-SOIL and stipulation of documentation to be updated. During the audit, it was discovered that the documentation had not been updated.

Requirement(s) Not Met:

CCP-TP-005, Revision 22, *CCP Acceptable Knowledge Documentation,* Section 4.10.4, requires that when updating AK for additional waste stream containers, "If the containers are not bounded by the existing AK Summary Report, but should be included in the waste stream, then revise the AK Summary Report..."

Action(s) Taken and Verification of Completion:

Due to the fact this affects an inactive site, CCP personnel are unable to make the changes at this time. However, the NWP Audit Team verified that the issue was identified in freeze files for the affected documents. Therefore, this issue is documented as a CDA.

OBSERVATION(S):

I12-12-O-01

Condition(s) Noted:

Several CCP documents refer to CCP QA. During a recent re-organization of the NWP QA, the CCP QA was merged with QA's Assurance Programs; therefore, there is no longer a distinct CCP QA. The NWP Audit Team verified that the procedure inaccuracies created as a result of the QA organizational changes were previously recognized and that procedure changes are in process. Marked-up procedure changes were reviewed and observed to include substitution of "CCP QA" with "QA".

I12-12-O-02

Condition(s) Noted:

CCP-PO-001 is credited for being the document that invokes the CBFO QAPD. However, CCP-PO-002 actually describes the QA programmatic requirements (it isn't referenced in CCP-PO-001 or otherwise given credit for invoking the QA program). The NWP Audit Team verified that changes are in progress to update and improve these documents and to more appropriately invoke WP 13-1.

I12-12-O-03

Condition(s) Noted:

Pressure/vacuum gages in use at the leak testing stations at the Mobile Loading Unit at INL were not listed on the Measuring and Test Equipment (M&TE) database viewed on-line during the audit. Investigation shows that the information for the gages had been recently provided to the CCP personnel responsible for generation of the M&TE database and that the information was entered in the database soon after the NWP Audit Team was at INL. Although the gages are now listed in the database, the identification numbers listed on the calibration stickers are slightly different than those listed in the database. The database lists six pressure/vacuum gages with equipment identification numbers VAC-PLP-1801 through VAC-PLP-1806, whereas the gages have calibration labels with equipment identification numbers VAC-PI-1801 through VAC-PI-1806. It was observed that these gages are calibrated via work orders by INL personnel and that the work order documentation (i.e., *Instrument Calibration/Check*) shows both of the numbers – the VAC-PLP-XXXX is a number for the "pressure loop" at each leak test station and the VAC-PI-XXXX is the number shown for the gage that exhibits the pressure/vacuum readout.

III. ATTACHMENTS:

Attachment 1, *Table of Personnel Contacted*
Attachment 2, *Table of Documents Reviewed*

IV. SIGNATURES:

Prepared by: _____ 12-3-12
T. D. Hood, Lead Auditor — Date
Oversight Programs

Approved by: W. W. Allen For _____ 12/3/12
V. K. Cannon, Manager — Date
Assurance Programs

Attachment 1, *Table of Personnel Contacted*

[A] Attended Audit Entrance Meeting
[B] Contacted During the Audit
[C] Attended Audit Exit Meeting

Name	A	B	C
NWP			
V. K. Cannon	X	X	X-1
W. T. Carlson		X	
C. A. Chester	X	X	
R. J. Czyzewski		X	X-2
A. De Bruyn Kops		X	
A. J. Fisher		X	X-1
J. A. Golden		X	
R. Green		X	
L. R. Jones		X	X-1
C. M. Luoma		X	
V. J. Medina		X	
T. L. Mueller	X	X	X-1
M. W. Pearcy	X	X	
M. F. Ramirez		X	
R. D. Reeves			X-1
N. K. Roberts		X	
Y. H. Salmon		X	
W. F. Verlanic		X	X-2
J. A. Vernon			X-1
V. M. Waldram		X	
M. A. Walker		X	X-1
J. T. Yturralde		X	
Idaho National Laboratory			
M. Christensen.		X	
C. Covington		X	
C. Davis		X	
B. Dial		X	
The S. M. Stoller Corporation			
C. A. Armijo		X	
A. K. Atwood		X	
M. L. Billett		X	
V. L. Davis		X	
J. E. Madrid		X	
L. Martin		X	
J. R. Payanes		X	
S. K. Pearcy		X	
S. A. Punchios		X	
J. T. Yturralde		X	
TechSpecs			
C. D. Davis		X	
H. T. Greenwood		X	

X-1 Exit meeting in Carlsbad
X-2 Exit meeting at INL

Attachment 2, *Table of Documents Reviewed*

Document Identification	Document Title
NM4890139088-TSDF	*Waste Isolation Pilot Plant* [WIPP] *Hazardous Waste Facility Permit*
DOE/CBFO-94-1012, Revision 11	*U.S. Department of Energy Carlsbad Field Office Quality Assurance* [QA] *Program Document*
DOE/TRU-11-3425, Revision 0	*Annual Transuranic* [TRU] *Waste Inventory Report – 2011*
DOE/WIPP-02-3122, Revision 7.2	*TRU Waste Acceptance Criteria for the Waste Isolation Pilot Plant*
DOE/WIPP-06-3345, Revision 4	*Flammable Gas Analysis*
WIPP Procedure (WP) 13-1, Revision 31	*Washington TRU Solutions LLC* [WTS] *QA Program Description*
WP 13-1, Revision 32	*Nuclear Waste Partnership LLC* [NWP] *QA Program Description*
WP 04-CO.01, Revision 1	*Conduct of Operations*
WP 04-CO.01, -1 through -16, Revision 1	Conduct of Operations series
WP 13-QA.03, Revision 19	*QA Independent Assessment Program*
WP 15-GM.01, Revision 3	*WTS Project Execution Plans*
WP 15-GM.03, Revision 4	*Integrated Safety Management System* [ISMS] *Description*
CCP-AK-LANL-009, Revision7	*Central Characterization Project* [CCP] *Acceptable Knowledge [AK] Summary Report for Los Alamos National Laboratory* [LANL] *Chemistry And Metallurgy Research Facility Waste Stream LA-MHD03.001*
CCP-AK-SRS-12, Revision 5	*CCP AK Summary Report for Savannah River Site* [SRS] *Solid Waste Management Facility*
CCP-CM-001, Revision 3	*CCP Equipment Change Authorization and Documentation*
CCP-CM-031, Revision 0	*Verification of Designs Produced by External Agencies*
CCP-PO-001, Revision 20	*CCP TRU Waste Characterization QA Project Plan*
CCP-PO-002, Revision 26	*CCP TRU Waste Certification Plan*
CCP-PO-004, Revision 30	*CCP/SRS Interface Document*
CCP-PO-008, Revision 9	*CCP QA Interface with the WTS QA Program*
CCP-PO-012, Revision 10	*CCP/LANL Interface Document*
CCP-PO-024, Revision 11	*CCP/Idaho National Laboratory* [INL] *Interface Document*
CCP-PO-026, Revision 3	*CCP Configuration Management*
CCP-PO-403, Revision 1	*CCP/Advanced Mixed Waste Treatment Project* [AMWTP] *Roles and Responsibilities*
CCP-PO-405, Revision 0	*CCP/Sandia National Laboratory* [SNL] *Roles and Responsibilities*
CCP-QP-001, Revision 7	*CCP Graded Approach*
CCP-QP-002, Revision 33	*CCP Training and Qualification Plan*
CCP-QP-004, Revision 10	*CCP Corrective Action Management*
CCP-QP-005, Revision 21	*CCP TRU Nonconforming Item Reporting and Control*
CCP-QP-008, Revision 20	*CCP Records Management*
CCP-QP-010, Revision 23	*CCP Document Preparation, Approval, and Control*
CCP-QP-011, Revision 10	*CCP Laboratory Logbooks*
CCP-QP-015, Revision 11	*CCP Procurement*
CCP-QP-016, Revision 16	*CCP Control of Measuring and Testing Equipment* [M&TE]
CCP-QP-017, Revision 3	*CCP Identification and Control of Items*
CCP-QP-018, Revision 9	*CCP Management Assessment*
CCP-QP-019, Revision 6	*CCP QA Reporting to Management*
CCP-QP-021, Revision 7	*CCP Surveillance Program*
CCP-QP-028, Revision 14	*CCP Records Filing, Inventorying, Scheduling, and Dispositioning*
CCP-TP-002, Revision 24	*CCP Reconciliation of Data Quality Objectives and Reporting Characterization Data*
CCP-TP-003, Revision 18	*CCP Data Analysis for S3000, S4000, and S5000 Characterization*
CCP-TP-005, Revision 24	CCP AK Documentation
CCP-TP-006, Revision 16	*CCP Visual Examination* [VE] *Technique for INL Newly Generated TRU Waste*
CCP-TP-035, Revision 24	*CCP Container Management*
CCP-TP-053, Revision 12	*CCP Standard Real-Time Radiography* [RTR] *Inspection Procedure*
CCP-TP-068, Revision 8	*CCP Standardized Container Management*

Document Identification	Document Title
CCP-TP-140, Revision 9	*CCP Equipment Maintenance*
CCP-TP-162, Revision 1	*CCP Random Selection of Containers for Solids and Headspace Gas Sampling* [HSGS]
CCP- Standing Order (SO) -010, Revision 0	*Information Only Sampling for Selected Analytes using Ground Control Monitoring System* [GCMS]
CCP-SO-INL-11-002, Revision 1	*48 Hour Drum Heat-up Using Gas Generation Test Canister* [GGTC]
CCP-SO-037 (no date or revision number)	*Additional Review and Approval of iCALs for Flammable Gas Analysis* [FGA]
CCP-SO-074, dated May 11, 2011	*File Transfer Protocol (ftp) Site Replacement*
CCP-SO-082, Revision 1	*Quarterly Inspection for Fillable Forms*
CCP-SO-092, dated February 22, 2012	*Container Characterization After Closure Date*
CCP-SO-093, Revision 3	*Content of Document Record Packages Prepared by CCP Document Services*
RCT-PXP-027, Revision 0	*Project Execution Plan for the TRU Waste Sorting System-1 (TSS-1) Refurbishment Project*
RCT-PXP-026, Revision 0	*Project Execution Plan for the Development and Deployment of a High Energy Real-Time Radiography (HE-RTR) System*
	QA organization chart, dated January 9, 2012
	QA organization chart, dated June 1, 2012
	Semiannual Report on the CCP QA Program, First Half of Calendar Year 2012 (January 1 through June 30, 2012) DRAFT / INFORMATION ONLY
CP:12:01115, dated February 16, 2012	Letter from V. K. Cannon to Mr. R. Unger, subject: *Semiannual Report on the CCP QA Program, Second Half of Calendar Year 2012 (July 1 through December 31, 2011)* (Report was attached to letter)
	CCP 2012 Surveillance Schedule, Attachment 1, August 10, 2012
QA:12:01026, dated April 2, 2012	Interoffice Correspondence from V. K. Cannon to M. L. Sensibaugh, subject: *Information Copy of Completed CCP Surveillance Report SUR-SRS-0002-12, Large Box Nondestructive Assay* [NDA] (Report was attached)
QA:12:01030, dated April 2, 2012	Interoffice Correspondence from V. K. Cannon to M. L. Sensibaugh, subject: *Information Copy of Completed CCP Surveillance Report SUR-LANL-0001-12, Nondestructive Examination* [NDE] *Operations* (Report was attached)
QA:12:01031, dated March 29, 2012	Interoffice Correspondence from V. K. Cannon to M. L. Sensibaugh, subject: *Information Copy of Completed CCP Surveillance Report SUR-CCP-0002-12, CCP Records Management* (Report was attached)
QA:12:01035, dated April 10, 2012	Interoffice Correspondence from V. K. Cannon to M. L. Sensibaugh, subject: *Information Copy of Completed CCP INL Surveillance Report SUR-INL-0001-12, Container Management INL* (Report was attached)
QA:12:01037, dated April 11, 2012	Interoffice Correspondence from V. K. Cannon to M. L. Sensibaugh, subject: *Information Copy of Completed CCP Surveillance Report SUR-CCP-0003-12, Procurement* (Report was attached)
QA:12:01049, dated May 24, 2012	Interoffice Correspondence from V. K. Cannon to M. L. Sensibaugh, subject: *Information Copy of Completed CCP Surveillance Report SUR-SRS-0005-12, Contact-Handled [CH] Headspace Gas Sampling [HSGS] – SUMMA at SRS* (Report was attached)
QA:12:01051, dated May 24, 2012	Interoffice Correspondence from V. K. Cannon to M. L. Sensibaugh, subject: *Information Copy of Completed CCP Surveillance Report SUR-ALD-0001-12, INL Analytical Department* (Report was attached)
QA:12:01055, dated June 12, 2012	Interoffice Correspondence from V. K. Cannon to M. L. Sensibaugh, subject: *Information Copy of Completed CCP Surveillance Report SUR-LANL-0004-12, Standing Orders and Operator Aids* (Report was attached)
QA:12:01060, dated June 28, 2012	Interoffice Correspondence from V. K. Cannon to M. L. Sensibaugh, subject: *Information Copy of Completed CCP INL Surveillance Report SUR-INL-0002-12, RTR, CH Waste Operations* (Report was attached)
SUR-INL-0003-12, July 25, 2012	*Surveillance: NDA*
SUR-INL-0004-12, September 6, 2012	*Surveillance: TRUPACT II Loading; Area: CCP Mobile Loading Unit*
SUR-INL-0005-12, August 12, 2012	*Surveillance: RTR and Dose-to-Curie; Area: RH Waste Characterization*
	CCP 2012 Management Assessment Schedule, Attachment 2, August 13, 2012

Document Identification	Document Title
QA:12:01021, dated February 15, 2012	Interoffice Correspondence from V. K. Cannon to M. L. Sensibaugh, subject: *Transmittal of Management Assessment Report MA-CCP-0003-12, QA Program Document Matrix* (Report was attached)
QA:12:01046, dated May 21, 2012	Interoffice Correspondence from V. K. Cannon to M. L. Sensibaugh, subject: *Transmittal of Management Assessment Report MA-CCP-0004-12, Maintenance, Condition, and Reliability of CCP Characterization Equipment at LANL* (Report was attached)
QA:12:01047, dated May 21, 2012	Interoffice Correspondence from V. K. Cannon to M. L. Sensibaugh, subject: *Transmittal of Management Assessment Report MA-CCP-0006-12, Effectiveness of the Integrated Data Center Training Module* (Report was attached)
QA:12:01054, dated June 11, 2012	Interoffice Correspondence from V. K. Cannon to M. L. Sensibaugh, subject: *Transmittal of Management Assessment Report MA-CCP-0007-12, Data Generation Level Batch Data Report* [BDR] *Processing at SRS* (Report was attached)
QA:12:01058, dated June 29, 2012	Interoffice Correspondence from V. K. Cannon to M. L. Sensibaugh, subject: *Transmittal of Management Assessment Report MA-CCP-0009-12, Length of Time Since Last Revision to CCP Documents* (Report was attached)
QA:12:01068, dated July 18, 2012	Interoffice Correspondence from V. K. Cannon to M. L. Sensibaugh, subject: *Transmittal of Management Assessment Report MA-CCP-0001-12, Time Required to Close CBFO Corrective Action Reports* [CARs] *Issued to the CCP in Calendar Year 2011* (Report was attached)
QA:12:01071, dated July 19, 2012	Interoffice Correspondence from V. K. Cannon to M. L. Sensibaugh, subject: *Transmittal of Management Assessment Report MA-CCP-0010-12, QA Qualification* (Report was attached)
QA:11:00280, dated December 15, 2011	Interoffice Correspondence from W. W. Allen to J. E. Hoff, subject: *Transmittal of Management Assessment Report MA-QA-11-006, Annual QA Department Management Assessment Report* (Report was attached)
Calibration Certificate, INL Calibration Identification 723060, Calibration Date December 14, 2011	GGTC Temperature Controller, GGTS-TC-3571
Calibration Certificate, INL Calibration Identification 718103, Calibration Date August 9, 2012	GGTC Temperature Controller, GGTS-TC-3522
Calibration Certificate, INL Calibration Identification 723068, Calibration Date December 14, 2011	GGTC Temperature Controller, GGTS-TC-3573
Calibration Certificate, INL Calibration Identification 723075, Calibration Date August 9, 2012	GGTC Temperature Controller, GGTS-TC-3552
	MTE List, MTE Updated August 19, 2012 [list from INL]
	Screen shot of excerpt from M&TE database at INL, showing vacuum/pressure gages
	Instrument Calibration/Check for VAC-PLP-1804 and related AMWTP Work Order Number 415867, *Annual Calibration of Pressure Loop, VAC-PLP-1804*
	Reviewed Certificates of Calibration for the following M&TE at INL (identification number and description): • MTE-450, torque wrench, • MTE-243, thermometer, • MTE-555, pressure indicator / barometer, and • MTE-352, calibrated gas/leak standard
Certificate of Accuracy	Air Liquide, Purchase Order (PO) 415043, ALM030804, expires February 8, 2013; certificate signed by D. VonFeldt (Air Liquide)
Certificate of Accuracy	Air Liquide, PO 415557, ALM011632, certificate signed by D. VonFeldt (Air Liquide)
	Reviewed files (included controlled copy of procedure, approvals, comments, etc) for the following procedures: • CCP-PO-001, • CCP-PO-002, • CCP-PO-008,

Document Identification	Document Title
	• CCP-PO-024, • CCP-QP-001, • CCP-QP-010, • CCP-QP-011, • CCP-QP-015, • CCP-QP-017, • CCP-QP-018, • CCP-QP-019, and • CCP-QP-021
	CCP-INL List of Qualified Individuals (LOQI) , September 6, 2012
	INL NDE Personnel Waste Streams Qualified List, September 6, 2012

	Reviewed training/qualification files (included qualification cards, logbooks, eye exams, tests, appointment letters, and/or evaluations) for the following personnel for the listed examination/evaluation process:
	• Flammable Gas Analysis (FGA)
	  o D. Dover,
	  o A. De Bruyn Kops, and
	  o J. Poirier
	• Gas Generation Testing
	  o D. Dover,
	  o A. De Bruyn Kops, and
	  o J. Poirier
	• SuperHENC
	  o S. Cummins,
	  o R. Green,
	  o S. A. McElhaney, and
	  o R. Thompson
	• NDA Stored Waste Examination Pilot Plant (SWEPP) Gamma-Ray Spectrometer (SGRS)
	  o C. Davis, and
	  o B. Dial
	• NDA Waste Assay Gamma Spectrometer (WAGS)
	  o C. Davis,
	  o B. Dial, and
	  o R. Green
	• Leak Testing
	  o M. Christensen,
	  o B. Hebdon, and
	  o L. Seiler
	• VE
	  o L. Grover,
	  o M. Haderlie,
	  o J. Hegsted,
	  o D. Jackman,
	  o S. Pattee,
	  o J. Poole,
	  o J. Stanton,
	  o B. Stark, and
	  o L. Verlanic
	• RTR
	  o J. Bowden,
	  o T. Christensen, and
	  o M. Galbraith

	Level III designation letters / qualification files for: • W. Weyerman. Letter (dated September 11, 2012), from V. Cannon • R. Leimenstoll. Letter (dated November 16, 2011), from V. Cannon
CCP-TP-068, Revision 8, *CCP Standardized Container Management*, Attachment 1	*CCP Container Traveler (Label)* Reviewed the completed form for drum numbers: • ARP70800, • ARP70803,

Document Identification	Document Title
	• ARP70805, • ARP70807, • ARP70808, • ARP70835, • ARP70836, • ARP70837, • ARP70838, and • ARP70839
	Reviewed BDRs for VE with the following BDR numbers: • IN-ARP-VE-002776, • IN-ARP-VE-002778, • IN-ARP-VE-002780, • IN-ARP-VE-002782, • IN-ARP-VE-002783, • IN-ARP-VE-002785, • IN-ARP-VE-002788, and • IN-ARP-VE-002790
	Reviewed BDRs for RTR with the following BDR numbers: • INRTR5120001, • INRTR5120004, and • INRTR5120005
	Reviewed BDRs for SuperHENC examination with the following BDR numbers: • INNDAB11001, • INNDAB11004, and • INNDAB12003
Integrated Data Center Database for verification of containers	Container Numbers ARP 71187, ARP 71270, and ARP71197
Nonconformance Report (NCR)-INL-1039-06, December 20, 2006	BDR Number(s): INNDAW060244; Container Number(s): 10129981; NDA, container rejected; returned to INL
NCR-INL-0799-06, August 17, 2006	BDR Number(s): INNDAW060122; Container Number(s): 10101841,10105523, 10102014; NDA, container rejected; returned to INL.
NCR-INL-0781-06, August 1, 2006	BDR Number(s): INNDAW060111; Container Number(s): 10102521, 10099524, 10102272, 10105623, and 10104794; NDA, container rejected; returned to INL
NCR-INL-0725-07, October 2, 2007	BDR Number(s): INRTR5070125; Container Number(s): 10168742; NDE, container rejected; returned to INL; NCR open
NCR-INL-0501-08, Revision 2, May 1, 2008	BDR Number(s): INRTR5050104; Container Number(s): 10018191; NDE, container rejected; returned to Host site; NCR open
NCR-INL-0421-12, May 8, 2012	BDR Number(s): IN12FG5026; Container Number(s): ARP70230, ARP70229, ARP70164, and ARP70158; FGA, container rejected; (1) remove from Lot both hard-copy and electronic copy, if applicable; (2) remove containers from applicable AK Tracking Spreadsheet; (3) return to Accelerated Retrieval Project (ARP); NCR open
NCR-INL-0361-12, September 11, 12	BDR Number(s): INNDAW120076; Container Number(s): ARP71204, ARP70451, ARP71202, ARP71267, ARP71209, ARP71187 ARP71197, and ARP71270; NDA, equipment failure; rework; (1) perform a calibration verification per CCP-TP-019; (2) an NDA Expert Analyst will review the Daily Performance Check data and the data associated with the BDR listed in block 3 and once the data is shown satisfactory, the system may be returned to service; NCR open
NCR-INL-2519-11, May 3, 2011	BDR Number(s): INRTR5110048; Container Number(s): 10066902, 10086727, 10161087, 1 0036200, 10403059, and 10220395; NDE, container rejected; returned to INL; NCR open, container rejected; returned to INL
NCR-INL-0360-12, September 10, 2012	BDR Number(s): INNDAS120031; Container Number(s): ARP71187, ARP71270, and ARP71197; NDA, container rejected; reject from BDR; move the container to WMF-610 and re-assay on WAGS
CBFO CAR 12-026, July 2, 2012	Identified during CBFO Audit A-12-13
CBFO CAR 12-027, July 2, 2012	Identified during CBFO Audit A-12-13

Document Identification	Document Title
OP:12:01365, July 17, 2012	Letter from CCP to CBFO; subject: CCP Corrective Action Plan (CAP) for CBFO CAR 12-026, "Transportation – Related Procedure Violations Due to Inattention to Detail"; CCP CAP for CBFO CAR 12-027, "Multiple Documentation Errors"
CBFO:OQA:CF:CC:12-1441:UFC 2300.00, July 2, 2012	Letter from CBFO to CCP; subject: Issuance of Accelerated CARs 12-026 and 12-027 Identified During Audit A-12-13
Purchase Requisition (PR) 0000416312, April 2, 2012	Spare Parts for Super HENC
PR 0000413321, June 2, 2010	(1500) 019DS Filters for LANL
PR 0000416557, June 20, 2012	Hydrogen for LANL
PR 0000416323, April 4, 2012	Spare Parts for HE-RTR
CCP Equipment Change Authorization (ECA), CM12-0009, [requested] May 1, 2012	INL; NDE-RTR-05; Change tapping on Transformer T1 to configure them for 208 volt input power and make associated adjustments
CCP ECA CM10-0001, [requested] April 21, 2010	LANL TA-54, Area G, Pad 10, Building 54-506; NDA-HENC-01, Manufacture new Drawbridge Lower Actuator Bracket Assemblies per Canberra drawings 10000001550, 10000001551, 10000001552, and 10000001571
	2012 Operator Logbook for FGA area at INL
	2012 Operator Logbook for NDA area at INL
CCP-INL-TRANS-AMWTP-012	2012 Operator Logbook for Mobile Loading Unit area at INL
CP:11:01176	Letter from I. S. Quintana to CCP Records Coordinator; subject: Headspace Gas (HSG) Random Sample Selection Memorandum, for Waste Stream SNL-HCF-S5400-RH, Lot 1, Characterized by the CCP at the SNL; dated May 25, 2011
	LANL VE BDR LA12-OSR-VE-007
	LANL BDR 3LANLDA0005 (Voided)
	INL BDR IN12FG5054
	LA12-OSR [Operational Safety Requirement]-VE-003QTR
	LA-HE-RTR-12-0049
	Disks: • MCS [Mobile Characterization Services]; 3LANDA0081; Unscheduled; NDA 2000, 4.0; dated July 31, 2012; • MCS; 3LANDA0082; Unscheduled; NDA 2000, 4.0; dated July 31, 2012; and • MCS; 3LANDA0083; Unscheduled; NDA 2000, 4.0; dated July 31, 2012
	E-mail from A. Atwood (S.M. Stoller Corporation) to S. Martinez (L&M Technologies, Inc.) at the Records Processing Center (RPC) requesting transmittal numbers on July 24, 2012; and S. Martinez's reply with transmittal numbers on July 25, 2012.
	E-mail from L. Nelson to T. Parker requesting RH SNL 40L90, Lot 2 HSG Summary on July 26, 2012; which was transmitted to L. Nelson as a PDF
CCP Records Inventory and Disposition Schedule (RIDS)	Reviewed the following RIDS: • General, dated February 14, 2012 • All Sites CH, dated August 2, 2012 • All Sites RH, dated July 23, 2012 • Intersite Shipping, dated May 9, 2012
CCP Qualification Cards	Reviewed qualification cards for the following personnel (qualification card information included below): • J. Golden – RCT-CM-01, Revision 0, *Configuration Management Engineer/Coordinator Qualification Card*, effective August 24, 2010; completed November 2010; • J. Vernon – Site Project Manager (SPM)-01, Revision 12, *SPM Qualification Card*, effective February 23, 2009; completed June 2009; • S. Peterman – SPM-01, Revision 1, effective October 9, 2002; completed December 2002; • J. Tenorio – VPM-01, Revision 5, *Vendor Project Manager Qualification Card*, effective March 13, 2009; completed November 2009; • M. Martinez – VPM-01, Revision 3, effective September 21, 2005; completed February 2007; and SPM-01, Revision 8, effective February 14, 2006, completed February 2006; and • B. Verlanic - VPM-01, Revision 4, effective November 16, 2006; completed January 2008

Document Identification	Document Title
Purchase Orders (POs)	Reviewed the following POs: • PO415203, • PO415226, • PO415391, • PO415489, • PO415557, • PO415899, • PO415935, • PO415966, • PO416505, • PO416514, • PO415090, • PO415248, • PO415340, and • PO416439
	Reviewed following Container Tracking Spreadsheets (received August 24, 2012 via email from WTS RCT group): • *LANL LLW-AK-Tracking-Spreadhseet dated August 20,2012 6_2_05 PM.xls*, • *ORNL AKT-AK-Tracking-Spreadsheet dated May 30, 2012 1_33_15 PM.xls*, and • *SRS RH AKT-AK-Tracking-Spreadsheet dated August 23, 2012 2_53_05 PM.xls*
Documents pertaining to Waste Stream LA-MHD03.001	
	CCP-TP-005, *AK Documentation*, Attachment 1, *AK Documentation Checklist*, completed by AK Expert (AKE) A. Johns, dated January 19, 2012
	CCP-TP-005, Attachment 3, *AK Source Document Summary*, form for source document C014, completed by AKE A.Johns, dated August 5, 2009
	CCP-TP-005, Attachment 3, form for source document D043, completed by AKE A. Johns, dated April 19, 2011
	CCP-TP-005, Attachment 3, form for source document P038 completed, by AKE A. Johns, dated October 3, 2011
	CCP-TP-005, Attachment 4, *AK Information List*, completed by AKE A. Johns, dated July 5, 2012
	CCP-TP-005, Attachment 6 *Waste Form, Waste Material Parameters, Prohibited Items, and Packaging*, (AKE not recorded)
	Memo from J. Schoen, CCP AK, dated June 9, 2008. RE: Waste Material Parameter Analysis
	CCP-TP-005, Attachment 5, *Hazardous Constituents*, completed by AKE A. Johns, dated August 25, 2009
	CCP-TP-005, Attachment 7, *Radionuclides*, completed by AKE M. J. Papp, dated November 1, 2011
	Memo from J. M. Schoen, CCP AKE, dated February 18, 2009. RE: Evaluation of Radiological Characterization of the waste stream
	CCP-TP-005, Attachment 8, *Waste Containers List*, (AKE not recorded)
	Memo dated January 9, 2012; Addition of one container
	Memo dated January 12, 2012; Addition of five containers
	Memo dated March 22, 2012; Addition of ten containers
	CCP-TP-005, Attachment 10, *Re-evaluation Checklist*, completed by AKE S. Schafer, dated December 13, 2006. Evaluation of NCRs against 33 drums for potential trend code L assignment.
	Memo from S. Schafer, dated December 13, 2006. RE: review of NDA NCR for waste stream
	CCP-TP-005, Attachment 10, completed by AKE R. Fitzgerald, dated February 1, 2007. Driven by NCR-LANL-0803-06
CCP-TP-053 Revision 4	*RTR Inspection Procedure*
	LANL TRU Waste Storage Record, dated October 13, 1999
	NCR-LANL-0803-06
	CCP-TP-005, Attachment 11, completed by AKE R. Fitzgerald, dated February 1,

Document Identification	Document Title
	2007
	CCP-TP-005, Attachment 3, (source document not recorded) completed by AKE R. Fitzgerald, dated February 14, 2007
	CCP-TP-005, Attachment 10, completed by AKE J. M. Schoen dated January 28, 2008. NCR-0502-07
	Waste Stream Profile Form, (Attachment 2 to CCP-TP-002 Rev.15) dated May 31, 2007; and, Change Notice 1 dated November 16, 2006 and Change Notice 2 dated October 12, 2008
	Memo CP:12:01344 from T.Groover dated June 11, 2012. Subject: AK Accuracy Report for LANL Waste Stream LA-MHD03.001, Lots 45 through60 and CCP Correlation of Container Identification Numbers to BDR Numbers
	CCP-TP-005, Attachment 13, *Waste Stream Characterization Checklist* (Lot 60), completed by AKE M. Papp dated May 16, 2012
	CCP-TP-005, Attachment 14, *CCP AK Accuracy Report* completed by Site Project Manager (SPM) K. Zbryk dated April 19, 2007 Lots 1 through 9 and memo CP:07:01158 April 8, 2008 Accuracy Report
	CCP-TP-005, Attachment 14, completed by SMP K. Zbryk dated April 3, 2008 Lots 10 through 21 and memo CP:08:00224
	CCP-TP-005, Attachment 14, completed by SPM K. Zbryk dated March 30, 2009 Lots 22 through 24 and memo CP:09:01152
	CCP-TP-005, Attachment 14, completed by SMP K. Zbryk dated February 25, 2010 Lots 25 through 33 and memo CP:10:01127
	CCP-TP-005, Attachment 14, completed by SPM S. Peterman dated May 30, 2011 Lots 33 through 44 and memo CP:11:01190
	CCP-TP-005, Attachment 14, completed by SPM T. Groover dated July 11, 2012 Lots 45 through 60 and memo CP:12:01344
Documents pertaining to Waste Stream OR-SWSA-CH-SOIL	
	CCP-TP-005, Attachment 4, completed by AKE C. A. Dickerson dated May 16, 2011
	CCP-TP-005, Attachment 5, completed by AKE C. A. Dickerson dated May 3, 2011
	CCP-TP-005, Attachment 6, completed by AKE C. A. Dickerson dated May 26, 2011
	CCP-TP-005, Attachment 7, completed by AKE C. A. Dickerson dated May 10, 2011
	CCP-TP-005, Attachment 8, completed by AKE C. A. Dickerson dated May 26, 2011
	CCP-TP-005, Attachment 10, completed by AKE J. Harrison date May 15, 2011
	CCP-TP-005, Attachment 1, completed by AKE C. A. Dickerson dated May 31, 2011
	CCP-TP-005, Attachment 3, form for source document DR036, completed by AKE C. A. Dickerson 5/26/11
	CCP-TP-005, Attachment 11, *AK Source Document Discrepancy Resolution,* completed by AKE J. Harrison dated May 25, 2011
Documents pertaining to Waste Stream OR-RF-RH-HET	
	CCP-TP-005, Attachment 1, completed by AKE C. Chancellor dated November 16, 2010
	CCP-TP-005, Attachment 4, completed by AKE C. Chancellor dated November 16, 2010
	CCP-TP-005, Attachment 5, completed by AKE K. J. Peters dated November 12, 2010
	CCP-TP-005, Attachment 6, *Waste Form,* completed by AKE K. J. Peters dated November 30, 2010
	CCP-TP-005, Attachment 8, completed by AKE K. J. Peters dated November 12, 2010
Documents pertaining to Waste Stream SR-SWMF-HET-A	
	CCP-TP-005, Attachment 1, completed by AKE C. A. Dickerson dated September 1, 2011
	CCP-TP-005, Attachment 4, completed by AKE C. A. Dickerson dated September 1, 2011
	CCP-TP-005, Attachment 5, completed by AKE J. Luginbyhl dated October 21,

Document Identification	Document Title
	2008
	CCP-TP-005, Attachment 6, completed by AKE J. Schoen dated September 1, 2011 and memo dated September 21, 2010 RE: waste material parameter analysis
	CCP-TP-005, Attachment 7, completed by AKE J. Schoen September 1, 2011 and memo dated October 5, 2010 RE: Evaluation of radiological characterization
	CCP-TP-005, Attachment 10, completed by AKE J. Luginbyhl 6/2/09 and NCR dated May 3, 2009 Resolution AK: drum SWD071821 to be removed from Attachment 8
	CCP-TP-005, Attachment 8, completed by AKE C. A. Dickerson September 6, 2011 and note stating that drum was deleted on June 2, 2009
	CCP-TP-005, Attachment 13, completed by: • AKE C. Simmons dated April 2, 2008 • AKE J. Luginbyhl dated April 4, 2008 • AKE J. Luginbyhl dated June 20, 2008 • AKE J. Luginbyhl dated July 18, 2008 • AKE J. Luginbyhl dated September 18, 2008 • AKE J. Luginbyhl dated October 24, 2008
	CCP-TP-005, Attachment 14, completed by SPM B. S. Schrock dated September 9, 2011 and memo AK Accuracy Report for Waste Stream, Lots 1-23
Documents pertaining to Waste Stream SR-BCLDP-001.001	
	CCP-TP-005, Attachment 1, completed by AKE L. Price-Watson dated May 13, 2011
	CCP-TP-005, Attachment 4, completed by AKE L. Price-Watson dated May 13, 2011
	CCP-TP-005, Attachment 5, completed by AKE K. J. Peters dated May 18, 2008
	CCP-TP-005, Attachment 6, completed by AKE K. J. Peters dated May 18, 2008
	CCP-TP-005, Attachment 13, completed by AKE K. J. Peters dated August 10, 2010
	CCP-TP-005, Attachment 14, completed by SPM I. S. Quintana dated October 19, 2010 and memo CP:10:01642 RE: Accuracy Report, Lot 1
	CCP-TP-005, Attachment 14, completed by Issued in memo form only dated October 19, 2010 subject: AK Accuracy Report, Lot 1
Documents pertaining to Waste Stream RLCCCPUNIT	
	CCP-TP-005, Attachment 1, completed by AKE T. Greenwood dated May 16, 2012
	CCP-TP-005, Attachment 4, completed by AKE S. Nance dated April 19, 2012
	CCP-TP-005, Attachment 5, completed by AKE M. Doherty dated April 6, 2011
	CCP-TP-005, Attachment 6, completed by AKE M. Doherty dated February 23, 2011 and memo dated February 23, 2011 subject: Calculation of WMPs
	CCP-TP-005, Attachment 7, completed by AKE M. Doherty dated February 23, 2011 and memo dated May 16, 2012 Re: evaluation of radiological characterization
	CCP-TP-005, Attachment 8, completed by AKE S. Nance dated March 1, 2011
	CCP-TP-005, Attachment 13, *Waste Stream Characterization Checklist* form completed by AKE S. Nance, not signed or dated; not required as this waste stream is listed as "not certified"

Nuclear Waste Partnership LLC

A URS-led partnership with B&W and AREVA

QA:13:01033
UFC:2300.00

INTEROFFICE CORRESPONDENCE

DATE: April 22, 2013

FROM: V. K. Cannon V.K. Cannon LOCATION: Assurance Programs

TO: D. E. Gulbransen ED LOCATION: National TRU Program Certification

SUBJECT: INFORMATION COPY OF COMPLETED SURVEILLANCE REPORT SUR-CCP-0003-13, CENTRAL CHARACTERIZATION PROGRAM PROJECT OFFICE RECORDS MANAGEMENT

Attached is the subject report in compliance with CCP-QP-021, *CCP* [Central Characterization Program] *Surveillance Program,* Revision 8.

As a result, there was no Corrective Action Report issued; there was one WIPP Form issued; and five items corrected during the surveillance. Please refer to the report for details.

If you have any questions, please contact me at Extension 7111 or 8112.

VKC:jmc

Attachment

cc: NWP

A. J. Fisher	ED
M. S. Hendrickson	ED
J. E. Hoff	ED
L. R. Jones	ED
R. P. Kantrowitz	ED
J. R. Mireles	ED
T. L. Mueller	ED
M. L. Sensibaugh	ED
M. A. Walker	ED
NTPC Records Custodian	GSA-212

Stoller

S. K. Pearcy	ED

NTPC RECORDS ORIGINAL
DATE REC'D 5/22/13

SURVEILLANCE REPORT

RECORDS MANAGEMENT - PROJECT OFFICE

CENTRAL CHARACTERIZATION PROGRAM

Surveillance Number: SUR-CCP-0003-13

Surveillance Lead	Mark Walker M. A. Walker	4/17/13 Date
Assurance Programs Manager	V. K. Cannon V. K. Cannon	4/17/13 Date

Surveillance Report
Records Management - Project Office
Surveillance no. SUR-CCP-0003-13

Summary

A surveillance was conducted April 9-15, 2013, in accordance with CCP-QP-021, *CCP Surveillance Program*, revision 8, and resulted in no Corrective Action Reports, one WIPP Form, five items Corrected During Surveillance (CDS), no Observations, and no Recommendations.

Scope

Records management at the CCP Project Office.

Criteria

- CCP-PO-005, *CCP Conduct of Operations*, revision 23
- CCP-QP-008, *CCP Records Management*, revision 21
- CCP-QP-011, *CCP Laboratory Logbooks*, revision 10
- CCP-QP-028, *CCP Records Filing, Inventorying, Scheduling, and Dispositioning*, revision 15
- CCP-QP-040, *Support Training*, revision 3
- CCP-TP-005, *CCP Acceptable Knowledge Documentation*, revision 24
- CCP-TP-030, *CCP CH TRU Waste Certification and WWIS/WDS Data Entry*, revision 31
- Associated documents

Surveillance Personnel

- M. A. Walker (Team Lead)
- L. R. Jones (Team Member)
- J. R. Mireles (Team Member)
- T. L. Mueller (Team Member)

Personnel Contacted During the Surveillance

- S. K. Pearcy, NTP Records Manager
- P. Henry, NTP Records
- M. L. Billett, NTP Training
- M. Edwards, NWP Procurement

Details

A. See also Attachment 1, Surveillance Checklist.

B. Review of Receipt Inspection Verification Sheets (RIVSs) revealed a superseded Certificate of Conformance (CoC) was used. Rev. 2 of the CoC was issued effective 5/18/2011, but Rev. 1 was used as late as January 2013. RIVS associated with following PO# were reviewed and found deficient: LANL: 416120, 416113, 416265, 416267, 416184, 416439, 416304, 416268, 416418, 501011, 501012, 501079, 501105, 501186. INL: 416725, 501366. **WIPP Form 13-059** was initiated 4/11/2013.

In addition, the following RIVSs were reviewed and found to lack "Sample Size": RHANL: 414974; INL 416697, 414401, 414060, 413982; LANL: 413659; SRS: 414041, 416485, 416130, 416723, 416514, 416434, 416258, 414259, 414299, 414666, 414782, 415161, 415203, 415489, 415645, 415889, 415935, 510014, . **CDS-1**. These RIVSs were verified corrected by TLM 4/11/2013. A thorough search was made to ensure no other RIVSs also lacked this documentation. There were no other examples found. Also, RIVS to PO #501199, 416764 (INL) were reviewed and found to cite "Certificate of Analysis" instead of "Certificate of Conformance."

CDS-2. A thorough search was made to ensure no other RIVSs also had this deficiency. No other examples were found. This RIVS was verified corrected by TLM 4/11/2013. The RIVS to PO #416300 (INL) lacked a checkmark in the box labeled "Required Documentation." **CDS-3**. A thorough search concluded that no other examples existed. This RIVS was verified corrected by TLM 4/11/2013. **CDS-4**. RIVS was placed in wrong file folder. Verified corrected by JRM 4/11/2013.

Also, the following RIVSs were reviewed and found acceptable: LANL: 501163, 501054; INL: 501371, 501258; ANL: 501190.

C. **CDS-5.** AK Document file number entered as "C968"—verified corrected to "C698" by LRJ 4/11/13.

Findings

No Corrective Action Reports were initiated as a result of this surveillance. One WIPP Form, WF 13-059, was initiated to document the finding described above in Details.

Corrected During the Surveillance (CDS)

Items corrected during this surveillance, documented as CDS-1, CDS-2, CDS-3, CDS-4, and CDS-5 are explained in "Details," above.

Concerns Previously Identified

None.

Recommendations

None.

Observations

None.

Noteworthy Practices

The cooperation of the personnel undergoing surveillance was excellent.

Safety Note

No safety violations were observed.

Attachment

Surveillance Checklist

Attachment

CCP SURVEILLANCE CHECKLIST, Attachment

Surveillance Number: SUR-CCP-0003-13
Organization to be Evaluated: CCP Records Management Program
Date of Surveillance: April 9-15, 2013
Result Key: **S** = Satisfactory **U** = Unsatisfactory **N/A** = Not Applicable
Surveillance Team: Mak Walker, Team Lead, Terry Mueller, Jessica Mireles, and Laura Jones
Applicable Requirements: CCP:QP-008, *CCP Records Management*, Revision 21; CCP-QP-011, *CCP Laboratory Logbooks*, Revision 10; CCP-QP-028, *CCP Records Filing, Inventorying, Scheduling, and Dispositioning*, Revision 15; CCP-PO-005, *CCP Conduct of Operations*, Revision 23; CCP-TP-005, *CCP Acceptable Knowledge Documentation*, Revision 24; CCP-TP-030, *CCP CH TRU Waste Certification and WWIS/WDS Data Entry*, Revision 31; CCP-QP-040, *Support Training*, Revision 3

##	Surveillance Item	Ref Doc	Result	Verification and Comments
1	Training Requirements -Verify that personnel performing this procedure will be trained and qualified in accordance with CCP-QP-002, CCP Training and Qualification Plan prior to performing this procedure.	CCP-QP-008, Rev. 21, Section 2.2.1 ➡	S	(MAW:) Copies of Jeff Patterson and Paulette Henry were provided. All others are new employees and are in the process of being trained.
	-Verify that the Cognizant Manager ensures the Trainee has completed all required reading.	CCP-QP-040, Rev. 3, Section 3.1.5 [B]	S	(MAW:) Copies of Records Assigned Reading Report, provided by CCP Training.
2	Responsibilities: CCP Personnel -Verify that the records are legible, accurate, and complete, appropriate to the work accomplished.	CCP-QP-008, Rev. 21, Section 3.7.3	U	(MAW:) See #5 and #6 for documents reviewed. No issues. (JRM/TLM:) See Report Details. **WF 13-059** was initiated. **Corrected During the Surveillance CDS-1, CDS-2, CDS-3,** and **CDS-4** were documented: see Report Details.

CCP SURVEILLANCE CHECKLIST, Attachment

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##	Surveillance Item	Ref Doc	Result	Verification and Comments
3	Storage, Maintenance, Control, and Protection of CCP Records -Verify the list designating the personnel who are authorized is current.	CCP-QP-008, Rev. 21, Section 4.5.2 [A.1]	S	(TLM:) Verified access labels on all records fire safes, filing cabinets, and lockboxes had current personnel listed on access list: signed by Sheila Pearcy 4/5/13: S. Pearcy, Tom Myers, Alyca Atwood, Paulette Henry, Jeff Patterson, Austin Peralta, Ruthie Goff, and Leon Navarrete.
	-Ensure file cabinets and offices are locked when leaving controlled access areas.	CCP-QP-008, Rev. 21, Section 4.5.2 [A.4]	S	(MAW:) No issues.
4	Transmitting CCP Records -Verify that a copy of Attachment 2 is being made prior to transmitting record.	CCP-QP-008, Rev. 21, Section 4.10.1 [A]	S	(MAW:) Verified in Dixon.
	-Verify that the copy of Attachment 2 is retained until receipt acknowledgement is received from the recipient.	CCP-QP-008, Rev. 21, Section 4.10.1 [B]	S	(MAW:) Verified in Dixon.

CCP SURVEILLANCE CHECKLIST, Attachment

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##	Surveillance Item	Ref Doc	Result	Verification and Comments
5	Operational Logbooks (OLBs) -Verify that an OLB has been submitted for each OLB number assigned during the previous year.	CCP-PO-005, Rev. 23, Section 13.1	S	(MAW:) Reviewed Operational Logbooks CCP-INL-VEL-018; CCP-INL-HSG-Unit 9-002; CCP-INL-NDA-SGRS-019 (SGRS OLB 2012); CCP-INL-NDE5-008 (Operational Logbook for RTR-5); CCP-INL-SUMMA-008; RH-ANLE-VE-013 (AGHCF FEW 2012, Bldg 212); LANL-VE-Debris-009 (2011 OLB); LANL-NDA-HENC-013 (2012, HENC1, LANL TA-54); LANL-NDA-HENC-02-012 (2012-HENC2 LANL TA-54); LANL-NDE-RTR1-007; LANL-NDE-RTR2-009; LANL-NDA-SHENC-003 (2012-SuperHENC, LANL TA-54); LANL-NDE-HE RTR2-002; LANL-HSG-Summa-008 (TA54 Area G Building 33); LANL-VE-Debris-010 (TA-50-LANL); LANL-HSG-Trans-014 (Flamgas Testing use of GC/MS/TCD TA-54 Area G Building 486 Unit 2); BNAS OLB (CCP-SRS-BNAS-001, E-area Bldg 643-43E); CCP-SRS-FGA11-001. (TLM:) Reviewed Sample Tracking Logbook, ALD-1488; INL-ACL 2013 Controlled Temperature Logbook for CTC-110, ALD-1497; Operational Logbook CCP-RH-INL-VE-006 (2012)-RH VE @ INL; CCP-INL-HSG-RH-006 (2012); CCP-RH-NL-SOLIDS-005 (2013); CCP-SRS-RH-DTC-001 (2012); RH-ANLE-HSG-004 (2012, Bldg. 331); SRS-SUMMA-004 (2011); CCP-SRS-BSGS-002.
	-Verify that following receipt of all required OLBs and resolution of discrepancies, the OLB Annual Reconciliation Report was filed.	CCP-PO-005, Rev. 23, Section 13.6	S	(MAW:) Copy of OLB Annual Reconciliation Report for 2012.
6	Laboratory Logbooks -Verify that the first lined page of the LLB, record the following: Identification of the logbook as an LLB, control number, description of the facility/equipment, including location (e.g. SRS), and the printed name, signature and initials of the personnel who will be making entries.	CCP-QP-011, Rev. 10, Section 4, 4.2.[B]	S	(MAW:) Reviewed ALD-1497 (2013 Controlled Temperature Logbook for CTC-110) – 1st entry was 01/02/13; Last entry was 03/25/13; Date sent to Records: 03/27/13. Logbook for ECL: dated 03/27/13. (TLM:) (see items reviewed above under #5.)

CCP SURVEILLANCE CHECKLIST, Attachment

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##	Surveillance Item	Ref Doc	Result	Verification and Comments
7	Laboratory Logbooks -Verify that each entry made in a LLB shall be initialled and dated by the individual or individuals who performed the action.	CCP-QP-011, Rev. 10, Section 4, 4.2.[C]	S	(MAW:) (see item #6.) (TLM:) (see items reviewed above under #5.)
8	CCP Manager or Designee: -Verify that the Records Inventory and Disposition Schedule (RIDS) has been approved.	CCP-QP-028, Rev. 15, Section 3.1	S	(MAW:) Copy of RIDs.
9	WWIS/WDS Data Entry Records -Verify that the records contain the following: QA/Lifetime Container Certification: WDS Master Template Correspondence Radiological Survey Information, if applicable WDS FGA Template	CCP-TP-030, Rev. 31, Section 5.0, 5.1.1 [A]	S	(TLM:) (See next question.)
	Overpack Certification: Overpack Data Report (for Overpacks only) Radiological Survey Information (if applicable) Correspondence	CCP-TP-030, Rev. 31, Section 5.0, 5.1.1 [B]	S	(TLM:) Reviewed TDOP Report (TDOP 041) dated 4/9/13; LANL Overpack Data Report SWB079 dated 3/6/13; INL SWB080 SWB Report dated 3/6/13; INL RH Canister RH034.

CCP SURVEILLANCE CHECKLIST, Attachment

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##	Surveillance Item	Ref Doc	Result	Verification and Comments
10	CCP Acceptable Knowledge Documentation -Verify that the Acceptable Knowledge Documentation Checklists generated are maintained as QA Records.	CCP-TP-005, Rev. 24 Section 5.1.1 [A]	S	(LRJ:) Documents reviewed: INL-AK-25_ID-AECHDM_12-06-11, INL-AK25-id-AECHHM_12-06-11, INL-AK24_ID-AECHHM_12-06-11, INL-AK-23_ID-NRD.1_09-30-11. LANL-AK14 (Waste Stream) LA-MHD10.001_06_26-12 LANL-AK13 (Waste Stream) LA-MHD05-ITRI.001_0. SRS-AK21_SR-221H-PuOx_11_06, AK20_SR-HBL-235F-HET_04. AK19_SR-BCLDP-HET-12-11.
11	CCP Acceptable Knowledge Documentation -Verify that the Acceptable Knowledge source Document summary forms, and when applicable attached CCP generated source documents.	CCP-TP-005, Rev. 24 Section 5.1.1 [C]	U	(LRJ:) INL-ID-SDA-DEBRIS, ID-SDA-SLUDGE, ID-SDA-SOIL Source Document ID-C101 INL-ID-SDA-DEBRIS, ID-SDA-SLUDGE, ID-SDA-SOIL Source Document ID-C113 INL-ID-SDA-DEBRIS, ID-SDA-SLUDGE, ID-SDA-SOIL Source Document ID-C114 INL-AK22, INL-AK-25 SRS Source Document C031 RH-ANL Source Document C2033 RH-INL Source Document C4127 Document file number entered as C968 – **CDS-5:** corrected to C698 during the surveillance.
12	CCP Acceptable Knowledge Documentation -Verify that the AK Container Tracking Spreadsheet (submitted to CCP Records after notification by the site SPM that waste shipments to WIPP have been completed.	CCP-TP-005, Rev. 24 Section 5.1.1 [Q]	S	(LRJ:) Verified in sftp.site and Dixon

Approved: Surveillance Team Lead, Mak Walker 3/25/2013

URS

Washington TRU Solutions LLC

QA:11:00099
UFC:2300.00

INTER-OFFICE CORRESPONDENCE

DATE: April 6, 2011

FROM: J. E. Hoff
W. W. Allen FOR
LOCATION: Quality Assurance

TO: D. K. Ploetz ED
LOCATION: Central Characterization Project

SUBJECT: TRANSMITTAL AND CLOSURE OF WTS QUALITY ASSURANCE SURVEILLANCE S11-18, ACCEPTABLE KNOWLEDGE

WTS Quality Assurance (QA) conducted Surveillance S11-18, *Acceptable Knowledge*, on March 2 and 3, 2011.

With the exception of the specific issues documented, it was determined that the Central Characterization Project (CCP) Acceptable Knowledge Process is adequately established and implemented.

This surveillance resulted in the identification of one finding and one observation. The finding is documented on WIPP Form (WF) 11-051, and the resulting corrective actions will be tracked and closed through the WIPP Issues Management Process. No response is required for observations. Therefore, this surveillance is considered closed with issue of this report.

If you have any questions or need further information regarding this surveillance, please contact Ms. Cathy Nesser at Extension 8376.

LEH

Attachment

cc: W. W. Allen ED
V. K. Cannon ED
L. B. Estrada ED
D. H. Haar ED
M. S. Hendrickson ED
F. M. Ito ED
M. D. Keathley ED
K. A. Klein ED
M. A. Mullins 451-27
C. E. Nesser ED
P. D. Yocum ED
Quality Assurance Surveillance File S11-18

Washington TRU Solutions Quality Assurance

Surveillance Report Number: S11-18 Date: March 2 – 3, 2011

Subject: Acceptable Knowledge

Organization(s) Surveilled: Central Characterization Project (CCP) Records, Inventory and Acceptable Knowledge Support

Scope: The purpose of the surveillance was to assess compliance with relevant requirements for use of Acceptable Knowledge, including adherence to procedure CCP-TP-005, *CCP Acceptable Knowledge Documentation*. Performance of this surveillance is an element of corrective actions proposed to address issues identified during WTS Quality Assurance Audit I10-08, *Central Characterization Project Quality Assurance Program*.

Surveillor(s): C. Nesser (lead), K. Klein, W. Ledford

Requirement References (include revision no.) CCP-TP-005, Revision 21, *CCP Acceptable Knowledge Documentation*; CCP-QP-021, Revision 7, *CCP Surveillance Program*; CCP-PO-001, Revision 19, *CCP Transuranic Waste Characterization Quality Assurance Project Plan;* CCP-PO-002, Revision 25, *CCP Transuranic Waste Certification Plan;* CCP-QP-008, Revision 18, *CCP Records Management;* CCP-QP-010, Revision 22, *CCP Document Preparation, Approval and Control*

Surveillance Criteria: ☑ Checklist on file in QA

Personnel Contacted (*indicates persons to whom a copy of this report is to be distributed):

T. Greenwood; S. Pearcy; S. Keathley, C. Davis

Documents reviewed: ☑ See Attachment

Details/Results/Conclusions ☑ WIPP Form(s) identified in Findings

WTS Quality Assurance was requested to perform Surveillance S11-18 of the Acceptable Knowledge (AK) process, as part of a Corrective Action Plan to address issues identified during the most recent annual CCP QA Program audit (I10-08). Two findings documented in the I10-08 audit report included concerns relative to the AK process.

This surveillance was performed to a prepared checklist, considering all requirements documents noted above, with a focus on adherence to CCP-TP-005, *CCP Acceptable Knowledge Documentation*. Surveillance activities included assessment of Document Quality Assurance (Procedures/Records); Technical Process (es); Implementing Procedure(s); and, program flow-down from requirements documents to implementing procedures. The Surveillance Team had opportunity to review AK records, observe performance of tasks inherent to the process, and interview key personnel.

Corrective Actions (WTS QA Audit I10-08)

I10-08-F-01

The issue identified in Finding I10-08-F-01 pertained to personnel failure to perform numbered procedure steps (pertaining to the completion of AK documentation) in the order written.

CCP-TP-005, Revision 21, December 29, 2010, *CCP Acceptable Knowledge Documentation*, removed the requirement for procedure steps to be performed in consecutive order.

I10-08-F-02

Several instances of AK supporting documentation containing inaccuracies were observed during document reviews.

In general, inaccuracies were not prevalent in information contained in AK supporting documentation reviewed during this surveillance. However, it was observed that "Attachment 8s" were not always updated, sometimes an "add container memorandum" was appended to the original Attachment 8. Per interview, CCP AK plans to specify how this is to be performed in a revision to CCP-TP-005 to standardize the practice for all waste streams.

I10-08-F-03

Finding I10-08-F-03 pertained to completion of Nonconformance Reports, and was not included in the scope of this surveillance.

Flowdown of Requirements

NM 4890139088-TSDF, *WIPP Hazardous Waste Facility Permit*, November 30, 2010, Permit Attachment C6, Table C6-1 Waste Analysis Plan (WAP) General Checklist for Use at DOE's Generator/Storage Sites was used to confirm flow-down of requirements to implementing programs and procedures.

Per CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan (QAPjP),* waste characterization activities (specified in the QAPjP) are to be carried out at generator/storage sites and DOE approved laboratories in accordance with requirements identified in the QAPjP. Further, the QAPjP is implemented through Interface Agreements between WTS CCP and each remote site. QAPjP requirements may also be implemented through applicable Statements of Work (SOWs). Therefore, implementing procedures that are not site-specific are determined to apply at all generator/storage sites.

As a result of this assessment, it was determined that controls specified in requirements documents are adequately flowed-down to implementing procedures.

Document Quality Assurance (Procedures/Records) and Technical Process(es)

Acceptable Knowledge Summary Reports (AKSRs) were reviewed for compliance with CCP procedural requirements. This review included AKSRs issued after the effective date of CCP-TP-005, Revision 21, and older AKSRs to verify compliance for waste streams that had been actively characterized and shipped to WIPP.

A complete AK records package includes a series of attachments that provide details of the process, and a defensible and auditable record of AK. For those streams (reviewed) that had been actively characterized and shipped to WIPP, the records were determined to be complete. However, for newer waste streams (not yet shipped to WIPP) the completed AK attachments were not consistently found in CCP records, although the AKSR had been issued.

Of concern to the surveillance team was the observation that CCP-TP-005 attachments and/or source documents are not consistently submitted to CCP records to support issued AK Summary Reports. This includes the submittal of AK Container Tracking Spreadsheets to CCP Records after the completion of waste stream shipment to WIPP. At the time of this surveillance, no AK tracking spreadsheets have

been submitted to CCP records for completed waste streams (e.g., streams from Argonne National Laboratory or the General Electric Vallecitos facilities). This is further documented as Finding (S11-18-F-01).

Additionally, it was noted that there is no 'formal' mechanism for transmitting and/or tracking AK records from AKEs to CCP Records. This is further discussed as Observation (S11-18-O-010).

With exception of the specific issues documented in this report, it was determined that the CCP Acceptable Knowledge process is adequately established and implemented. This surveillance resulted in the identification of one finding and one observation.

The finding will be tracked through closure via the WIPP Form process. This surveillance is therefore considered closed with issue of this report.

FINDING

S11-18-F-01 (WF11-051)

Condition observed:

Source documents and AK Container Tracking Spreadsheets are not consistently submitted to CCP records to support issued AK Summary Reports. This includes:

- CCP-AK-SRS-5, Rev. 7, 2/16/11
  - Several source documents that are referenced in AK Summary Report are not in CCP Records
- CCP-AK-INL-020, Rev. 1, 2/17/11
  - No source documents are in CCP Records.
- CCP-AK-BAPL-500
  - There were no source documents in the CCP records system at the time of the surveillance
- CCP-AK-INL-600
  - There were no source documents in the CCP records system at the time of the surveillance.
- The submittal of AK Container Tracking Spreadsheets to CCP Records after the completion of waste stream shipment to WIPP
  - At the time of this surveillance, no AK tracking spreadsheets have been submitted to CCP records for completed waste streams (e.g., streams from Argonne National Laboratory or the General Electric Vallecitos facilities)

Requirement not met:

DOE/CBFO-94-1012, Revision 11, *U.S. Department of Energy, Carlsbad Field Office, Quality Assurance Program Document*, Section 1.5.2.G, "Documents referenced by final reports, except readily available references such as encyclopedias, dictionaries, engineering handbooks, and national codes and standards, shall be retrievable from records files. Preparers of such records shall ensure that the documents are entered into the records system."

CCP-TP-005, Revision 21, *CCP Acceptable Knowledge Documentation*, Section 5.11.[P], "AK Container Tracking Spreadsheet (submitted to CCP Records after the completion of waste stream shipment to WIPP)"

Table of Documents Reviewed

Document Identification	Documentation Title or Description
DOE/CBFO-94-1012, Revision 11	*U.S. Department of Energy Carlsbad Field Office Quality Assurance Program Document*
NM 4890139088-TSDF, November 30, 2010,	*WIPP Hazardous Waste Facility Permit, Permit Attachment C6, Table C6-1 Waste Analysis Plan (WAP) General Checklist for Use at DOE'S Generator/Storage Sites*
Acceptable Knowledge (AK) Packages	*CCP-AK-INL-600, CCP-AK-BAPL-500, CCP-AK-ORNL-510, CCP-AK-RL-110, CCP-AK-SRS-5, CCP-AK-INL-020, and CCP-AK-RL-101; CCP-AK-BAPL-500 & CCP-AK-INL-600*
Headspace Gas AK	*LA-0S-001.01.001, Lot 1, LA-OS-00-03*
Waste Stream Documentation	*Waste Streams: ID-RF-S5126; LA-OS-00.01.001; ID-SDA-DEBRIS; RF-5300A; ID-RF-S3121-374; SRS-W027-773A-HET, LA-MDH05-ITRI.001*
CCP-PO-001, Revision19	*CCP Transuranic Waste Characterization Quality Assurance Project Plan*
CCP-PO-002, Revision 25	*CCP Transuranic Waste Certification Plan*
CCP-PO-003, Revision 12	*CCP Transuranic Authorized Methods for Payload Control (CCP CH-TRAMPAC)*
CCP-TP-005, Revision 21	*CCP Acceptable Knowledge Documentation*
CCP-QP-021, Revision 7	*CCP Surveillance Program*
CCP-QP-008, Revision 18	*CCP Records Management*
CCP-QP-010, Revision 22	*CCP Document Preparation, Approval and Control*
CCP-PO-401, Revision 2	*CCP Contact-Handled Transuranic Authorized Methods for Payload Control (CCP CH-TRAMPAC) for Intersite Shipments*
CCP-TP-402, Revision 3	*CCP Nondestructive Examination Data Validation for Transportation*
WP 13-QA.03, Revision 17	*Quality Assurance Independent Assessment Program*
Statement of Work for AK Support at All Generator Sites, March 19, 2007	
WTS QA Audit Report, I10-08	*Central Characterization Project Quality Assurance Program*

Washington TRU Solutions Quality Assurance

Surveillance Report Number: S11-18 Date: March 2 – 3, 2011

OBSERVATION

S11-18-O-01

Condition observed:

There is no 'formal' mechanism for transmitting and/or tracking AK records from AKEs to CCP Records.

A cognizant individual, responsible for transferring AK documents to CCP Records maintains an informal 'log' of documents/records transferred to CCP Records. It is proposed for consideration that a transmittal mechanism/record be created and maintained to enhance the AK group's ability to monitor document movement through the technical processes until submittal to CCP Records.

C.E. Nesser	4·6·11	M.D. Keathley	4/6/11
C.E. Nesser Lead Auditor/Surveillor	Date	M.D. Keathley Manager, Assurance Programs	Date

Comments:

CC: Hoff, J. E.; Cannon, V. K.; Estrada, L. B.; Hendrickson, M. S.; Ito, F. M.; Mullins, M. A.; Klein, K. A.; Haar, D. H.

AK15

AK15

NWP
Nuclear Waste Partnership LLC

A URS-led partnership with B&W and AREVA

CP:13:01212
UFC:5900.00

INTER-OFFICE CORRESPONDENCE

DATE: May 22, 2013

FROM: L. M. Nelson LM Nelson — LOCATION: Central Characterization Program Operations

TO: NTPC Records Custodian GSA-212 — LOCATION: National TRU Program Certification

SUBJECT: ACCEPTABLE KNOWLEDGE ACCURACY REPORT: ARGONNE NATIONAL LABORATORY WASTE STREAM NUMBER AERHDM, LOTS 1-42.

Purpose

CCP-TP-005, Revision 24, CCP Acceptable Knowledge Documentation, requires that Acceptable Knowledge (AK) accuracy be evaluated and documented, either on a lot or waste stream basis. The purpose of this correspondence is to document the results of the AK accuracy evaluation for containers in Waste Stream AERHDM, Heterogeneous Debris Waste, Lots 1-42. Prior Accuracy Results issued on Argonne National Laboratory (ANL) Lots 1-2, in interoffice correspondence letter, CP:09:01060 dated January 28, 2009, accounted for 50 containers with an accuracy of 100 percent. AK Accuracy Report on ANL lots 1-5, in interoffice correspondence letter, CP:10:01328, dated May 25, 2010, accounted for 100 containers with an accuracy of 100 percent. AK Accuracy Report on ANL Lots 1-22, interoffice correspondence letter, CP:11:01501, dated July 20, 2011, accounted for 259 containers with an accuracy of 100 percent. AK Accuracy Report on ANL Lots 1-34, interoffice correspondence letter, CP:12:01256, dated May, 23, 2012 accounted for 350 containers with an accuracy of 100 percent.

Methodology

In accordance with CCP-TP-005, the CCP Acceptable Knowledge Confirmation Checklist (Attachment 13 for Lots 1-42 in Waste Stream AERHDM subject to this AK Accuracy review was evaluated. No Acceptable Knowledge Re-Evaluation Checklists (Attachment 10's) were generated for the review of this report.

The results of the AK Accuracy evaluation for Waste Stream AERHDM, Lots 1-42 are documented on the attached AK Accuracy Report form (Attachment 14). A total of 441 containers have been evaluated for AK Accuracy and none had the Waste Matrix Codes reassigned, Environmental Protection Agency (EPA) Hazardous Waste Numbers (HWN's) reassigned, or were found to have radiological data

NTPC RECORDS ORIGINAL
DATE REC'D 6/3/13

inconsistent with AK. The results of the AK Accuracy determination for Waste Stream AERHDM, Lots 1-42 are addressed in the following section of this correspondence.

Results of AK Accuracy Determination

AK Re-evaluation and Confirmation for Waste Stream AERHDM

No AK Re-Evaluation Checklists were prepared for waste containers in Waste Stream AERHDM, Lots 1-42.

The following parameters were described in AK Accuracy Report AERHDM.

- The AK identifies the waste as mixed heterogeneous debris.
- The Waste stream was determined to contain Resource Conservation and Recovery Act regulated constituents and is assigned the following EPA HWN's: F002, F005, D004, D005, D006, D007, D008, D009, D010, D011, D019, D028, D029.

No EPA HWN's were reassigned to this waste stream.

The waste material parameters, EPA HWN's and radionuclides are with reasonable error as predicted in the AK Summary Report for waste stream AERHDM. No additional AK re-evaluations are required at this time.

Other Considerations

No Attachments 10's were generated for this waste stream.

No drums were eliminated from Waste Stream AERHDM due to radioisotopic content.

Based on the criteria for calculating accuracy, the accuracy for the waste stream is 100 percent, as calculated below.

Summary

There are a total of 441 containers in lots 1-42 for Waste Stream AERHDM and all containers were determined to be consistent with AK Summary Report AERHDM. The percentage of waste containers found to be consistent with AK is therefore:

(441/441)*100= 100%

This AK Accuracy report has been prepared in accordance with CCP-TP-005. The original Attachment 14, AK accuracy Report and the supporting list of waste containers in Lots 1-42 for waste stream AERHDM is being provided directly to National TRU Program Certification Records Custodian in accordance with CCP-TP-005.

If you have any questions, or if you would like more information about the contents of this AK Accuracy Report, please contact me at (303) 843-2269.

LMN:jmc

Attachments (2)

cc: (without attachments)
I. S. Joo ED

Attachment 14 – CCP Acceptable Knowledge Accuracy Report – Example Form

CCP Acceptable Knowledge Accuracy Report

Site(s): Argonne National Laboratory (ANL)

Waste Stream Number(s): AERHDM

Waste Stream Description: Heterogeneous Debris Waste

Waste Containers:	Waste Matrix Code Reassigned? (Y/N)	EPA Hazardous Waste Number Reassigned? (Y/N)	Radiological Data Consistent with AK? (Y/N)
See Attachment 2 for a listing of containers	NA	NA	NA
NA	NA	NA	NA
NA	NA	NA	NA
NA	NA	NA	NA
NA	NA	NA	NA
NA	NA	NA	NA
NA	NA	NA	NA
NA	NA	NA	NA
NA	NA	NA	NA

Total containers in this report: 441
Total containers consistent with AK: 441
Percent containers consistent with AK: 100

Site Project Manager:
Laura Nelson
Print

Laura Nelson
Sign

Date: 5/16/2013

CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

Waste Stream: # AERHDM

Sub-Lot # 1

Container ID Number	Historical Container ID	NDA BDR or Radiological Characterization BDR (CH only)	VE BDR	RTR BDR	Solids Sampling BDR	Solids Analytical BDR	Lead Management/ Overpack Yes	Permit Required Headspace Gas BDR			
								Sample	Analysis		
00798	NA	NA	RHANLVE080002	NA	NA	NA		NA	NA	NA	NA
00799*	NA	NA	RHANLVE080002	NA	NA	NA		AN9808070001	BCL070889	BCL070890	NA
00810	NA	NA	RHANLVE080001_R1	NA	NA	NA		NA	NA	NA	NA
00811	NA	NA	RHANLVE080002	NA	NA	NA		NA	NA	NA	NA
00812	NA	NA	RHANLVE080009	NA	NA	NA		NA	NA	NA	NA
00813	NA	NA	RHANLVE080009	NA	NA	NA		NA	NA	NA	NA
00814	NA	NA	RHANLVE080009	NA	NA	NA		NA	NA	NA	NA
00815*	NA	NA	RHANLVE080001_R1	NA	NA	NA		AN9808070001	BCL070889	BCL070890	NA
00816*	NA	NA	RHANLVE080001_R1	NA	NA	NA		AN9808070001	BCL070889	BCL070890	NA
00817	NA	NA	RHANLVE080001_R1	NA	NA	NA		NA	NA	NA	NA
00818*	NA	NA	RHANLVE080002	NA	NA	NA		AN9808070001	BCL070889	BCL070890	NA
00819*	NA	NA	RHANLVE080002	NA	NA	NA		AN9808070001	BCL070889	BCL070890	NA
00820*	NA	NA	RHANLVE080001_R1	NA	NA	NA		AN9808070001	BCL070889	BCL070890	NA
00821	NA	NA	RHANLVE080002	NA	NA	NA		NA	NA	NA	NA
00822*	NA	NA	RHANLVE080002	NA	NA	NA		AN9808070001	BCL070889	BCL070890	NA
00823	NA	NA	RHANLVE080003	NA	NA	NA		NA	NA	NA	NA
00824	NA	NA	RHANLVE080001_R1	NA	NA	NA		NA	NA	NA	NA
00825	NA	NA	RHANLVE080001_R1	NA	NA	NA		NA	NA	NA	NA
00827	NA	NA	RHANLVE080002	NA	NA	NA		NA	NA	NA	NA
00829	NA	NA	RHANLVE080002	NA	NA	NA		NA	NA	NA	NA
00830	NA	NA	RHANLVE080002	NA	NA	NA		NA	NA	NA	NA
00831	NA	NA	RHANLVE080001_R1	NA	NA	NA		NA	NA	NA	NA
00832	NA	NA	RHANLVE080003	NA	NA	NA		NA	NA	NA	NA
00833*	NA	NA	RHANLVE080002	NA	NA	NA		NA	NA	NA	NA
00834	NA	NA	RHANLVE080002	NA	NA	NA		AN9808070001	BCL070889	BCL070890	NA
00836	NA	NA	RHANLVE080009	NA	NA	NA		NA	NA	NA	NA
00837	NA	NA	RHANLVE080002	NA	NA	NA		NA	NA	NA	NA
00838*	NA	NA	RHANLVE080002	NA	NA	NA		NA	NA	NA	NA
00840	NA	NA	RHANLVE080003	NA	NA	NA		AN9808070001	BCL070889	BCL070890	NA
00841	NA	NA	RHANLVE080003	NA	NA	NA		NA	NA	NA	NA
00842	NA	NA	RHANLVE080003	NA	NA	NA		NA	NA	NA	NA
00843	NA	NA	RHANLVE080003	NA	NA	NA		NA	NA	NA	NA
00844	NA	NA	RHANLVE080003	NA	NA	NA		NA	NA	NA	NA
00846	NA	NA	RHANLVE080002	NA	NA	NA		NA	NA	NA	NA
00847	NA	NA	RHANLVE080003	NA	NA	NA		NA	NA	NA	NA
00848	NA	NA	RHANLVE080003	NA	NA	NA		NA	NA	NA	NA
00849	NA	NA	RHANLVE080003	NA	NA	NA		NA	NA	NA	NA

* HSG lot 1 randomly selected for verifying the assignment of Hazardous Waste Numbers.

CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

Waste Stream: # AERHDM

Sub-Lot # 2

Container ID Number	Historical Container ID	NDA BDR or Radiological Characterization BDR (CH only)	VE BDR	RTR BDR	Solids Sampling BDR	Solids Analytical BDR	Lead Management Overpack Yes	Permit Required Headspace Gas BDR			
								Sample	Analysis		
[illegible]	NA	NA	[illegible]	NA	NA	NA		NA	NA	NA	NA
[illegible]	NA	NA	[illegible]	NA	NA	NA		NA	NA	NA	NA
[illegible]	NA	NA	[illegible]	NA	NA	NA		NA	NA	NA	NA
[illegible]	NA	NA	[illegible]	NA	NA	NA		NA	NA	NA	NA
[illegible]	NA	NA	[illegible]	NA	NA	NA		NA	NA	NA	NA
[illegible]	NA	NA	[illegible]	NA	NA	NA		NA	NA	NA	NA
[illegible]	NA	NA	[illegible]	NA	NA	NA		NA	NA	NA	NA
[illegible]	NA	NA	[illegible]	NA	NA	NA		NA	NA	NA	NA
[illegible]	NA	NA	[illegible]	NA	NA	NA		NA	NA	NA	NA
[illegible]	NA	NA	[illegible]	NA	NA	NA		NA	NA	NA	NA
[illegible]	NA	NA	[illegible]	NA	NA	NA		NA	NA	NA	NA
[illegible]	NA	NA	[illegible]	NA	NA	NA		NA	NA	NA	NA
[illegible]	NA	NA	[illegible]	NA	NA	NA		NA	NA	NA	NA
[illegible]	NA	NA	[illegible]	NA	NA	NA		NA	NA	NA	NA
[illegible]	NA	NA	[illegible]	NA	NA	NA		NA	NA	NA	NA

* HWD lot 1 randomly selected for verifying the assignment of Hazardous Waste Numbers.
@ Container rejected in VE process and can not be certified for shipment to WIPP.

Rebecca Walker
Signature of Site Project Manager

Rebecca Walker
Printed Name

10/13/2006
Date

CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

Waste Stream: # AERHDM

Sub-Lot # 3

Container ID Number	Historical Container ID	NDA BDR or Radiological Characterization BDR (CH only)	VE BDR	RTR BDR	Solids Sampling BDR	Solids Analytical BDR	Lead Management/ Overpack Yes	Permit Required Headspace Gas BDR			
								Sample	Analyte		
562	NA	NA	RHANLVE080003	NA	NA	NA		NA	NA	NA	NA
563	NA	NA	RHANLVE080003	NA	NA	NA		NA	NA	NA	NA
566	NA	NA	RHANLVE080001	NA	NA	NA		NA	NA	NA	NA
567	NA	NA	RHANLVE080001	NA	NA	NA		NA	NA	NA	NA
568	NA	NA	RHANLVE080001	NA	NA	NA		NA	NA	NA	NA
569	NA	NA	RHANLVE080001	NA	NA	NA		NA	NA	NA	NA
570	NA	NA	RHANLVE080001	NA	NA	NA		NA	NA	NA	NA
571	NA	NA	RHANLVE080001	NA	NA	NA		NA	NA	NA	NA
572	NA	NA	RHANLVE080001	NA	NA	NA		NA	NA	NA	NA
573	NA	NA	RHANLVE080001	NA	NA	NA		NA	NA	NA	NA
574	NA	NA	RHANLVE080001	NA	NA	NA		NA	NA	NA	NA
575	NA	NA	RHANLVE080001	NA	NA	NA		NA	NA	NA	NA
576	NA	NA	RHANLVE080001	NA	NA	NA		NA	NA	NA	NA
577	NA	NA	RHANLVE080002	NA	NA	NA		NA	NA	NA	NA
578	NA	NA	RHANLVE080002	NA	NA	NA		NA	NA	NA	NA
579	NA	NA	RHANLVE080002	NA	NA	NA		NA	NA	NA	NA
580	NA	NA	RHANLVE080002	NA	NA	NA		NA	NA	NA	NA
581	NA	NA	RHANLVE080002	NA	NA	NA		NA	NA	NA	NA
582	NA	NA	RHANLVE080002	NA	NA	NA		NA	NA	NA	NA
583	NA	NA	RHANLVE080002	NA	NA	NA		NA	NA	NA	NA
584	NA	NA	RHANLVE080002	NA	NA	NA		NA	NA	NA	NA
585	NA	NA	RHANLVE080002	NA	NA	NA		NA	NA	NA	NA
586	NA	NA	RHANLVE080002	NA	NA	NA		NA	NA	NA	NA
587	NA	NA	RHANLVE080002	NA	NA	NA		NA	NA	NA	NA
588	NA	NA	RHANLVE080002	NA	NA	NA		NA	NA	NA	NA

* HSG lot 1 randomly selected for verifying the assignment of Hazardous Waste Numbers.
\# Container rejected in VE process and can not be certified for shipment to WIPP.

Signature of [illegible] Project Manager

Hillari J. Neely
Printed Name

7/10/2009
Date

CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

Waste Stream: # AERHDM

Lot # 4

Container ID Number	Historical Container ID	NDA BDR or Radiological Characterization BDR (CH only)	VE BDR	RTR BDR	Solids Sampling BDR	Solids Analytical BDR	Lead Management/ Overpack Yes	Permit Required Headspace Gas BDR			
								Sample	Analysis		
889	NA	NA	RHANLVE080008	NA	NA	NA		NA	NA	NA	NA
890	NA	NA	RHANLVE080008	NA	NA	NA		NA	NA	NA	NA
891	NA	NA	RHANLVE080003	NA	NA	NA		NA	NA	NA	NA
892	NA	NA	RHANLVE080003	NA	NA	NA		NA	NA	NA	NA
893	NA	NA	RHANLVE080003	NA	NA	NA		NA	NA	NA	NA
894	NA	NA	RHANLVE080003	NA	NA	NA		NA	NA	NA	NA
895	NA	NA	RHANLVE080003	NA	NA	NA		NA	NA	NA	NA
896	NA	NA	RHANLVE080003	NA	NA	NA		NA	NA	NA	NA
897	NA	NA	RHANLVE080003	NA	NA	NA		NA	NA	NA	NA

Signature of SSS Project Manager

Hillari J. Nealy
Printed Name

9/18/2009
Date

CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

Waste Stream: # AERHDM

Lot # 6

Container ID Number	Historical Container ID	NDA BDR or Radiological Characterization BDR (CH only)	VE BDR	RTR BDR	Solids Sampling BDR	Solids Analytical BDR	Load Management/ Overpack Yes	Permit Required Headspace Gas BDR			
								Sample	Analysis		
888	NA	NA	RHAMLVE100001	NA	NA	NA		NA	NA	NA	NA
889	NA	NA	RHAMLVE100001	NA	NA	NA		NA	NA	NA	NA
901	NA	NA	RHAMLVE100001	NA	NA	NA		NA	NA	NA	NA
902	NA	NA	RHAMLVE100001	NA	NA	NA		NA	NA	NA	NA
903	NA	NA	RHAMLVE100001	NA	NA	NA		NA	NA	NA	NA
904	NA	NA	RHAMLVE100001	NA	NA	NA		NA	NA	NA	NA
905	NA	NA	RHAMLVE100001	NA	NA	NA		NA	NA	NA	NA
906	NA	NA	RHAMLVE100001	NA	NA	NA		NA	NA	NA	NA
907	NA	NA	RHAMLVE100001	NA	NA	NA		NA	NA	NA	NA
908	NA	NA	RHAMLVE100001	NA	NA	NA		NA	NA	NA	NA
909	NA	NA	RHAMLVE100001	NA	NA	NA		NA	NA	NA	NA
910	NA	NA	RHAMLVE100001	NA	NA	NA		NA	NA	NA	NA
911	NA	NA	RHAMLVE100001	NA	NA	NA		NA	NA	NA	NA
912	NA	NA	RHAMLVE100001	NA	NA	NA		NA	NA	NA	NA
913	NA	NA	RHAMLVE100001	NA	NA	NA		NA	NA	NA	NA
914	NA	NA	RHAMLVE100001	NA	NA	NA		NA	NA	NA	NA

* HSG lot 1 randomly selected for verifying the assignment of Hazardous Waste Numbers.

Container rejected in VE process and can not be certified for shipment to WIPP.

Signature of Site Project Manager

Hilari J. Neely
Printed Name

4/9/2010
Date

5

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515

CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

Waste Stream: # AERHDM

Lot # 6

Container ID Number	Historical Container ID	NDA BDR or Radiological Characterization BDR (CH only)	VE BDR	RTR BDR	Solids Sampling BDR	Solids Analytical BDR	Last Management Overpack Yes	Permit Required Headspace Gas BDR			
								Sample	Analysis		
916	NA	NA	RHAMLVE100000	NA	NA	NA		NA	NA	NA	NA
916	NA	NA	RHAMLVE100002	NA	NA	NA		NA	NA	NA	NA
917	NA	NA	RHAMLVE100002	NA	NA	NA		NA	NA	NA	NA
918	NA	NA	RHAMLVE100002	NA	NA	NA		NA	NA	NA	NA
919	NA	NA	RHAMLVE100002	NA	NA	NA		NA	NA	NA	NA
920	NA	NA	RHAMLVE100002	NA	NA	NA		NA	NA	NA	NA
921	NA	NA	RHAMLVE100002	NA	NA	NA		NA	NA	NA	NA
922	NA	NA	RHAMLVE100002	NA	NA	NA		NA	NA	NA	NA
924	NA	NA	RHAMLVE100002	NA	NA	NA		NA	NA	NA	NA
926	NA	NA	RHAMLVE100003	NA	NA	NA		NA	NA	NA	NA
926	NA	NA	RHAMLVE100003	NA	NA	NA		NA	NA	NA	NA
927	NA	NA	RHAMLVE100003	NA	NA	NA		NA	NA	NA	NA
928	NA	NA	RHAMLVE100003	NA	NA	NA		NA	NA	NA	NA
929	NA	NA	RHAMLVE100003	NA	NA	NA		NA	NA	NA	NA
								NA	NA	NA	NA

* HSG lot 1 randomly selected for verifying the assignment of Hazardous Waste Numbers.
\# Container rejected in VE process and can not be certified for shipment to WIPP.

Signature of Site Project Manager

Hillari J. Neely
Printed Name

4/19/2010
Date

CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

Waste Stream: # AERHDM

Lot # 7

Container ID Number	Historical Container ID	NDA BDR or Radiological Characterization BDR (CH only)	RTR BDR	VE BDR	Solids Sampling BDR	Solids Analytical BDR	Lead Management Overpack Yes	Permit Required Headspace Gas BDR			Transportation BDR
								Sample	Analyte		
934	NA	ANLRHDTC[illegible]	RHANLVE100006	NA	NA	NA		NA	NA	NA	NA
936	NA	ANLRHDTC[illegible]	RHANLVE100006	NA	NA	NA		NA	NA	NA	NA
937	NA	ANLRHDTC[illegible]	RHANLVE100006	NA	NA	NA		NA	NA	NA	NA
939	NA	ANLRHDTC[illegible]	RHANLVE100006	NA	NA	NA		NA	NA	NA	NA
940	NA	ANLRHDTC[illegible]	RHANLVE100006	NA	NA	NA		NA	NA	NA	NA
942	NA	ANLRHDTC[illegible]	RHANLVE100006	NA	NA	NA		NA	NA	NA	NA
943	NA	ANLRHDTC[illegible]	RHANLVE100006	NA	NA	NA		NA	NA	NA	NA

Signature of Site Project Manager

Irene Quintana
Printed Name

[illegible]
Date

015003

CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

Waste Stream: # AERHDM

Lot # 8

Container ID Number	Historical Container ID	NDA BDR or Radiological Characterization BDR (CM only)	VE BDR	RTR BDR	Solids Sampling BDR	Solids Analytical BDR	Lead Management/ Compact Yes	Permit Required Headspace Gas BDR			
								Sample	Analysis		
944	NA	NA	RHAWLVE100007	NA	NA	NA		NA	NA	NA	NA
945	NA	NA	RHAWLVE100007	NA	NA	NA		NA	NA	NA	NA
946	NA	NA	RHAWLVE100007	NA	NA	NA		NA	NA	NA	NA
947	NA	NA	RHAWLVE100007	NA	NA	NA		NA	NA	NA	NA
948	NA	NA	RHAWLVE100007	NA	NA	NA		NA	NA	NA	NA
949	NA	NA	RHAWLVE100007	NA	NA	NA		NA	NA	NA	NA
950	NA	NA	RHAWLVE100007	NA	NA	NA		NA	NA	NA	NA
951	NA	NA	RHAWLVE100007	NA	NA	NA		NA	NA	NA	NA

Signature of Site Project Manager

Hillari J. Neely
Printed Name

8/9/2010
Date

CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

Waste Stream: # AERHDM

Lot # 9

Container ID Number	Historical Container ID	NDA BDR or Radiological Characterization BDR (OH only)	VE BDR	RTR BDR	Solids Sampling BDR	Solids Analytical BDR	Lead Management/ Overpack Yes	Permit Required Headspace Gas BDR			
								Sample	Analysis		
900	NA	NA	RHANLVE100001	NA	NA	NA		[illegible]	ECL10012M	ECL100123	NA
923	NA	NA	RHANLVE100002	NA	NA	NA		[illegible]	ECL10012M	ECL100123	NA
930	NA	NA	RHANLVE100003	NA	NA	NA		[illegible]	ECL10012M	ECL100123	NA
939	NA	NA	RHANLVE100005	NA	NA	NA		[illegible]	ECL10012M	ECL100123	NA
938	NA	NA	RHANLVE100005	NA	NA	NA		[illegible]	ECL10012M	ECL100123	NA
941	NA	NA	RHANLVE100006	NA	NA	NA		[illegible]	ECL10012M	ECL100123	NA

Signature of Site Project Manager

Irene Quintana
Printed Name

6/11/2010
Date

9

1508

CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

Waste Stream: # AERHDM

Lot # 10

Container ID Number	Historical Container ID	NDA BDR or Radiological Characterization BDR (CH only)	VE BDR	RTR BDR	Solids Sampling BDR	Solids Analytical BDR	Lead Management/ Overpack Yes	Permit Required Headspace Gas BDR			
								Sample	Analysis		
RW18570*	NA	NA	RHAHLVE100004	NA	NA	NA		AN4BSB100002	BCL100144	BCL100145	NA
RW18571	NA	NA	RHAHLVE100004	NA	NA	NA		NA	NA	NA	NA
RW18572	NA	NA	RHAHLVE100004	NA	NA	NA		NA	NA	NA	NA
RW18573*	NA	NA	RHAHLVE100004	NA	NA	NA		AN4BSB100002	BCL100144	BCL100145	NA
RW18574	NA	NA	RHAHLVE100004	NA	NA	NA		NA	NA	NA	NA
RW18575	NA	NA	RHAHLVE100004	NA	NA	NA		NA	NA	NA	NA
RW18576*	NA	NA	RHAHLVE100004	NA	NA	NA		AN4BSB100002	BCL100144	BCL100145	NA
RW18580	NA	NA	RHAHLVE100004	NA	NA	NA		NA	NA	NA	NA
RW18581*	NA	NA	RHAHLVE100004	NA	NA	NA		NA	NA	NA	NA
RW18582	NA	NA	RHAHLVE100004	NA	NA	NA		AN4BSB100002	BCL100144	BCL100145	NA
RW18585	NA	NA	RHAHLVE100004	NA	NA	NA		NA	NA	NA	NA
RW18586	NA	NA	RHAHLVE100004	NA	NA	NA		AN4BSB100002	BCL100144	BCL100145	NA
								NA	NA	NA	NA
								NA	NA	NA	NA
								NA	NA	NA	NA

* HSG lot randomly selected for verifying the assignment of Hazardous Waste Numbers.

3 of 10

Signature of Site Project Manager

Irene Quintana
Printed Name

9/15/2010
Date

C15 002

CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

Waste Stream: # AERHDM

Lot # 11

Container ID Number	Historical Container ID	NDA BDR or Radiological Characterization BDR (CH only)	VE BDR	RTR BDR	Solids Sampling BDR	Solids Analytical BDR	Lead Management Overpack Yes	Permit Required Headspace Gas BDR			
								Sample	Analysis		
961	NA	ANLRHDTC10000	RHANLVE100011	NA	NA	NA		NA	NA	NA	NA
962	NA	ANLRHDTC10000	RHANLVE100011	NA	NA	NA		NA	NA	NA	NA
963	NA	ANLRHDTC10000	RHANLVE100011	NA	NA	NA		NA	NA	NA	NA
964	NA	ANLRHDTC10000	RHANLVE100011	NA	NA	NA		NA	NA	NA	NA
965	NA	ANLRHDTC10000	RHANLVE100011	NA	NA	NA		NA	NA	NA	NA
966	NA	ANLRHDTC10000	RHANLVE100011	NA	NA	NA		NA	NA	NA	NA
973	NA	ANLRHDTC10000	RHANLVE100011	NA	NA	NA		NA	NA	NA	NA
976	NA	ANLRHDTC10000	RHANLVE100011	NA	NA	NA		NA	NA	NA	NA
980	NA	ANLRHDTC10000	RHANLVE100010	NA	NA	NA		NA	NA	NA	NA
981	NA	ANLRHDTC10000	RHANLVE100010	NA	NA	NA		NA	NA	NA	NA
982	NA	ANLRHDTC10000	RHANLVE100010	NA	NA	NA		NA	NA	NA	NA
986	NA	ANLRHDTC10000	RHANLVE100010	NA	NA	NA		NA	NA	NA	NA
986	NA	ANLRHDTC10000	RHANLVE100010	NA	NA	NA		NA	NA	NA	NA
987	NA	ANLRHDTC10000	RHANLVE100010	NA	NA	NA		NA	NA	NA	NA

* HSG lot 1 randomly selected for verifying the assignment of Hazardous Waste Numbers.

\# Container rejected in VE process and can not be certified for shipment to WIPP.

Laura Nelson
Signature of Site Project Manager

Laura Nelson
Printed Name

10/6/2010
Date

CIS-003

CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

Waste Stream: # AERHDM

Lot # 12

Container ID Number	Historical Container ID	NDA BDR or Radiological Characterization BDR (CH only)	VE BDR	RTR BDR	Solids Sampling BDR	Solids Analytical BDR	Lost Management/ Overpack Yes	Permit Required Headspace Gas BDR			
								Sample	Analysis		
931	NA	ANL/RHDTC10010	RHANLVE100012	NA	NA	NA		NA	NA	NA	NA
932	NA	ANL/RHDTC10010	RHANLVE100012	NA	NA	NA		NA	NA	NA	NA
933	NA	ANL/RHDTC10010	RHANLVE100012	NA	NA	NA		NA	NA	NA	NA
967	NA	ANL/RHDTC10010	RHANLVE100012	NA	NA	NA		NA	NA	NA	NA
968	NA	ANL/RHDTC10010	RHANLVE100012	NA	NA	NA		NA	NA	NA	NA
969	NA	ANL/RHDTC10010	RHANLVE100012	NA	NA	NA		NA	NA	NA	NA
970	NA	ANL/RHDTC10010	RHANLVE100012	NA	NA	NA		NA	NA	NA	NA
971	NA	ANL/RHDTC10010	RHANLVE100012	NA	NA	NA		NA	NA	NA	NA
972	NA	ANL/RHDTC10010	RHANLVE100012	NA	NA	NA		NA	NA	NA	NA
974	NA	ANL/RHDTC10010	RHANLVE100012	NA	NA	NA		NA	NA	NA	NA
977	NA	ANL/RHDTC10010	RHANLVE100012	NA	NA	NA		NA	NA	NA	NA
978	NA	ANL/RHDTC10010	RHANLVE100012	NA	NA	NA		NA	NA	NA	NA

* H&G lot 1 randomly selected for verifying the assignment of Hazardous Waste Numbers.

Container rejected in VE process and can not be certified for shipment to WIPP.

Laura Nelson
Signature of Site Project Manager

Laura Nelson
Printed Name

10/18/2010
Date

1.15-003

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CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

Waste Stream: # AERHDM

Lot # 13

Container ID Number	Historical Container ID	NDA BDR or Radiological Characterization BDR (CH only)	VE BDR	RTR BDR	Solids Sampling BDR	Solids Analytical BDR	Lead Management/ Overpack Yes	Permit Required Headspace Gas BDR			
								Sample	Analysis		
RW18903	NA	NA	RHANLVE100013	NA	NA	NA		NA	NA	NA	NA
RW18906	NA	NA	RHANLVE100013	NA	NA	NA		NA	NA	NA	NA
RW18910	NA	NA	RHANLVE100013	NA	NA	NA		NA	NA	NA	NA
984	NA	NA	RHANLVE100010	NA	NA	NA		NA	NA	NA	NA

* HSG lot 1 randomly selected for verifying the assignment of Hazardous Waste Numbers.

Container rejected in VE process and can not be certified for shipment to WIPP.

Laura Nelson
Signature of Site Project Manager

Laura Nelson
Printed Name

10/22/2010
Date

CIS-003

CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

Waste Stream: # AERHDM

Lot # 14

Container ID Number	Historical Container ID	NDA BDR or Radiological Characterization BDR (CH only)	VE BDR	RTR BDR	Solids Sampling BDR	Solids Analytical BDR	Lead Management Overpack Yes	Permit Required Headspace Gas BDR			
								Sample	Analysis		
989	NA	AHLRHDTC10912	RHANLVE100914	NA	NA	NA		NA	NA	NA	NA
990	NA	AHLRHDTC10912	RHANLVE100914	NA	NA	NA		NA	NA	NA	NA
992	NA	AHLRHDTC10912	RHANLVE100914	NA	NA	NA		NA	NA	NA	NA
993	NA	AHLRHDTC10912	RHANLVE100914	NA	NA	NA		NA	NA	NA	NA
994	NA	AHLRHDTC10912	RHANLVE100914	NA	NA	NA		NA	NA	NA	NA
RW10911	NA	AHLRHDTC10913	RHANLVE100915	NA	NA	NA		NA	NA	NA	NA
RW10912	NA	AHLRHDTC10913	RHANLVE100915	NA	NA	NA		NA	NA	NA	NA
RW10914	NA	AHLRHDTC10913	RHANLVE100915	NA	NA	NA		NA	NA	NA	NA

* HSG lot 1 randomly selected for verifying the assignment of Hazardous Waste Numbers.

\# Container rejected in VE process and can not be certified for shipment to WIPP.

Laura Nelson
Signature of Site Project Manager

Laura Nelson
Printed Name

11/3/2010
Date

CS.003

CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

Waste Stream: # AERHDM

Lot # 15

Container ID Number	Historical Container ID	NDA BDR or Radiological Characterization BDR (OH only)	VE BDR	RTR BDR	Solids Sampling BDR	Solids Analytical BDR	Lead Management/ Overpack Yes	Permit Required Headspace Gas BDR			
								Sample	Analysis		
958	NA	ANLRHDTC10010	RHANLVE100012	NA	NA	NA		ANHBGS100009	ECL100990	ECL100990M	NA
973	NA	ANLRHDTC10010	RHANLVE100012	NA	NA	NA		ANHBGS100009	ECL100990	ECL100990M	NA
966	NA	ANLRHDTC10009	RHANLVE100010	NA	NA	NA		ANHBGS100009	ECL100990	ECL100990M	NA
967	NA	ANLRHDTC10009	RHANLVE100011	NA	NA	NA		ANHBGS100009	ECL100990	ECL100990M	NA
963	NA	ANLRHDTC10009	RHANLVE100010	NA	NA	NA		ANHBGS100009	ECL100990	ECL100990M	NA
RW16907	NA	ANLRHDTC10011	RHANLVE100013	NA	NA	NA		ANHBGS100009	ECL100990	ECL100990M	NA
RW16909	NA	ANLRHDTC10011	RHANLVE100013	NA	NA	NA		ANHBGS100009	ECL100990	ECL100990M	NA

Signature of Site Project Manager

Irene Quintana
Printed Name

11/7/2010
Date

CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

Waste Stream: # AERHOM

Lot # 16

Container ID Number	Historical Container ID	NDA BDR or Radiological Characterization BDR (CH only)	VE BDR	RTR BDR	Solids Sampling BDR	Solids Analytical BDR	Lead Management Overpack Yes	Permit Required Headspace Gas BDR			
								Sample	Analyst		
RW18915	NA	ANLWHDTC10014	RWANLVE100915	NA	NA	NA		NA	NA	NA	NA

Laura Nelson
Signature of Site Project Manager

Laura Nelson
Printed Name

11/10/2010
Date

CIS 003

CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

Waste Stream: # AERHDM

Lot # 17

Container ID Number	Historical Container ID	NDA BDR or Radiological Characterization BDR (CH only)	VE BDR	RTR BDR	Solids Sampling BDR	Solids Analytical BDR	Lead Management/ Overpack Yes	Permit Required Headspace Gas BDR			
								Sample	Analyte		
995	NA	ANURHDTC11001	RHANLVE100017	NA	NA	NA		NA	NA	NA	NA
996	NA	ANURHDTC11001	RHANLVE100017	NA	NA	NA		NA	NA	NA	NA
999	NA	ANURHDTC11001	RHANLVE100017	NA	NA	NA		NA	NA	NA	NA
1000	NA	ANURHDTC11001	RHANLVE100017	NA	NA	NA		NA	NA	NA	NA
1001	NA	ANURHDTC11001	RHANLVE100017	NA	NA	NA		NA	NA	NA	NA
1017	NA	ANURHDTC11002	RHANLVE110002	NA	NA	NA		NA	NA	NA	NA
1018	NA	ANURHDTC11002	RHANLVE110002	NA	NA	NA		NA	NA	NA	NA
1019	NA	ANURHDTC11002	RHANLVE110002	NA	NA	NA		NA	NA	NA	NA
1020	NA	ANURHDTC11002	RHANLVE110002	NA	NA	NA		NA	NA	NA	NA
1021	NA	ANURHDTC11002	RHANLVE110002	NA	NA	NA		NA	NA	NA	NA
1022	NA	ANURHDTC11002	RHANLVE110002	NA	NA	NA		NA	NA	NA	NA
1023	NA	ANURHDTC11002	RHANLVE110002	NA	NA	NA		NA	NA	NA	NA
1024	NA	ANURHDTC11002	RHANLVE110002	NA	NA	NA		NA	NA	NA	NA
1025	NA	ANURHDTC11002	RHANLVE110002	NA	NA	NA		NA	NA	NA	NA
1026	NA	ANURHDTC11002	RHANLVE110002	NA	NA	NA		NA	NA	NA	NA
RW18916	NA	RHANLDTC11003	RHANLVE110001	NA	NA	NA		NA	NA	NA	NA
RW18917	NA	RHANLDTC11003	RHANLVE110001	NA	NA	NA		NA	NA	NA	NA
RW18918	NA	RHANLDTC11003	RHANLVE110001	NA	NA	NA		NA	NA	NA	NA
RW18919	NA	RHANLDTC11003	RHANLVE110001	NA	NA	NA		NA	NA	NA	NA
RW48249	NA	RHANLDTC11003	RHANLVE110001	NA	NA	NA		NA	NA	NA	NA
RW48250	NA	RHANLDTC11003	RHANLVE110001	NA	NA	NA		NA	NA	NA	NA

* HSG tot 1 randomly selected for verifying the assignment of Hazardous Waste Numbers.

Container rejected in VE process and can not be certified for shipment to WIPP.

Laura Nelson
Signature of Site Project Manager

Laura Nelson
Printed Name

3/14/2011
Date

CAS-003

CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

Waste Stream: # AERHDM

Lot # 18

Container ID Number	Historical Container ID	NDA BDR or Radiological Characterization BDR (CH only)	VE BDR	RTR BDR	Solids Sampling BDR	Solids Analytical BDR	Lost Management/ Overpack: Yes	Permit Required Headspace Gas BDR			
								Sample	Analysis		
952	NA	NA	RHANLVE100008	NA	NA	NA		NA	NA	NA	NA
953	NA	NA	RHANLVE100008	NA	NA	NA		NA	NA	NA	NA
954	NA	NA	RHANLVE100008	NA	NA	NA		NA	NA	NA	NA
955	NA	NA	RHANLVE100008	NA	NA	NA		NA	NA	NA	NA
956	NA	NA	RHANLVE100008	NA	NA	NA		NA	NA	NA	NA
1002	NA	NA	RHANLVE100018	NA	NA	NA		NA	NA	NA	NA
1004	NA	NA	RHANLVE110005	NA	NA	NA		NA	NA	NA	NA
1008	NA	NA	RHANLVE110005	NA	NA	NA		NA	NA	NA	NA
1009	NA	NA	RHANLVE110005	NA	NA	NA		NA	NA	NA	NA
1011	NA	NA	RHANLVE110005	NA	NA	NA		NA	NA	NA	NA

* HSG lot 1 randomly selected for verifying the assignment of Hazardous Waste Numbers.
# Container rejected in VE process and can not be certified for shipment to WIPP.

Laura Nelson
Signature of Site Project Manager

Laura Nelson
Printed Name

4/11/2011
Date

CIS-003 4-15-11

CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

Waste Stream: # AERHDM

Lot # 19

Container ID Number	Historical Container ID	NDA BDR or Radiological Characterization BDR (CH only)	VE BDR	RTR BDR	Solids Sampling BDR	Solids Analytical BDR	Lead Management Overpack Yes	Permit Required Headspace Gas BDR			
								Sample	Analysis		
968	NA	NA	RHANLVE110006	NA	NA	NA		NA	NA	NA	NA
979	NA	NA	RHANLVE110006	NA	NA	NA		NA	NA	NA	NA
1008	NA	NA	RHANLVE110006	NA	NA	NA		NA	NA	NA	NA
1016	NA	NA	RHANLVE110006	NA	NA	NA		NA	NA	NA	NA
1028	NA	NA	RHANLVE110006	NA	NA	NA		NA	NA	NA	NA
1032	NA	NA	RHANLVE110006	NA	NA	NA		NA	NA	NA	NA
1033	NA	NA	RHANLVE110006	NA	NA	NA		NA	NA	NA	NA
1034	NA	NA	RHANLVE110006	NA	NA	NA		NA	NA	NA	NA
1036	NA	NA	RHANLVE110006	NA	NA	NA		NA	NA	NA	NA

* HSG lot 1 randomly selected for verifying the assignment of Hazardous Waste Numbers.

Container rejected in VE process and can not be certified for shipment to WIPP.

Laura Nelson
Signature of Site Project Manager

Laura Nelson
Printed Name

4/18/2011
Date

CB-003

CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

Waste Stream: # AERHDM

Lot # 20

Container ID Number	Historical Container ID	NDA BDR or Radiological Characterization BDR (QH only)	VE BDR	RTA BDR	Solids Sampling BDR	Solids Analytical BDR	Lens Management/ Outgassing Yes	Permit Required Headspace Gas BDR			
								Sample	Analysis		
1038	NA	NA	RHAWLVE110003	NA	NA	NA		NA	NA	NA	NA
1039	NA	NA	RHAWLVE110003	NA	NA	NA		NA	NA	NA	NA
1040	NA	NA	RHAWLVE110003	NA	NA	NA		NA	NA	NA	NA
1041	NA	NA	RHAWLVE110003	NA	NA	NA		NA	NA	NA	NA
1042	NA	NA	RHAWLVE110003	NA	NA	NA		NA	NA	NA	NA
1043	NA	NA	RHAWLVE110003	NA	NA	NA		NA	NA	NA	NA
1044	NA	NA	RHAWLVE110003	NA	NA	NA		NA	NA	NA	NA
1045	NA	NA	RHAWLVE110003	NA	NA	NA		NA	NA	NA	NA
1046	NA	NA	RHAWLVE110003	NA	NA	NA		NA	NA	NA	NA
1047	NA	NA	RHAWLVE110003	NA	NA	NA		NA	NA	NA	NA
1048	NA	NA	RHAWLVE110003	NA	NA	NA		NA	NA	NA	NA

* HBG lot 1 randomly selected for verifying the assignment of Hazardous Waste Numbers.
# Container rejected in VE process and can not be certified for shipment to WIPP.

Laura Nelson
Signature of Site Project Manager

Laura Nelson
Printed Name

4/20/2011
Date

20

CS 003

CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

Waste Stream: # AERHDM

Lot # 21

Container ID Number	Historical Container ID	NDA BDR or Radiological Characterization BDR (CH only)	VE BDR	RTR BDR	Solids Sampling BDR	Solids Analytical BDR	Lead Management/ Overpack Yes	Permit Required Headspace Gas BDR			
								Sample	Analysis		
RW48251	NA	NA	RHANLVE110004	NA	NA	NA		NA	NA	NA	NA
RW48252	NA	NA	RHANLVE110004	NA	NA	NA		NA	NA	NA	NA
RW48253	NA	NA	RHANLVE110004	NA	NA	NA		NA	NA	NA	NA
RW48254	NA	NA	RHANLVE110004	NA	NA	NA		NA	NA	NA	NA
RW48255	NA	NA	RHANLVE110004	NA	NA	NA		NA	NA	NA	NA
RW48256	NA	NA	RHANLVE110004	NA	NA	NA		NA	NA	NA	NA

* HSG lot 1 randomly selected for verifying the assignment of Hazardous Waste Numbers.
a Container rejected in VE process and can not be certified for shipment to WIPP.

Laura Nelson
Signature of Site Project Manager

Laura Nelson
Printed Name

6/1/2011
Date

CIS-004

CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

Waste Stream: # AERHDM

Lot # 22

Container ID Number	Historical Container ID	NDA BDR or Radiological Characterization BDR (CH only)	VE BDR	RTR BDR	Solids Sampling BDR	Solids Analytical BDR	Lead Management/ Overpack Yes	Permit Required Headspace Gas BDR			
								Sample	Analysis		
1008	NA	NA	ANLRHVE11008	NA	NA	NA		NA	NA	NA	NA
1007	NA	NA	ANLRHVE11008	NA	NA	NA		NA	NA	NA	NA
1010	NA	NA	ANLRHVE11008	NA	NA	NA		NA	NA	NA	NA
1030	NA	NA	ANLRHVE11008	NA	NA	NA		NA	NA	NA	NA
1006	NA	NA	ANLRHVE11008	NA	NA	NA		NA	NA	NA	NA
1012	NA	NA	ANLRHVE11008	NA	NA	NA		NA	NA	NA	NA
1013	NA	NA	ANLRHVE11008	NA	NA	NA		NA	NA	NA	NA
1029	NA	NA	ANLRHVE11008	NA	NA	NA		NA	NA	NA	NA

* HSG lot 1 randomly selected for verifying the assignment of Hazardous Waste Numbers.

Container rejected in VE process and can not be certified for shipment to WIPP.

Laura Nelson
Signature of Site Project Manager

Laura Nelson
Printed Name

7/14/2011
Date

CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

Waste Stream: # AERHDM

Lot # 23

Container ID Number	Historical Container ID	NDA BDR or Radiological Characterization BDR (CH only)	VE BDR	RTR BDR	Solids Sampling BDR	Solids Analytical BDR	Load Management/ Overpack Yes	Permit Required Headspace Gas BDR			
								Sample	Analysis		
1058	NA	NA	ANLRHVE11013	NA	NA	NA		NA	NA	NA	NA
1014	NA	NA	RHANLVE110007	NA	NA	NA		NA	NA	NA	NA
1037	NA	NA	RHANLVE110007	NA	NA	NA		NA	NA	NA	NA
RW48257	NA	NA	ANLRHVE11012	NA	NA	NA		NA	NA	NA	NA
RW48258	NA	NA	ANLRHVE11012	NA	NA	NA		NA	NA	NA	NA

* HSG lot 1 randomly selected for verifying the assignment of Hazardous Waste Numbers.

Container rejected in VE process and can not be certified for shipment to WIPP.

Laura Nelson
Signature of Site Project Manager

Laura Nelson
Printed Name

7/18/2011
Date

CIS-004

CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

Waste Stream: # AERHDM

Lot # 24

Container ID Number	Historical Container ID	NDA BDR or Radiological Characterization BDR (CH only)	VE BDR	RTR BDR	Solids Sampling BDR	Solids Analytical BDR	Lead Management/ Overpack Yes	Permit Required Headspace Gas BDR			
								Sample	Analysis		
RW48261	NA	NA	ANLRHVE11017	NA	NA	NA		NA	NA	NA	NA
RW48262	NA	NA	ANLRHVE11017	NA	NA	NA		NA	NA	NA	NA
RW48263	NA	NA	ANLRHVE11017	NA	NA	NA		NA	NA	NA	NA
RW48267	NA	NA	ANLRHVE11017	NA	NA	NA		NA	NA	NA	NA
RW48268	NA	NA	ANLRHVE11017	NA	NA	NA		NA	NA	NA	NA
RW49613	NA	NA	ANLRHVE11017	NA	NA	NA		NA	NA	NA	NA
RW49614	NA	NA	ANLRHVE11017	NA	NA	NA		NA	NA	NA	NA
RW49615	NA	NA	ANLRHVE11017	NA	NA	NA		NA	NA	NA	NA
RW49616	NA	NA	ANLRHVE11017	NA	NA	NA		NA	NA	NA	NA
RW49617	NA	NA	ANLRHVE11017	NA	NA	NA		NA	NA	NA	NA

* HSG lot 1 randomly selected for verifying the assignment of Hazardous Waste Numbers.

Container rejected in VE process and can not be certified for shipment to WIPP.

Laura Nelson
Signature of Site Project Manager

Laura Nelson
Printed Name

10/6/2011
Date

CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

Waste Stream: # AERHDM

Lot # 25

Container ID Number	Historical Container ID	NDA BDR or Radiological Characterization BDR (CH only)	VE BDR	RTR BDR	Solids Sampling BDR	Solids Analytical BDR	Load Management/ Overpack Yes	Permit Required Headspace Gas BDR			
								Sample	Analysis		
1027	NA	NA	ANLRHVE11014	NA	NA	NA		NA	NA	NA	NA
1050	NA	NA	ANLRHVE11014	NA	NA	NA		NA	NA	NA	NA
1051	NA	NA	ANLRHVE11014	NA	NA	NA		NA	NA	NA	NA
1054	NA	NA	ANLRHVE11014	NA	NA	NA		NA	NA	NA	NA

* HSG lot 1 randomly selected for verifying the assignment of Hazardous Waste Numbers.

Container rejected in VE process and can not be certified for shipment to WIPP

Laura Nelson
Signature of Site Project Manager

Laura Nelson
Printed Name

10/10/2011
Date

US-004

CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

Waste Stream: # AERHDM

Lot # 26

Container ID Number	Historical Container ID	NDA BDR or Radiological Characterization BDR (CH only)	VE BDR	RTR BDR	Solids Sampling BDR	Solids Analytical BDR	Load Management/ Overpack Yes	Permit Required Headspace Gas BDR			
								Sample	Analysis		
1055	NA	NA	ANLRHVE11018	NA	NA	NA		NA	NA	NA	NA
1056	NA	NA	ANLRHVE11018	NA	NA	NA		NA	NA	NA	NA
1057	NA	NA	ANLRHVE11018	NA	NA	NA		NA	NA	NA	NA
1060	NA	NA	ANLRHVE11018	NA	NA	NA		NA	NA	NA	NA
1062	NA	NA	ANLRHVE11018	NA	NA	NA		NA	NA	NA	NA
1064	NA	NA	ANLRHVE11018	NA	NA	NA		NA	NA	NA	NA

* HSG lot 1 randomly selected for verifying the assignment of Hazardous Waste Numbers.

Container rejected in VE process and can not be certified for shipment to WIPP

Laura Nelson
Signature of Site Project Manager

Laura Nelson
Printed Name

10/10/2011
Date

CS-004

CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

Waste Stream: # AERHDM

Lot # 27

Container ID Number	Historical Container ID	NDA BDR or Radiological Characterization BDR (CH only)	VE BDR	RTR BDR	Solids Sampling BDR	Solids Analytical BDR	Load Management/ Overpack Yes	Permit Required Headspace Gas BDR			
								Sample	Analysis		
1015	NA	NA	ANLRHVE11011	NA	NA	NA		NA	NA	NA	NA
1069	NA	NA	ANLRHVE11019	NA	NA	NA		NA	NA	NA	NA
1069	NA	NA	ANLRHVE11019	NA	NA	NA		NA	NA	NA	NA
1070	NA	NA	ANLRHVE11019	NA	NA	NA		NA	NA	NA	NA
1071	NA	NA	ANLRHVE11019	NA	NA	NA		NA	NA	NA	NA
1073	NA	NA	ANLRHVE11019	NA	NA	NA		NA	NA	NA	NA

* HSG lot 1 randomly selected for verifying the assignment of Hazardous Waste Numbers.

Container rejected in VE process and can not be certified for shipment to WIPP

Laura Nelson
Signature of Site Project Manager

Laura Nelson
Printed Name

10/13/2011
Date

CIS-004

CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

Waste Stream: # AERHDM

Lot # 28

Container ID Number	Historical Container ID	NDA BDR or Radiological Characterization BDR (CH only)	VE BDR	RTR BDR	Solids Sampling BDR	Solids Analytical BDR	Load Management/ Overpack Yes	Permit Required Headspace Gas BDR			
								Sample	Analysis		
1035	NA	NA	ANLRHVE11020	NA	NA	NA		NA	NA	NA	NA
1065	NA	NA	ANLRHVE11020	NA	NA	NA		NA	NA	NA	NA

* HSG lot 1 randomly selected for verifying the assignment of Hazardous Waste Numbers.

Container rejected in VE process and can not be certified for shipment to WIPP.

Laura Nelson
Signature of Site Project Manager

Laura Nelson
Printed Name

10/20/2011
Date

U15-004

CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

Waste Stream: # AERHDM

Lot # 29

Container ID Number	Historical Container ID	NDA BDR or Radiological Characterization BDR (CH only)	VE BDR	RTR BDR	Solids Sampling BDR	Solids Analytical BDR	Load Management/ Overpack Yes	Permit Required Headspace Gas BDR			
								Sample	Analysis		
1063	NA	NA	AN.LRHVE11020	NA	NA	NA		NA	NA	NA	NA
1066	NA	NA	AN.LRHVE11020	NA	NA	NA		NA	NA	NA	NA
1061	NA	NA	AN.LRHVE11021	NA	NA	NA		NA	NA	NA	NA
1067	NA	NA	AN.LRHVE11021	NA	NA	NA		NA	NA	NA	NA
1068	NA	NA	AN.LRHVE11021	NA	NA	NA		NA	NA	NA	NA

* HSG lot 1 randomly selected for verifying the assignment of Hazardous Waste Numbers.

Container rejected in VE process and can not be certified for shipment to WIPP.

Laura Nelson
Signature of Site Project Manager

Laura Nelson
Printed Name

10/26/2011
Date

C15-004

CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

Waste Stream: # AERHDM

Lot # 30

Container ID Number	Historical Container ID	NDA BDR or Radiological Characterization BDR (CH only)	VE BDR	RTR BDR	Solids Sampling BDR	Solids Analytical BDR	Load Management/ Overpack Yes	Permit Required Headspace Gas BDR			
								Sample	Analysis		
RW18875	NA	CCP-AK-ANLE-501	ANLRHVE11010	NA	NA	NA		NA	NA	NA	NA
RW18876	NA	CCP-AK-ANLE-501	ANLRHVE11010	NA	NA	NA		NA	NA	NA	NA
RW18877	NA	CCP-AK-ANLE-501	ANLRHVE11010	NA	NA	NA		NA	NA	NA	NA
RW18878	NA	CCP-AK-ANLE-501	ANLRHVE11010	NA	NA	NA		NA	NA	NA	NA
RW18879	NA	CCP-AK-ANLE-501	ANLRHVE11010	NA	NA	NA		NA	NA	NA	NA
RW18880	NA	CCP-AK-ANLE-501	ANLRHVE11010	NA	NA	NA		NA	NA	NA	NA
RW18881	NA	CCP-AK-ANLE-501	ANLRHVE11010	NA	NA	NA		ANLHSGS100002	ECL10014G	ECL10014M	NA
RW18904	NA	CCP-AK-ANLE-501	ANLRHVE11010	NA	NA	NA		NA	NA	NA	NA

* HSG lot 1 randomly selected for verifying the assignment of Hazardous Waste Numbers.

\# Container rejected in VE process and can not be certified for shipment to WIPP.

Laura Nelson
Signature of Site Project Manager

Laura Nelson
Printed Name

5/21/12
Date

015-004

CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

Waste Stream: # AERHDM

Lot # 31

Container ID Number	Historical Container ID	NDA BDR or Radiological Characterization BDR (CH only)	VE BDR	RTR BDR	Solids Sampling BDR	Solids Analytical BDR	Load Management/ Overpack Yes	Permit Required Headspace Gas BDR			
								Sample	Analysis		
1076	NA	NA	ANLRHVE12003	NA	NA	NA		NA	NA	NA	NA
1077	NA	NA	ANLRHVE12003	NA	NA	NA		NA	NA	NA	NA
1078	NA	N A	ANLRHVE12003	NA	NA	NA		NA	NA	NA	NA
1084	NA	NA	ANLRHVE12003	NA	NA	NA		NA	NA	NA	NA
1085	NA	NA	ANLRHVE12003	NA	NA	NA		NA	NA	NA	NA
1090	NA	NA	ANLRHVE12006	NA	NA	NA		NA	NA	NA	NA
1096	NA	NA	ANLRHVE12006	NA	NA	NA		NA	NA	NA	NA
1074	NA	NA	ANLRHVE12004	NA	NA	NA		NA	NA	NA	NA
1075	NA	NA	ANLRHVE12004	NA	NA	NA		NA	NA	NA	NA
1080	NA	NA	ANLRHVE12004	NA	NA	NA		NA	NA	NA	NA
1081	NA	NA	ANLRHVE12004	NA	NA	NA		NA	NA	NA	NA
1094	NA	NA	ANLRHVE12004	NA	NA	NA		NA	NA	NA	NA

Container rejected in VE process and can not be certified for shipment to WIPP.

Laura Nelson
Signature of Site Project Manager

Laura Nelson
Printed Name

4/10/12
Date

CIS-004

CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

Waste Stream: # AERHDM

Lot # 32

Container ID Number	Historical Container ID	NDA BDR or Radiological Characterization BDR (CH only)	VE BDR	RTR BDR	Solids Sampling BDR	Solids Analytical BDR	Lead Management/ Overpack Yes	Permit Required Headspace Gas BDR			
								Sample	Analysis		
1072	NA	NA	ANLRHVE12005	NA	NA	NA		NA	NA	NA	NA
1086	NA	NA	ANLRHVE12005	NA	NA	NA		NA	NA	NA	NA
1087	NA	NA	ANLRHVE12005	NA	NA	NA		NA	NA	NA	NA
1089	NA	NA	ANLRHVE12005	NA	NA	NA		NA	NA	NA	NA
1091	NA	NA	ANLRHVE12005	NA	NA	NA		NA	NA	NA	NA
1093	NA	NA	ANLRHVE12005	NA	NA	NA		NA	NA	NA	NA
1095	NA	NA	ANLRHVE12005	NA	NA	NA		NA	NA	NA	NA
1097	NA	NA	ANLRHVE12005	NA	NA	NA		NA	NA	NA	NA
1099	NA	NA	ANLRHVE12005	NA	NA	NA		NA	NA	NA	NA
1100	NA	NA	ANLRHVE12009	NA	NA	NA		NA	NA	NA	NA
1102	NA	NA	ANLRHVE12009	NA	NA	NA		NA	NA	NA	NA
1104	NA	NA	ANLRHVE12009	NA	NA	NA		NA	NA	NA	NA
1106	NA	NA	ANLRHVE12009	NA	NA	NA		NA	NA	NA	NA

Laura Nelson
Signature of Site Project Manager

Laura Nelson
Printed Name

4/10/12
Date

32

05-004

CCP-TP-002 Rev. 24
Effective Date: 12/28/11
CCP Reporting of DQO's and Reporting Characterization Data

33

CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

Waste Stream: # AERHDM

Lot # 33

Container ID Number	Historical Container ID	NDA BDR or Radiological Characterization BDR (CH only)	VE BDR	RTR BDR	Solids Sampling BDR	Solids Analytical BDR	Lead Management/ Overpack Yes	Permit Required Headspace Gas BDR			
								Sample	Analysis		
1079	NA	NA	ANLRHVE12002	NA	NA	NA		NA	NA	NA	NA
1083	NA	NA	ANLRHVE12002	NA	NA	NA		NA	NA	NA	NA
1103	NA	NA	ANLRHVE12012	NA	NA	NA		NA	NA	NA	NA
1105	NA	NA	ANLRHVE12012	NA	NA	NA		NA	NA	NA	NA
1107	NA	NA	ANLRHVE12012	NA	NA	NA		NA	NA	NA	NA
1111	NA	NA	ANLRHVE12012	NA	NA	NA		NA	NA	NA	NA
1113	NA	NA	ANLRHVE12012	NA	NA	NA		NA	NA	NA	NA
1114	NA	NA	ANLRHVE12012	NA	NA	NA		NA	NA	NA	NA
1115	NA	NA	ANLRHVE12012	NA	NA	NA		NA	NA	NA	NA
1116	NA	NA	ANLRHVE12013	NA	NA	NA		NA	NA	NA	NA
1117	NA	NA	ANLRHVE12013	NA	NA	NA		NA	NA	NA	NA
1118	NA	NA	ANLRHVE12013	NA	NA	NA		NA	NA	NA	NA
1119	NA	NA	ANLRHVE12013	NA	NA	NA		NA	NA	NA	NA

Laura Nelson
Signature of Site Project Manager

Laura Nelson
Printed Name

5/8/12
Date

CIS-004

CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

Waste Stream: # AERHDM

Lot # 34

Container ID Number	Historical Container ID	NDA BDR or Radiological Characterization BDR (CH only)	VE BDR	RTR BDR	Solids Sampling BDR	Solids Analytical BDR	Load Management/ Overpack Yes	Permit Required Headspace Gas BDR			
								Sample	Analysis		
RW49818	NA	NA	ANLRHVE12007	NA	NA	NA		ANHSG1201	ECL12014M	NA	NA
RW18913	NA	NA	RHANLVE100015	NA	NA	NA		ANHSG1201	ECL12014M	NA	NA
RW49822	NA	NA	ANLRHVE12007	NA	NA	NA		ANHSG1201	ECL12014M	NA	NA
RW49820	NA	NA	ANLRHVE12007	NA	NA	NA		ANHSG1201	ECL12014M	NA	NA
RW49821	NA	NA	ANLRHVE12007	NA	NA	NA		ANHSG1201	ECL12014M	NA	NA
RW49819	NA	NA	ANLRHVE12007	NA	NA	NA		ANHSG1201	ECL12014M	NA	NA
RW49893	NA	NA	ANLRHVE12007	NA	NA	NA		ANHSG1201	ECL12014M	NA	NA

Laura Nelson
Signature of Site Project Manager

Laura Nelson
Printed Name

5/23/12
Date

CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

Waste Stream: # AERHDM

Lot # 35

Container ID Number	Historical Container ID	NDA BDR or Radiological Characterization BDR (CH only)	VE BDR	RTR BDR	Solids Sampling BDR	Solids Analytical BDR	Load Management/ Overpack Yes	Permit Required Headspace Gas BDR			
								Sample	Analysis		
1049	NA	ANLRHDTC11004	RHANLVE110003	NA	NA	NA		ANHSG1202	ECL12017M	NA	NA
1031	NA	ANLE-RH-50-7	RHANLVE110006	NA	NA	NA		ANHSG1202	ECL12017M	NA	NA
1120	NA	ANLRHDTC12006	ANLRHVE12013	NA	NA	NA		ANHSG1202	ECL12017M	NA	NA
999	NA	ANLRHDTC11001	RHANLVE100017	NA	NA	NA		ANHSG1202	ECL12017M	NA	NA
991	NA	ANLRHDTC10012	RHANLVE100014	NA	NA	NA		ANHSG1202	ECL12017M	NA	NA
1092	NA	ANLE-RH-50-46	ANLRHVE12006	NA	NA	NA		ANHSG1202	ECL12017M	NA	NA
1082	NA	ANLE-RH-50-53	ANLRHVE12004	NA	NA	NA		ANHSG1202	ECL12017M	NA	NA
1053	NA	ANLE-RH-50-56	ANLRHVE11014	NA	NA	NA		ANHSG1202	ECL12017M	NA	NA
997	NA	ANLRHDTC11001	RHANLVE100017	NA	NA	NA		ANHSG1202	ECL12017M	NA	NA
1052	NA	ANLE-RH-50-55	ANLRHVE11014	NA	NA	NA		ANHSG1202	ECL12017M	NA	NA

Laura Nelson
Signature of Site Project Manager

Laura Nelson
Printed Name

7/2/2012
Date

55

OS-003

CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

Waste Stream: # AERHDM

Lot # 36

Container ID Number	Historical Container ID	NDA BDR or Radiological Characterization BDR (CH only)	VE BDR	RTR BDR	Solids Sampling BDR	Solids Analytical BDR	Load Management/ Overpack Yes	Permit Required Headspace Gas BDR			
								Sample	Analysis		
RW18883	NA	NA	ANLRHVE11016	NA	NA	NA		NA	NA	NA	NA
RW18884	NA	NA	ANLRHVE11016	NA	NA	NA		NA	NA	NA	NA
RW18885	NA	NA	ANLRHVE11016	NA	NA	NA		NA	NA	NA	NA
RW18886	NA	NA	ANLRHVE11016	NA	NA	NA		NA	NA	NA	NA
RW18896	NA	NA	ANLRHVE11015	NA	NA	NA		ANHSGS100002	ECL10014M	ECL10014G	NA
RW18897	NA	NA	ANLRHVE11015	NA	NA	NA		NA	NA	NA	NA
RW18882	NA	NA	ANLRHVE11016	NA	NA	NA		NA	NA	NA	NA
RW18887	NA	NA	ANLRHVE11015	NA	NA	NA		NA	NA	NA	NA
RW18901	NA	NA	ANLRHVE11015	NA	NA	NA		NA	NA	NA	NA
RW18902	NA	NA	ANLRHVE11015	NA	NA	NA		NA	NA	NA	NA
RW18898	NA	NA	ANLRHVE11015	NA	NA	NA		NA	NA	NA	NA
RW18893	NA	NA	ANLRHVE11015	NA	NA	NA		NA	NA	NA	NA
RW18894	NA	NA	ANLRHVE11015	NA	NA	NA		ANHSGS100002	ECL10014M	ECL10014G	NA
RW18895	NA	NA	ANLRHVE11015	NA	NA	NA		NA	NA	NA	NA
RW18899	NA	NA	ANLRHVE11015	NA	NA	NA		NA	NA	NA	NA
RW18900	NA	NA	ANLRHVE11015	NA	NA	NA		NA	NA	NA	NA
								ANHSGS100003	ECL10033M	ECL10033G	NA

Laura Nelson
Signature of Site Project Manager

Laura Nelson
Printed Name

4/10/2012
Date

CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

Waste Stream: # AERHDM

Lot # 37

Container ID Number	Historical Container ID	NDA BDR or Radiological Characterization BDR (CH only)	VE BDR	RTR BDR	Solids Sampling BDR	Solids Analytical BDR	Load Management/ Overpack Yes	Permit Required Headspace Gas BDR			
								Sample	Analysis		
1121	NA	ANLRHDTC12007	ANLRHVE12014	NA	NA	NA		NA	NA	NA	NA
1122	NA	ANLRHDTC12007	ANLRHVE12014	NA	NA	NA		NA	NA	NA	NA
1123	NA	ANLRHDTC12007	ANLRHVE12014	NA	NA	NA		NA	NA	NA	NA
1124	NA	ANLRHDTC12007	ANLRHVE12014	NA	NA	NA		NA	NA	NA	NA
1125	NA	ANLRHDTC12007	ANLRHVE12014	NA	NA	NA		NA	NA	NA	NA
1126	NA	ANLRHDTC12007	ANLRHVE12014	NA	NA	NA		NA	NA	NA	NA
1127	NA	ANLRHDTC12007	ANLRHVE12014	NA	NA	NA		NA	NA	NA	NA
1128	NA	ANLRHDTC12007	ANLRHVE12014	NA	NA	NA		NA	NA	NA	NA
1129	NA	ANLRHDTC12007	ANLRHVE12014	NA	NA	NA		NA	NA	NA	NA
1130	NA	ANLRHDTC12007	ANLRHVE12014	NA	NA	NA		NA	NA	NA	NA
1132	NA	ANLRHDTC12007	ANLRHVE12014	NA	NA	NA		NA	NA	NA	NA
1133	NA	ANLRHDTC12007	ANLRHVE12014	NA	NA	NA		NA	NA	NA	NA
1134	NA	ANLRHDTC12007	ANLRHVE12014	NA	NA	NA		NA	NA	NA	NA
1135	NA	ANLRHDTC12007	ANLRHVE12014	NA	NA	NA		NA	NA	NA	NA
1142	NA	ANLRHDTC12007	ANLRHVE12014	NA	NA	NA		NA	NA	NA	NA
1143	NA	ANLRHDTC12007	ANLRHVE12014	NA	NA	NA		NA	NA	NA	NA
1144	NA	ANLRHDTC12007	ANLRHVE12014	NA	NA	NA		NA	NA	NA	NA
1145	NA	ANLRHDTC12007	ANLRHVE12014	NA	NA	NA		NA	NA	NA	NA
1131	NA	ANLRHDTC12007	ANLRHVE12014	NA	NA	NA		NA	NA	NA	NA

Laura Nelson
Signature of Site Project Manager

Laura Nelson
Printed Name

8/21/12
Date

CLS-003

CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

38

Waste Stream: # AERHDM

Lot # 38

Container ID Number	Historical Container ID	NDA BDR or Radiological Characterization BDR (CH only)	VE BDR	RTR BDR	Solids Sampling BDR	Solids Analytical BDR	Load Management/ Overpack Yes	Permit Required Headspace Gas BDR			
								Sample	Analysis		
1110	NA	ANLRHDTC12009	ANLRHVE12012	NA	NA	NA		NA	NA	NA	NA
1112	NA	ANLRHDTC12009	ANLRHVE12012	NA	NA	NA		NA	NA	NA	NA
1137	NA	ANLRHDTC12009	ANLRHVE12015	NA	NA	NA		NA	NA	NA	NA
1139	NA	ANLRHDTC12009	ANLRHVE12015	NA	NA	NA		NA	NA	NA	NA
1140	NA	ANLRHDTC12009	ANLRHVE12015	NA	NA	NA		NA	NA	NA	NA
1141	NA	ANLRHDTC12009	ANLRHVE12015	NA	NA	NA		NA	NA	NA	NA
1155	NA	ANLRHDTC12009	ANLRHVE12015	NA	NA	NA		NA	NA	NA	NA
1156	NA	ANLRHDTC12009	ANLRHVE12015	NA	NA	NA		NA	NA	NA	NA
1160	NA	ANLRHDTC12009	ANLRHVE12015	NA	NA	NA		NA	NA	NA	NA
1161	NA	ANLRHDTC12009	ANLRHVE12015	NA	NA	NA		NA	NA	NA	NA
1162	NA	ANLRHDTC12009	ANLRHVE12015	NA	NA	NA		NA	NA	NA	NA
1163	NA	ANLRHDTC12009	ANLRHVE12015	NA	NA	NA		NA	NA	NA	NA
1164	NA	ANLRHDTC12009	ANLRHVE12015	NA	NA	NA		NA	NA	NA	NA
1165	NA	ANLRHDTC12009	ANLRHVE12018	NA	NA	NA		NA	NA	NA	NA
1166	NA	ANLRHDTC12009	ANLRHVE12018	NA	NA	NA		NA	NA	NA	NA

Laura Nelson
Signature of Site Project Manager

Laura Nelson
Printed Name

11/12/12
Date

CG.004

CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

Waste Stream: # AERHDM

Lot # 39

Container ID Number	Historical Container ID	NDA BDR or Radiological Characterization BDR (CH only)	VE BDR	RTR BDR	Solids Sampling BDR	Solids Analytical BDR	Load Management/ Overpack Yes	Permit Required Headspace Gas BDR			
								Sample	Analysis		
1138	NA	NA	ANLRHVE12016	NA	NA	NA		NA	NA	NA	NA
1147	NA	NA	ANLRHVE12016	NA	NA	NA		NA	NA	NA	NA
1149	NA	NA	ANLRHVE12016	NA	NA	NA		NA	NA	NA	NA
1157	NA	NA	ANLRHVE12017	NA	NA	NA		NA	NA	NA	NA
1158	NA	NA	ANLRHVE12017	NA	NA	NA		NA	NA	NA	NA
1159	NA	NA	ANLRHVE12017	NA	NA	NA		NA	NA	NA	NA
1089	NA	NA	ANLRHVE12001	NA	NA	NA		NA	NA	NA	NA
1108	NA	NA	ANLRHVE12010	NA	NA	NA		NA	NA	NA	NA
1171	NA	NA	ANLRHVE13001	NA	NA	NA		NA	NA	NA	NA
1173	NA	NA	ANLRHVE13001	NA	NA	NA		NA	NA	NA	NA
1175	NA	NA	ANLRHVE13001	NA	NA	NA		NA	NA	NA	NA
1177	NA	NA	ANLRHVE13001	NA	NA	NA		NA	NA	NA	NA
1179	NA	NA	ANLRHVE13001	NA	NA	NA		NA	NA	NA	NA
1181	NA	NA	ANLRHVE13001	NA	NA	NA		NA	NA	NA	NA

Laura Nelson
Signature of Site Project Manager

Laura Nelson
Printed Name

4-15-13
Date

CB-004

CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

Waste Stream: # AERHDM

Lot # 40

Container ID Number	Historical Container ID	NDA BDR or Radiological Characterization BDR (CH only)	VE BDR	RTR BDR	Solids Sampling BDR	Solids Analytical BDR	Load Management/ Overpack Yes	Permit Required Headspace Gas BDR			
								Sample	Analysis		
1101	NA	ANLE-RH-50-58	ANLRHVE12011	NA	NA	NA		NA	NA	NA	NA
1136	NA	ANLE-RH-50-59	ANLRHVE12011	NA	NA	NA		NA	NA	NA	NA
1099	NA	ANLE-RH-50-60	ANLRHVE12011	NA	NA	NA		NA	NA	NA	NA
1170	NA	ANLE-RH-50-61	ANLRHVE12011	NA	NA	NA		NA	NA	NA	NA
1109	NA	ANLE-RH-50-57	ANLRHVE12011	NA	NA	NA		NA	NA	NA	NA

Laura Nelson
Signature of Site Project Manager

Laura Nelson
Printed Name

4-17-13
Date

CIS-001

CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

Waste Stream: # AERHDM

Lot # 41

Container ID Number	Historical Container ID	NDA BDR or Radiological Characterization BDR (CH only)	VE BDR	RTR BDR	Solids Sampling BDR	Solids Analytical BDR	Load Management/ Overpack Yes	Permit Required Headspace Gas BDR			
								Sample	Analysis		
1146	NA	ANLE-RH-50-62	ANLRHVE12019	NA	NA	NA		NA	NA	NA	NA
1148	NA	ANLE-RH-50-63	ANLRHVE12019	NA	NA	NA		NA	NA	NA	NA
1150	NA	ANLE-RH-50-64	ANLRHVE12019	NA	NA	NA		NA	NA	NA	NA
1153	NA	ANLE-RH-50-67	ANLRHVE12019	NA	NA	NA		NA	NA	NA	NA
1154	NA	ANLE-RH-50-68	ANLRHVE12019	NA	NA	NA		NA	NA	NA	NA

Laura Nelson
Signature of Site Project Manager

Laura Nelson
Printed Name

4-17-13
Date

24

CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

Waste Stream: # AERHDM

Lot # 42

Container ID Number	Historical Container ID	NDA BDR or Radiological Characterization BDR (CH only)	VE BDR	RTR BDR	Solids Sampling BDR	Solids Analytical BDR	Load Management/ Overpack Yes	Permit Required Headspace Gas BDR			
								Sample	Analysis		
1167	NA	ANLRHDTC13002	ANLRHVE13003	NA	NA	NA		NA	NA	NA	NA
1168	NA	ANLRHDTC13002	ANLRHVE13003	NA	NA	NA		NA	NA	NA	NA
1169	NA	ANLRHDTC13002	ANLRHVE13003	NA	NA	NA		NA	NA	NA	NA
1174	NA	ANLRHDTC13003	ANLRHVE13002	NA	NA	NA		NA	NA	NA	NA
1176	NA	ANLRHDTC13003	ANLRHVE13002	NA	NA	NA		NA	NA	NA	NA
1178	NA	ANLRHDTC13003	ANLRHVE13002	NA	NA	NA		NA	NA	NA	NA
1182	NA	ANLRHDTC13003	ANLRHVE13002	NA	NA	NA		NA	NA	NA	NA

Laura Nelson
Signature of Site Project Manager

Laura Nelson
Printed Name

4-15-13
Date

CIS-004

Attachment 3 – Visual Examination Site Project Manager Checklist

Batch Data Report No.: HNLRHVE 12011

1. Has all the data received an independent technical review as evidenced by a completed checklist (Attachment 2) and the appropriate ITR signature?		☐ NO	☑ YES
2. Are BDR contents complete and match the Visual Examination Batch Data Report Table of Contents?		☐ NO	☑ YES
3. Is the BDR complete (appropriately filled in forms for each container)?		☐ NO	☑ YES
4. Have the RH Quality Assurance Objectives (QAOs) for VE been met?			
Precision – reconciled discrepancies between operators		☐ NO	☑ YES
Accuracy – trained operators		☐ NO	☑ YES
Representativeness – description of container contents		☐ NO	☑ YES
Completeness – completed data form and/or recording		☐ NO	☑ YES
Comparability – proper training and adequate AK for unopened containers		☐ NO	☑ YES
5. Were NCRs generated included in the BDR?	☐ NO	☐ YES	☑ N/A

Comments

No NCR'S.

SPM:

Laura Nelson — Printed Name

Laura Nelson — Signature

11/28/12 — Date

CCP RECORDS ORIGINAL
DATE REC'D 11.29.12

Attachment 4 – Visual Examination Batch Data Report Cover Sheet

Batch Data Report No.: ANLRHVE 12011 Date: 10-12-12

	Waste Container ID Number:
1	1101
2	1099
3	1109
4	1136
5	1170
6	
7	
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12	
13	
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15	
16	
17	
18	
19	
20	

PB 10-12-12

CCP RECORDS ORIGINAL
DATE REC'D 11.27.12

01

Attachment 5 – Visual Examination Batch Data Report Table of Contents

Batch Data Report No.: ANLRHVE12011 Date: 10-12-12

Item	Description	Page No.
1	Visual Examination Batch Data Report Cover Sheet (Attachment 4)	1
2	Visual Examination Batch Data Report Table of Contents (Attachment 5)	2
3	Visual Examination Data Forms (Attachment 1)	3
4	Visual Examination Independent Technical Reviewer Checklist (Attachment 2)	53
5	Copy of NCRs (N/A [If not applicable])	N/A

Attachment 1 – Visual Examination Data Form

Site ID: RHANI	
Examination Date: 2-22-12	Batch Number: NA
Procedure #: CCP-TP-500	Revision #: 11 / Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A	Recording Start: NA / Recording Stop: NA
Initial Container ☒ N/A	**Final Container** ☐ N/A
Container or Package ID Number:	Container or Package ID Number: 1101
Container Type:	Container Type: 30 GALLON CONTAINER
Waste Matrix Code:	Waste Matrix Code: S5400
Waste Stream:	Waste Stream: AERHDM
	Rigid Liner: ☒Y ☐N Type: 140 MIL / Rigid Liner Lid: ☐ Y ☒N
	Rigid Liner Vented or Hole Size: NA
Percent Fill: / Percent Organic Waste:	Percent Fill: 85 / Percent Organic Waste: 0
Layers of Confinement: / Closure Method:	Layers of Confinement: 1 / Closure Method: HEAT SEALED FILTERED
Comments (e.g., filter information, NCRs): NA	

Waste Description:

BOTTOM CAN: 843

TOP CAN: 933

03

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1101

Prohibited Items	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
ERIC BOND — Print Name
Eric Bond — Signature
2-22-12 — Date

Visual Examination Operator 2:
William H. Riley — Print Name
William H. Riley — Signature
02-22-12 — Date

04

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 02-17-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container	☐ N/A	**Final Container**	☒ N/A
Container or Package ID Number: 843		Container or Package ID Number:	
Container Type: 7-Gallon Container		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 85%	Percent Organic Waste: 0%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7-Gallon Container - (IM)
Shield Pot Centering Ring - (IM)
Shield Pot # 7206

05

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 843

Prohibited Items	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
William H. Riley — Print Name
Will. H. R — Signature
02-17-12 ~~02-17-11~~ — Date
02-17-12 WHR

Visual Examination Operator 2:
Pat Beallis — Print Name
Pat Beallis — Signature
02-17-12 — Date

04

Attachment 1 – Visual Examination Data Form

Site ID RHANL			
Examination Date 9-16-11		Batch Number NA	
Procedure # CCP-TP-500		Revision # 11	Video Number NA
Recording Equipment Check ☐SAT ☐UNSAT ☒N/A		Recording Start NA	Recording Stop NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number 7206		Container or Package ID Number	
Container Type 1 GALLON CONTAINER		Container Type	
Waste Matrix Code S5400		Waste Matrix Code	
Waste Stream AERHDM		Waste Stream	
		Rigid Liner ☐Y ☐N Type	Rigid Liner Lid ☐Y ☐N
		Rigid Liner Vented or Hole Size	
Percent Fill 85%	Percent Organic Waste 0%	Percent Fill	Percent Organic Waste
Layers of Confinement 0	Closure Method NA	Layers of Confinement	Closure Method
Comments (e.g. filter information, NCRs) NA			

Waste Description VENTED 1 GALLON "3/4" INCH THICK LEAD LINED SHIELD POT (TM) (OM)

FUEL SPECIMEN 493A2 (OM)

FUEL SPECIMEN 493A4 (OM)

FUEL SPECIMEN 467B7 (OM)

FUEL SPECIMEN 493A3 (OM)

FUEL SPECIMEN 467B8 (OM)

FUEL SPECIMEN 493A6 (OM)

07

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 7206

	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: N/A

Visual Examination Operator 1: Pat Beallis Print Name	Pat Beallis Signature	9-16-11 Date
Visual Examination Operator 2: ERIC BOND Print Name	Eric Bond Signature	9-16-11 Date

08

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 02-17-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		**Final Container** ☒N/A	
Container or Package ID Number: 933		Container or Package ID Number:	
Container Type: 7-Gallon Container		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 85%	Percent Organic Waste: 0%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7-Gallon Container-(IM)
Shield Pot Centering Ring-(IM)
Shield Pot # 7202

09

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 933

Prohibited Items	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1: William H. Riley (Print Name)	Will H. Ry (Signature)	02-17-12 (Date)
Visual Examination Operator 2: Pat Beallis (Print Name)	Pat Beallis (Signature)	02-17-12 (Date)

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 01-09-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒N/A	
Container or Package ID Number: 7202		Container or Package ID Number:	
Container Type: 1 Gallon Shield Pot		Container Type:	
Waste Matrix Code: S 5400		Waste Matrix Code:	
Waste Stream: ALRHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 90	Percent Organic Waste: 0	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): VT completed on 01-10-12			

Waste Description: Vented 1 gallon 3/4" thick lead lined shield pot (om) (1m)
Fuel Specimen 498 B 2 (om)
Fuel Specimen 498 B 3 (om)
Fuel Specimen 190 C1-D (om)
Fuel Specimen 190 C1 E (om)
Fuel Specimen 190 C 1 B (om)
Fuel Specimen 190 C 1 C (om)
Fuel Specimen 190 C 1 A (om)
Fuel Specimen 457 A 2 (om)
Fuel Specimen 613 D 1 (om)
Fuel Specimen 611 D 1 (om)
Fuel Specimen 613 D 4 (om)
Fuel Specimen 574 B3 B5 (om)
Fuel Specimen 612 D 4 (om)
Fuel Specimen 613 D 3 (om)
Fuel Specimen 611 D 2 (om)
Fuel Specimen 574 B3 B3 (om)
Fuel Specimen 574 B3 B1 (om)
Fuel Specimen 611 D 4 (om)

11

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 7207

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:		
Gary Redman	Gary Redman	01-10-12
Print Name	Signature	Date

Visual Examination Operator 2:		
ERIC BOWDS	[signature]	1-10-12
Print Name	Signature	Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL	
Examination Date: 02-27-12	Batch Number: NA
Procedure #: CCP-TP-500	Revision #: 11 / Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A	Recording Start: NA / Recording Stop: NA
Initial Container ☒N/A	**Final Container** ☐ N/A
Container or Package ID Number:	Container or Package ID Number: 1099
Container Type:	Container Type: 30-Gallon Container
Waste Matrix Code:	Waste Matrix Code: 55400
Waste Stream:	Waste Stream: AERHDM
	Rigid Liner: ☒Y ☐N Type: 140 mil / Rigid Liner Lid: ☐ Y ☒N
	Rigid Liner Vented or Hole Size: NA
Percent Fill: / Percent Organic Waste:	Percent Fill: 85% / Percent Organic Waste: 0%
Layers of Confinement: / Closure Method:	Layers of Confinement: 1 / Closure Method: Heat Sealed filtered
Comments (e.g., filter information, NCRs): VE Completed on 02-28-12	

Waste Description:

Bottom Can: 903

Top Can: 902

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1099

Prohibited Items	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
William H. Riley — Print Name
Will H. Ri — Signature
02-28-12 — Date

Visual Examination Operator 2:
ERIC BOND — Print Name
Eric Bond — Signature
2-28-12 — Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 2-20-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 903		Container or Package ID Number:	
Container Type: 7 GALLON CONTAINER		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHAM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 85	Percent Organic Waste: 0%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7 GALLON CONTAINER (IM)

SHIELD POT CENTERING RING (IM)

SHIELD POT #7087

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 903

	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
[illegible]			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:

Print Name	Signature	Date
ERIC BANDS	Eric Bands	2-20-12

Visual Examination Operator 2:

Print Name	Signature	Date
William H. Riley	William H. Riley	02-20-12

Attachment 1 – Visual Examination Data Form

Site ID and Location of Packaging Activity: RHANL-212			
Examination Date: 01-13-11	Batch Number: NA		
Procedure #: CCP-TP-500	Revision #: 10	Video Number: NA	
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A	Recording Start: NA	Recording Stop: NA	
Initial Container ☐ N/A	Final Container ☒N/A		
Container or Package ID Number: 7087	Container or Package ID Number:		
Container Type: 1-Gallon Shield Pot	Container Type:		
Waste Matrix Code: S5400	Waste Matrix Code:		
Waste Stream: AERHDM	Waste Stream:		
	Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N	
	Rigid Liner Vented or Hole Size:		
Percent Fill: 67-90%	Percent Fill:		
Layers of Confinement: 0 / Closure Method: NA	Layers of Confinement:	Closure Method:	
Comments (e.g., filter information, NCRs): VOLUME of ORGANIC WASTE: 0%			
Waste Description: Vented 1-Gallon 1-INCH thick Lead Lined Shield Pot - (OM)(IM) fuel Specimen - 579C1 - (OM) fuel Specimen - 579C7 - (OM) fuel Specimen - 579C9 - (OM) fuel Specimen - 579C8 - (OM) fuel Specimen - 579C4 - (OM) fuel Specimen - 579C3 - (OM) fuel Specimen - 579C6 - (OM) fuel Specimen - 579C2 - (OM) fuel Specimen - 579C10 - (OM) fuel Specimen - 579C5 - (OM) fuel Specimen - 579C11 - (OM)			
Primary Contents (check one)	☐ Concrete ☒ Steel ☐ Organic Material		

17

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 7087

Prohibited Item(s) Detected	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?		X	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
70.720 Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
William H. Riley — Print Name
Will H. Ri — Signature
01-13-11 — Date

Visual Examination Operator 2:
ERIC BONS — Print Name
Eric Bons — Signature
01-13-11 — Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 2-20-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 902		Container or Package ID Number:	
Container Type: 7 GALLON CONTAINER		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 85%	Percent Organic Waste: 0%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7 GALLON CONTAINER (IM)

SHIELD POT CENTERING RING (IM)

SHIELD POT # 7109

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 902

Prohibited Items Criteria	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH-72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:

Print Name	Signature	Date
ERIC BOND	Eric Bond	2-20-12

Visual Examination Operator 2:

Print Name	Signature	Date
William H. Riley	William H. Riley	02-20-12

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 7-11-11		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 7109		Container or Package ID Number:	
Container Type: 1 GALLON CONTAINER		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 85%	Percent Organic Waste: ~~10%~~ 0% EB 7-11-11	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): VE COMPLETED ON 7-18-11			

Waste Description: VENTED 1 GALLON "3/4" THICK LEAD LINED SHIELD POT (OM) (IM)

FUEL SPECIMEN 493B2 (OM)
FUEL SPECIMEN 493B3 (OM)
FUEL SPECIMEN 493B4 (OM)
FUEL SPECIMEN 493B5 (OM)
FUEL SPECIMEN 493B6 (OM)
FUEL SPECIMEN 502A3 (OM)
FUEL SPECIMEN 502A4 (OM)
FUEL SPECIMEN 502A5 (OM)
FUEL SPECIMEN 502A6 (OM)
FUEL SPECIMEN 502A7 (OM)

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 7109

Prohibited Item(s) Summary	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials container and packaging materials, shipping container materials or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001 D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments NA

Visual Examination Operator 1:
ERIC BOND — Print Name
Eric Bond — Signature
7-18-11 — Date

Visual Examination Operator 2:
GLORIA RUPPERT — Print Name
Gloria Ruppert — Signature
7-18-11 — Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL	
Examination Date: 03-19-12	Batch Number: NA
Procedure #: CCP-TP-500	Revision #: 11 / Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A	Recording Start: NA / Recording Stop: NA
Initial Container ☒N/A	**Final Container** ☐ N/A
Container or Package ID Number:	Container or Package ID Number: 1109
Container Type:	Container Type: 30-Gallon Container
Waste Matrix Code:	Waste Matrix Code: S5400
Waste Stream:	Waste Stream: AERHDM
	Rigid Liner: ☒Y ☐N Type: 140 mil / Rigid Liner Lid: ☐ Y ☒N
	Rigid Liner Vented or Hole Size: NA
Percent Fill: / Percent Organic Waste:	Percent Fill: 65% / Percent Organic Waste: 0%
Layers of Confinement: / Closure Method:	Layers of Confinement: 1 / Closure Method: Heat Sealed Filtered
Comments (e.g., filter information, NCRs): NA	

Waste Description:

Bottom Can: 937

Top Can: 909

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1109

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e. waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments NA

Visual Examination Operator 1

William H. Riley — Print Name
[signature] — Signature
03-19-12 — Date

Visual Examination Operator 2

ERIC BOND — Print Name
[signature] — Signature
3-19-12 — Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 03-07-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container	☐ N/A	**Final Container**	☒N/A
Container or Package ID Number: 937		Container or Package ID Number:	
Container Type: 7-Gallon Container		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 85%	Percent Organic Waste: 0%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7-Gallon Container-(IM)
Shield Pot Centering Ring-(IM)
Shield Pot # 7222

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 937

	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
William H. Riley — Print Name
Will-H-Ri — Signature
03-07-12 — Date

Visual Examination Operator 2:
ERIC BOND — Print Name
Eric Bond — Signature
3-7-12 — Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 9-28-11		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		**Final Container** ☒ N/A	
Container or Package ID Number: 7222		Container or Package ID Number:	
Container Type: 1 GALLON CONTAINER		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 40%	Percent Organic Waste: 0%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description: VENTED 1-GALLON 3/4" INCH THICK LEAD LINED SHIELD POT (OM) (IM)
FUEL SPECIMEN 354C4 (OM)
FUEL SPECIMEN 354C3 (OM)
FUEL SPECIMEN 354C5 (OM)
FUEL SPECIMEN 354C6 (OM)
FUEL SPECIMEN 354C2 (OM)

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 7222

Prohibited Items Summary	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, *whichever is greater in an internal container?*	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste *Matrix Code?*	☐	☒	
RH-TRU Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1: William H. Riley Print Name	Signature	09-28-11 Date
Visual Examination Operator 2: ERIC BOND Print Name	Signature	9-28-11 Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 03-07-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		**Final Container** ☒N/A	
Container or Package ID Number: 909		Container or Package ID Number:	
Container Type: 7-Gallon Container		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 85%	Percent Organic Waste: 0%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7-Gallon Container-(IM)
Shield Pot Centering Ring-(IM)
Shield Pot #7065

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 909

Prohibited Items	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
William H. Riley — Print Name
Will H. Ri — Signature
03-07-12 — Date

Visual Examination Operator 2:
ERIC BOND — Print Name
Eric Bond — Signature
3-7-12 — Date

Attachment 1 – Visual Examination Data Form

Site ID and Location of Packaging Activity: RHANL-212			
Examination Date: 2-1-11	Batch Number: NA		
Procedure #: CCP-TP-500	Revision #: 10	Video Number: NA	
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A	Recording Start: NA	Recording Stop: NA	
Initial Container ☐ N/A	Final Container ☒ N/A		
Container or Package ID Number: 7065	Container or Package ID Number:		
Container Type: 1 GALLON SHIELD POT	Container Type:		
Waste Matrix Code: S5400	Waste Matrix Code:		
Waste Stream: AERHDM	Waste Stream:		
	Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N	
	Rigid Liner Vented or Hole Size:		
Percent Fill: 67-90%	Percent Fill:		
Layers of Confinement: 0 / Closure Method: NA	Layers of Confinement:	Closure Method:	
Comments (e.g., filter information, NCRs): VOLUME OF ORGANIC WASTE 0%			
Waste Description: VENTED 1 GALLON 1 INCH THICK LEAD LINED SHIELD POT (OM) (IM) FUEL SPECIMEN 90B3 (OM) FUEL SPECIMEN 90B4 (OM) FUEL SPECIMEN 90B8 (OM) FUEL SPECIMEN 90B6 (OM) FUEL SPECIMEN 90B9 (OM) FUEL SPECIMEN 90B11 (OM)			
Primary Contents (check one)	☐ Concrete ☒ Steel ☐ Organic Material		

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 7065

Prohibited Item(s) Summary	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?		☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1
ERIC BOND — Eric Bond — 2-1-11
Print Name — Signature — Date

Visual Examination Operator 2
GLORIA RUPPERT — Gloria Ruppert — 2-1-11
Print Name — Signature — Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL	
Examination Date: 05-21-12	Batch Number: NA
Procedure #: CCP-TP-500	Revision #: 11 / Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A	Recording Start: NA / Recording Stop: NA
Initial Container ☒N/A	**Final Container** ☐ N/A
Container or Package ID Number:	Container or Package ID Number: 1136
Container Type:	Container Type: 30-Gallon Container
Waste Matrix Code:	Waste Matrix Code: S5400
Waste Stream:	Waste Stream: AERHDM
	Rigid Liner: ☒Y ☐N Type: 140 MiL / Rigid Liner Lid: ☐Y ☒N
	Rigid Liner Vented or Hole Size: NA
Percent Fill: / Percent Organic Waste:	Percent Fill: 85% / Percent Organic Waste: 0%
Layers of Confinement: / Closure Method:	Layers of Confinement: 1 / Closure Method: Heat Sealed filtered
Comments (e.g., filter information, NCRs): NA	

Waste Description:

BOTTOM CAN: 1001
TOP CAN: 1009

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1136

	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
William H. Riley — Print Name
Will. H. R — Signature
05-21-12 — Date

Visual Examination Operator 2:
GLORIA RUPPERT — Print Name
Gloria Ruppert — Signature
5-21-12 — Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL	
Examination Date: 05-07-12	Batch Number: NA
Procedure #: CCP TP 500	Revision #: 11 / Video Number NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A	Recording Start: NA / Recording Stop: NA
Initial Container ☐ N/A	Final Container ☒ N/A
Container or Package ID Number: 1001	Container or Package ID Number:
Container Type: 7-Gallon Container	Container Type:
Waste Matrix Code: S5400	Waste Matrix Code:
Waste Stream: AERHDM	Waste Stream:
	Rigid Liner: ☐Y ☐N Type: / Rigid Liner Lid: ☐Y ☐N
	Rigid Liner Vented or Hole Size:
Percent Fill: 85% / Percent Organic Waste: 0%	Percent Fill: / Percent Organic Waste:
Layers of Confinement: 0 / Closure Method: NA	Layers of Confinement: / Closure Method:
Comments (e.g., filter information, NCRs): NA	

Waste Description

7-Gallon Container-(IM)
Shield Pot Centering Ring-(IM)
Shield Pot # 7252

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1001

Prohibited Item(s) Summary	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1: William H. Riley Print Name	Wm. H. Riley Signature	05-07-12 ~~05-12-12~~ Date WHR 05-07-12
Visual Examination Operator 2: Pat Beallis Print Name	Pat Beallis Signature	5-7-12 Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL	
Examination Date: 04-27-12	Batch Number: N/A
Procedure #: CCP-TP-500	Revision #: 11 / Video Number: N/A
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A	Recording Start: N/A / Recording Stop: N/A
Initial Container ☐ N/A	Final Container ☒N/A
Container or Package ID Number: 7252	Container or Package ID Number:
Container Type: 1 Gallon Shield Pot	Container Type:
Waste Matrix Code: S5400	Waste Matrix Code:
Waste Stream: AERHDM	Waste Stream:
	Rigid Liner: ☐Y ☐N Type: / Rigid Liner Lid: ☐ Y ☐N
	Rigid Liner Vented or Hole Size:
Percent Fill: 60 / Percent Organic Waste: 0	Percent Fill: / Percent Organic Waste:
Layers of Confinement: 0 / Closure Method: N/A	Layers of Confinement: / Closure Method:
Comments (e.g., filter information, NCRs): Container closed 4/30/12	

Waste Description:
Vented 1 Gallon 3/4 inch Thick Lead Lined Shield Pot (IM)(OM)
Fuel specimen 467 A 2A (IM)(OM)
Fuel specimen 467 A 2B (IM)(OM)
Fuel specimen 467 A 3B (IM)(OM)
Fuel specimen 497C1 (IM)(OM)
Fuel specimen 497C2A (IM)(OM)
Fuel specimen 497C4 (IM)(OM)
Fuel specimen 497C2C (IM)(OM)

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 7252

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: N/A

Visual Examination Operator 1: F. Wesley Root Print Name	F. Wesley Root Signature	4-30-12 Date
Visual Examination Operator 2: Spencer Pattee Print Name	Spencer Pattee Signature	4/30/12 Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL	
Examination Date: 05-07-12	Batch Number: NA
Procedure # CCP TP-500	Revision #: 11 / Video Number NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A	Recording Start: NA / Recording Stop: NA
Initial Container ☐ N/A	**Final Container** ☒N/A
Container or Package ID Number: 1009	Container or Package ID Number:
Container Type: 7-Gallon Container	Container Type:
Waste Matrix Code: S5400	Waste Matrix Code:
Waste Stream: AERHDM	Waste Stream:
	Rigid Liner: ☐Y ☐N Type: / Rigid Liner Lid: ☐Y ☐N
	Rigid Liner Vented or Hole Size:
Percent Fill: 85% / Percent Organic Waste: 0%	Percent Fill: / Percent Organic Waste:
Layers of Confinement: 0 / Closure Method: NA	Layers of Confinement: / Closure Method:
Comments (e.g., filter information, NCRs): NA	

Waste Description

7-Gallon Container-(IM)
Shield Pot Centering Ring-(IM)
Shield Pot # 7195

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1009

Prohibited Item(s) Summary	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
William H. Riley — Print Name
Will H. Ri — Signature
05-07-12 — Date

Visual Examination Operator 2:
Pat Beallis — Print Name
Pat Beallis — Signature
5-7-12 — Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 3/16/12		Batch Number: N/A	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: N/A
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: N/A	Recording Stop: N/A
Initial Container ☐ N/A		Final Container ☒N/A	
Container or Package ID Number: 7195		Container or Package ID Number:	
Container Type: 1 Gallon Shield Pot		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHOM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 60%	Percent Organic Waste: 0%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: WR 3-16-12 0 3-16-12	Closure Method: N/A	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): N/A			

Waste Description:

Vented 1 Gallon 3/4" Thick Lead Lined Shield Pot (om)(IM)

Fuel Specimen 615C13 (om) Fuel Specimen 608C7H (om)

Fuel Specimen 615C6 (om)

Fuel Specimen 608C1 (om)

Fuel Specimen 615C9 (om)

Fuel Specimen 615C14 (om)

Fuel Specimen 615C5 (om)

Fuel Specimen 615C1 (om)

Fuel Specimen 612C6 (om)

Fuel Specimen 612C11 (om)

Fuel Specimen 608D7 (om)

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 7195

Prohibited Materials	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH-72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: N/A

Visual Examination Operator 1:
Spencer Pattee — Print Name
[signature] — Signature
3/16/12 — Date

Visual Examination Operator 2:
F. Wesley Root — Print Name
[signature] — Signature
3-16-12 — Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL	
Examination Date: 10-08-12	Batch Number: NA
Procedure #: CCP-TP-500	Revision #: 11 / Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A	Recording Start: NA / Recording Stop: NA
Initial Container ☒N/A	**Final Container** ☐ N/A
Container or Package ID Number:	Container or Package ID Number: 1170
Container Type:	Container Type: 30-Gallon Container
Waste Matrix Code:	Waste Matrix Code: S5400
Waste Stream:	Waste Stream: AERHUM
	Rigid Liner: ☒Y ☐N Type: 140 mil / Rigid Liner Lid: ☐ Y ☒N
	Rigid Liner Vented or Hole Size: NA
Percent Fill: / Percent Organic Waste:	Percent Fill: 85% / Percent Organic Waste: 0 %
Layers of Confinement: / Closure Method:	Layers of Confinement: 1 / Closure Method: Heat Sealed filtered
Comments (e.g., filter information, NCRs): NA	

Waste Description:

Bottom Can: 1015

Top Can: 1042

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PB 10-15-12

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1170

Prohibited Item(s) Summary	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
William H. Riley — Print Name
[signature] — Signature
10-08-12 — Date

Visual Examination Operator 2:
Eric Brown — Print Name
[signature] — Signature
10-8-12 — Date

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~~45~~
PB 10-17-12

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 6-5-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 1015		Container or Package ID Number:	
Container Type: 7 GALLON CONTAINER		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 85	Percent Organic Waste: 0	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7 GALLON CONTAINER (IM)

SHIELD POT CENTERING RING (IM)

SHIELD POT #7174

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1015

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:		
ERIC BOND	Eric Bond	6-5-12
Print Name	Signature	Date

Visual Examination Operator 2:		
William H. Riley	Will H. Ri	06-05-12
Print Name	Signature	Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 6-5-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 7174		Container or Package ID Number:	
Container Type: 1 GALLON SHIELD POT		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHLM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 0	Percent Organic Waste: 0	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NO WASTE WAS ADDED TO SHIELD POT			

Waste Description: VENTED 1 GALLON 1" ~~INCH LEAD LINED~~ EB 6-5-12 SHIELD POT (OM) (FM)
INCH THICK LEAD LINED

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Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 7174

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:		
ERIC BOND	[signature]	6-5-12
Print Name	Signature	Date

Visual Examination Operator 2:		
William H. Riley	[signature]	06-05-12
Print Name	Signature	Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 06-07-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒N/A	
Container or Package ID Number: 1042		Container or Package ID Number:	
Container Type: 7-Gallon Container		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 85%	Percent Organic Waste: 0%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7-Gallon Container-(IM)
Shield Pot Centering Ring-(IM)
Shield Pot # 7220

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1042

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
William H. Riley — Print Name
Signature — Date: 06-07-12

Visual Examination Operator 2:
Eric Bond — Print Name
Signature — Date: 6-7-12

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 09-26-11		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒N/A	
Container or Package ID Number: 7220		Container or Package ID Number:	
Container Type: 1-Gallon Container		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 40%	Percent Organic Waste: 0%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description: Vented 1-Gallon 3/4-INCH thick lead Lined shield Pot - (OM) (IM)

Fuel Specimen - 074H4 - (OM)

Fuel Specimen - 074H2 - (OM)

Fuel Specimen - 074H3 - (OM)

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 7220

Prohibited Item(s) Summary	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments NA

Visual Examination Operator 1:
William H. Riley — Print Name
Will H. Ri — Signature
09-26-11 — Date

Visual Examination Operator 2:
ERIC BOND — Print Name
Eric Bond — Signature
9-26-11 — Date

Attachment 2 – Visual Examination Independent Technical Reviewer Checklist

Batch Data Report No.: ANLRHVE12011

1. Were data generation and reduction conducted in a technically correct manner in accordance with the methods (procedure) used?	☐ NO	☒ YES	☐ N/A
2. Was the correct revision of the operating procedure used?	☐ NO	☒ YES	☐ N/A
3. Were all the transcription errors corrected?	☐ NO	☐ YES	☒ N/A
4. Are BDR contents complete and match the Visual Examination Batch Data report Table of Contents?	☐ NO	☒ YES	☐ N/A
5. Does the BDR include VE for no more than 20 containers?	☐ NO	☒ YES	☐ N/A
6. Is all data recorded signed and dated in reproducible ink?	☐ NO	☒ YES	☐ N/A
7. Is all raw data recorded clearly, legibly, and accurately?	☐ NO	☒ YES	☐ N/A
8. Are all changes to original data lined out, initialed and dated by the individual making the changes or an individual authorized to make the change?	☐ NO	☒ YES	☐ N/A
9. Is there an adequate written description of the contents?	☐ NO	☒ YES	☐ N/A
10. Were the recording equipment checks satisfactory?	☐ NO	☐ YES	☒ N/A
11. Has each container in this BDR been evaluated for the presence of prohibited wastes?	☐ NO	☒ YES	☐ N/A
12. Has the physical waste form in each container in this BDR been evaluated against the Waste Stream Description and the Waste Matrix Code?	☐ NO	☒ YES	☐ N/A
13. Have the RH Quality Assurance Objectives (QAOs) for VE been met?	☐ NO	☒ YES	☐ N/A
Precision – reconciled discrepancies between operators or between the operator and ITR.	☐	☒	☐
Accuracy – trained operators	☐	☒	☐
Representativeness – description of container contents	☐	☒	☐
Completeness – completed data form and/or recording	☐	☒	☐
Comparability – proper training and adequate AK source documents are available for unopened containers.	☐	☒	☐
14. Were NCRs generated included in the BDR?	☐ NO	☐ YES	☒ N/A

Comments: NA

Independent Technical Reviewer:

Monterry Harris — Printed Name

Monterry Harris — Signature

10-15-12 — Date

DIVIDER PAGE ONLY

Not part of page count

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523 or 575-234-7431

Fax Number: 575-234-7033

[X] Original Record [ ] Copy
[ ] Fax Record
[ ] Electronic Record

Attn:	Sheri Punchios	From:	Wes Root
Ship to:	S. M. Stoller WIPP Rec. Mgmt. Govt.	Site:	ANL-E
	CCP Records	Company:	Nuclear Waste Partnership LLC
	4021 National Parks Hwy	Telephone Number:	630-252-8306
	Carlsbad, NM 88220	Date Sent:	11-26-12
Telephone Number:	575-234-7095		

Document Number	Title / Description	Record Date	Total Pages
ANLRHVE12011	Batch Data Report – Waste Container ID Numbers: 1101, 1099, 1109, 1136 and 1170.	10-12-12	53

Comments

None

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

	Signature	Printed Name	Date
Records Accepted [✓]	Linda Martin	Linda Martin	11-27-12
Records Rejected [ ]			

Reason for Rejection:

Re-submittal:

Signature	Printed Name	Date

```
**********************
***   TX REPORT   ***
**********************

TRANSMISSION OK

TX/RX NO                1935
DESTINATION TEL #       916302526706
DESTINATION ID          WES ROOT
ST. TIME                11/27 15:41
TIME USE                00'15
PAGES SENT                1
RESULT                  OK
```


Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523 or 575-234-7431

Fax Number: 575-234-7033

[X] Original Record [ ] Copy
[ ] Fax Record
[ ] Electronic Record

Attn:	Sheri Punchios	From:	Wes Root
Ship to:	S. M. Stoller WIPP Rec. Mgmt. Govt.	Site:	ANL-E
	CCP Records	Company:	Nuclear Waste Partnership LLC
	4021 National Parks Hwy	Telephone Number:	630-252-8306
	Carlsbad, NM 88220	Date Sent:	11-26-12
Telephone Number:	575-234-7095		

Document Number	Title / Description	Record Date	Total Pages
ANLRHVE12011	Batch Data Report – Waste Container ID Numbers: 1101, 1099, 1108, 1138 and 1170.	10-12-12	53

Comments

None

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

Records Accepted [✓]	Linda Martin	Linda Martin	11.27.12
	Signature	Printed Name	Date
Records Rejected [ ]			
	Signature	Printed Name	Date

Reason for Rejection:

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523 or 575-234-7431

Fax Number: 575-234-7033

- [ ] Original Record
- [ ] Fax Record
- [x] Electronic Record
- [ ] Copy

Attn:	Linda Martin	From:	Laura Nelson
Ship to:	CCP Records	Site:	Denver
	4021 National Parks Hwy	Company:	WTS
	MS:GSA:212	Telephone Number:	303-843-2269
	Carlsbad, NM 88220	Date Sent:	11-28-12
Telephone Number:	575-234-7523		

Document Number	Title / Description	Record Date	Total Pages
ANLRHVE12011	SPM Checklist	11-28-12	1
	NA		

Comments

NA

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

Records Accepted [✓] Linda Martin — Signature: Linda Martin; Printed Name: Linda Martin; Date: 11.29.12

Records Rejected [ ] Signature _____ Printed Name _____ Date _____

Reason for Rejection:

Re-submittal: Signature _____ Printed Name _____ Date _____

```
*********************
***   TX REPORT   ***
*********************
```

TRANSMISSION OK

TX/RX NO	1937
DESTINATION TEL #	913038432208
DESTINATION ID	DENVER
ST. TIME	11/29 07:20
TIME USE	00'18
PAGES SENT	1
RESULT	OK

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523 or 575-234-7431

Fax Number: 575-234-7033

[ ] Original Record [ ] Copy
[ ] Fax Record
[x] Electronic Record

Attn:	Linda Martin	From:	Laura Nelson
Ship to:	CCP Records	Site:	Denver
	4021 National Parks Hwy	Company:	WTS
	MS:GSA:212	Telephone Number:	303-843-2269
	Carlsbad, NM 88220	Date Sent:	11-28-12
Telephone Number:	575-234-7523		

Document Number	Title / Description	Record Date	Total Pages
ANLRHVE12011	SPM Checklist	11-28-12	1
	NA		

Comments

NA

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

AK17

Attachment 3 – Visual Examination Site Project Manager Checklist

Batch Data Report No.: ANLRHVE13004

1. Has all the data received an independent technical review as evidenced by a completed checklist (Attachment 2) and the appropriate ITR signature?		☐ NO	☒ YES
2. Are BDR contents complete and match the Visual Examination Batch Data Report Table of Contents?		☐ NO	☒ YES
3. Is the BDR complete (appropriately filled in forms for each container)?		☐ NO	☒ YES
4. Have the RH Quality Assurance Objectives (QAOs) for VE been met?			
Precision – reconciled discrepancies between operators		☐ NO	☒ YES
Accuracy – trained operators		☐ NO	☒ YES
Representativeness – description of container contents		☐ NO	☒ YES
Completeness – completed data form and/or recording		☐ NO	☒ YES
Comparability – proper training and adequate AK for unopened containers		☐ NO	☒ YES
5. Were NCRs generated included in the BDR?	☐ NO	☐ YES	☒ N/A

Comments

No NCR's

SPM:
Laura Nelson

Printed Name

Laura Nelson
Signature

3/13/13
Date

NTPC RECORDS ORIGINAL
DATE REC'D 3/13/13

Attachment 4 – Visual Examination Batch Data Report Cover Sheet

Batch Data Report No.: ANL RHVE 13004 Date: 3-6-13

	Waste Container ID Number:
1	1183
2	1185
3	1187
4	1189
5	1191
6	1193
7	1195
8	1197
9	1199
10	1201
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	

GR 03-06-13

NTPC RECORDS ORIGINAL
DATE REC'D 3.13.12

01

Attachment 5 – Visual Examination Batch Data Report Table of Contents

Batch Data Report No.: ANL RHVE 13004 Date: 3 - 6 - 13

Item	Description	Page No.
1	Visual Examination Batch Data Report Cover Sheet (Attachment 4)	1
2	Visual Examination Batch Data Report Table of Contents (Attachment 5)	2
3	Visual Examination Data Forms (Attachment 1)	3
4	Visual Examination Independent Technical Reviewer Checklist (Attachment 2)	63
5	Copy of NCRs (N/A [If not applicable])	NA

02

Attachment 1 – Visual Examination Data Form

Site ID: KHANL			
Examination Date: 2-18-13		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 1	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☒N/A		Final Container ☐ N/A	
Container or Package ID Number:		Container or Package ID Number: 1183	
Container Type:		Container Type: 30 GALLON CONTAINER	
Waste Matrix Code:		Waste Matrix Code: S5400	
Waste Stream:		Waste Stream: A E B H D M	
		Rigid Liner: ☒Y ☐N Type: 120 MIL	Rigid Liner Lid: ☐ Y ☒N
		Rigid Liner Vented or Hole Size: NA	
Percent Fill:	Percent Organic Waste:	Percent Fill: 85%	Percent Organic Waste: 20%
Layers of Confinement:	Closure Method:	Layers of Confinement: 1	Closure Method: HEAT SEALED FILTERED
Comments (e.g., filter information, NCRs): NA			

Waste Description:

BOTTOM CAN: 1063

TOP CAN: 927

03

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1183

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
ERIC BOND (Print Name) — Signature — 2-18-13 (Date)

Visual Examination Operator 2:
William H. Riley (Print Name) — Signature — 02-18-13 (Date)

04

Attachment 1 – Visual Examination Data Form

Site ID: RHANL	
Examination Date: 9-14-12	Batch Number: NA
Procedure #: CCP-TP-500	Revision #: 11 / Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A	Recording Start: NA / Recording Stop: NA
Initial Container ☐ N/A	**Final Container** ☒ N/A
Container or Package ID Number: 1063	Container or Package ID Number:
Container Type: 7 GALLON CONTAINER	Container Type:
Waste Matrix Code: S5400	Waste Matrix Code:
Waste Stream: AERHDM	Waste Stream:
	Rigid Liner: ☐Y ☐N Type: / Rigid Liner Lid: ☐ Y ☐N
	Rigid Liner Vented or Hole Size:
Percent Fill: 85% / Percent Organic Waste: 20%	Percent Fill: / Percent Organic Waste:
Layers of Confinement: 0 / Closure Method: NA	Layers of Confinement: / Closure Method:
Comments (e.g., filter information, NCRs). NA	

Waste Description:

7 GALLON CONTAINER (IM)
CUT UP SCRUBBER UNIT (IM)(OM)(P)(R)
DRY RAGS (C)
METAL LABWARE (IM)(AM)
TORQUE WRENCH (IM)
TAPE (C)
PAPER (C)
TOOLS (IM)
SAW BLADE (IM)
OIL DRY SORBENT (OIM)
SODIUM BICARBONATE POWDER (OIM)

05

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1063

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
ERIC BOND (Print Name) — Signature — 9-14-12 (Date)

Visual Examination Operator 2:
William H. Riley (Print Name) — Signature — 09-14-12 (Date)

06

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 09-13-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒N/A	
Container or Package ID Number: 927		Container or Package ID Number:	
Container Type: 7 GALLON CONTAINER		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 90	Percent Organic Waste: 20	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

(Im) 7 GALLON CONTAINER
(Im) STEEL FRAMES (C) PAPER
(Im-P-R) VACUUM COVER
(Im) STEEL CAN OPEN
(C) DRY RAGS
(C) TAPE
(P) STRAP
(P) PLASTIC PIECES
(Am) ALUMINUM TUBES
(R) RUBBER PIECE
(C) WOOD HANDLE
(Im-Om-R) ELECTRICAL CORD
(Im) MANIPULATOR TAPE

01

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 927

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
GLORIA RUPPERT — Print Name
Gloria Ruppert — Signature
09-13-12 — Date

Visual Examination Operator 2:
William H. Riley — Print Name
Wille. H. Ri — Signature
09-13-12 — Date

08

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 8-19-13		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☒ N/A		Final Container ☐ N/A	
Container or Package ID Number:		Container or Package ID Number: 1185	
Container Type:		Container Type: 30 GALLON CONTAINER	
Waste Matrix Code:		Waste Matrix Code: S3400	
Waste Stream:		Waste Stream: AERHDM	
		Rigid Liner: ☒Y ☐N Type: 140 MIL	Rigid Liner Lid: ☐ Y ☒N
		Rigid Liner Vented or Hole Size: NA	
Percent Fill:	Percent Organic Waste:	Percent Fill: 85%	Percent Organic Waste: 20%
Layers of Confinement:	Closure Method:	Layers of Confinement: 1	Closure Method: HEAT SEALED FILTERS
Comments (e.g., filter information, NCRs): NA			

Waste Description:

BOTTOM CAN: 1096

TOP CAN 1033

09

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1185

Prohibited Item(s) Summary	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
ERIC BOND (Print Name) — [signature] (Signature) — 2-19-13 (Date)

Visual Examination Operator 2:
William H. Biley (Print Name) — [signature] (Signature) — 02-19-13 (Date)

10

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 11-29-12		Batch Number: N/A	
Procedure #: CCP-TP-500		Revision #: 11	Video Number N/A
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: N/A	Recording Stop: N/A
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 1096		Container or Package ID Number:	
Container Type: 7 GALLON CONTAINER		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHAM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 80%	Percent Organic Waste: 20%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0%	Closure Method: N/A	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): N/A			

Waste Description:

7 GALLON CONTAINER (IM)
FIREBRICKS (OIM) METAL LABWARE (IM)
PAPER (C)
DRY RAGS (C)
EMPTY CANS (IM)
EMPTY BOTTLES (P)
EMPTY TUBES (IM)
DISCHARGED BATTERY (OM) (IM)
EMPTY BAGS (P)

11

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1096

	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
[illegible]			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
William H. Riley — Print Name
Will H. R[illegible] — Signature
11-29-12 — Date

Visual Examination Operator 2:
ERIC BOND — Print Name
[illegible] — Signature
11-29-12 — Date

12

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 08-20-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		**Final Container** ☒N/A	
Container or Package ID Number: 1033		Container or Package ID Number:	
Container Type: 7gallon Container		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
G.R. 08-20-12		Rigid Liner Vented or Hole Size:	
Percent Fill: 90	Percent Organic Waste: ~~35~~30	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7gallon Container (Im)
Soldering gun (P)(Im)(OM)
electrical cord (P)(om)(R)
hand Tools (Im)(P)
engraver (Im)(om)(P)
brush (P)(Im)
heat gun (om)(Im)(P)
glass (oIm)
wooden ruler (c)
dry rags (c)
plastic pieces(P)
metal piece (Im)
Manipulator Tape (Im)
plastic caps (P)
paper (c)
hardware(Am)(Im)
Tape measure(Im)(P)

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1033

	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
Gary Redman (Print Name) Gary Redman (Signature) 08-20-12 (Date)

Visual Examination Operator 2:
William H. Riley (Print Name) William H. Riley (Signature) 08-20-12 (Date)

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 2-19-13		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☒ N/A		Final Container ☐ N/A	
Container or Package ID Number:		Container or Package ID Number: 1187	
Container Type:		Container Type: 30 GALLON CONTAINER	
Waste Matrix Code:		Waste Matrix Code: S5400	
Waste Stream:		Waste Stream: AERHDM	
		Rigid Liner: ☒Y ☐N Type: 140 MIL	Rigid Liner Lid: ☐ Y ☒N
		Rigid Liner Vented or Hole Size: NA	
Percent Fill:	Percent Organic Waste:	Percent Fill: 85%	Percent Organic Waste: 60%
Layers of Confinement:	Closure Method:	Layers of Confinement: 1	Closure Method: HEAT SEALED FILTERED
Comments (e.g., filter information, NCRs): NA			

Waste Description:

BOTTOM CAN: 941

TOP CAN: 1052

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1187

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:

Print Name	Signature	Date
ERIC BOND	Eric Bond	2-19-13

Visual Examination Operator 2:

Print Name	Signature	Date
William H. Riley	William H. Riley	02-19-13

Attachment 1 – Visual Examination Data Form

Site ID: RHANC			
Examination Date: 9-19-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 1	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 941		Container or Package ID Number:	
Container Type: 7 GALLON CONTAINER		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AER HDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 90%	Percent Organic Waste: 40%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7 GALLON CONTAINER (IM)

DRY RAGS (C) PLASTIC HARDWARE (P)

PIECES OF STEEL (IM) SAW BLADES (IM)

PITCH MATERIAL (P)

ROPE (C)

PAPER (C)

17

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 941

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:		
ERIC BOND	Eric Bond	9-19-12
Print Name	Signature	Date

Visual Examination Operator 2:		
William H. Riley	William H. Riley	09-19-12
Print Name	Signature	Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 08-20-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒N/A	
Container or Package ID Number: 1052		Container or Package ID Number:	
Container Type: 7 gallon Container		Container Type:	
Waste Matrix Code: S 5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 90	Percent Organic Waste: 70	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7 Gallon Container (Im)
Paper (c)
Dry rags (c)
metal pieces (Im) (Am) ~~(P)~~ 08-20-12 WHR
hand Tools (Im)
hardware (Im) (R) (P) (om)
plastic (P)
plastic pieces (P)
empty metal Tube (Im)
Cardboard (c)
Tape (c)
metal rod (Im)
MET MOUNT Fragment (om) (Im)
glass (oIm)
metal Shavings (om) (Im)

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1052

Prohibited Items Summary	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste ddes **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
[illegible]			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:

Print Name	Signature	Date
Gary Redman	Gary Redman	08-20-12

Visual Examination Operator 2:

Print Name	Signature	Date
William H. Riley	William H. Riley	08-20-12

Attachment 1 – Visual Examination Data Form

Site ID: BHAWL			
Examination Date: 2-20-13		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☒ N/A		Final Container ☐ N/A	
Container or Package ID Number:		Container or Package ID Number: 1189	
Container Type:		Container Type: 30 GALLON CONTAINER	
Waste Matrix Code:		Waste Matrix Code: S5400	
Waste Stream:		Waste Stream: AEBHDM	
		Rigid Liner: ☒Y ☐N Type: 140 MIL	Rigid Liner Lid: ☐ Y ☒N
		Rigid Liner Vented or Hole Size: NA	
Percent Fill:	Percent Organic Waste:	Percent Fill: 85%	Percent Organic Waste: 30%
Layers of Confinement:	Closure Method:	Layers of Confinement: 1	Closure Method: HEAT SEALED FILTERED
Comments (e.g., filter information, NCRs): NA			

Waste Description:

BOTTOM CAN: 1115

TOP CAN: 1024

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1189

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:

Print Name	Signature	Date
ERIC BOND	Eric Bond	2-20-13

Visual Examination Operator 2:

Print Name	Signature	Date
William H. Riley	William H. Riley	02-20-13

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Attachment 1 – Visual Examination Data Form

Site ID: RHANI			
Examination Date: 11-24-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 1115		Container or Package ID Number:	
Container Type: 7 GALLON CONTAINER		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHAM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 90%	Percent Organic Waste: 20%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0%	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7 GALLON CONTAINER (IM)
METAL LABWARE (IM)
FIREBRICKS (OIM)
PAPER (C)
EMPTY BOTTLES (P)
CUT UP CHOP SAW (IM) (OM) (P)
BROKEN GLASS (OIM)

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1115

	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
[illegible]			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
ERIC BOWS (Print Name) — Eric Bows (Signature) — 11-29-12 (Date)

Visual Examination Operator 2:
William H. Riley (Print Name) — William H. Riley (Signature) — 11-29-12 (Date)

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 10-25-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 1024		Container or Package ID Number:	
Container Type: 7 GALLON CONTAINER		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: A E R H AM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 90%	Percent Organic Waste: 40%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7 GALLON CONTAINER (IM)

EMPTY BOTTLES (P) EMPTY TUBES (IM)
DRY RAGS (C)

METAL LABWARE (IM) (AM)

TAPE (C) FIREBRICK (OIM)

PAPER (C) BROKEN FLASHLIGHT (R) (IM) (OIM)

GLASS (OIM) WIRE (IM)

25

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1024

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:

Print Name	Signature	Date
ERIC BOND	Eric Bond	10-25-12

Visual Examination Operator 2:

Print Name	Signature	Date
William H. Riley	William H. Riley	10-25-12

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 2-20-13		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☒N/A		Final Container ☐ N/A	
Container or Package ID Number:		Container or Package ID Number: 1191	
Container Type:		Container Type: 30 GALLON CONTAINER	
Waste Matrix Code:		Waste Matrix Code: S5400	
Waste Stream:		Waste Stream: AERHDM	
		Rigid Liner: ☒Y ☐N Type: 40 MIL	Rigid Liner Lid: ☐ Y ☒N
		Rigid Liner Vented or Hole Size: NA	
Percent Fill:	Percent Organic Waste:	Percent Fill: 85%	Percent Organic Waste: 30%
Layers of Confinement:	Closure Method:	Layers of Confinement: 1	Closure Method: HEAT SEALED FILTERED
Comments (e.g., filter information, NCRs): NA			

Waste Description:

BOTTOM CAN: 1027

TOP CAN: 1018

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1191

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:

Print Name	Signature	Date
ERIC BOND	[signature]	2-20-13

Visual Examination Operator 2:

Print Name	Signature	Date
William H. Riley	[signature]	02-20-13

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 11-29-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 1027		Container or Package ID Number:	
Container Type: 7 GALLON CONTAINER		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 90%	Percent Organic Waste: 40%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:
7 GALLON CONTAINER (IM)
EMPTY BOTTLES (P) PAPER (C)
METAL LABWARE (IM) SAWBLADE (IM)
DRY RAGS (C)
CUT UP PLASTIC PIECES (P)
EMPTY CANS (IM)
CUT UP RUBBER PARTS (R)
FIREBRICKS (OIM)
EMPTY GLASS JAR (OIM)

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1027

	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
[illegible] Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
ERIC BOND — Print Name
Eric Bond — Signature
11-29-12 — Date

Visual Examination Operator 2:
William H. Riley — Print Name
Will H. Ri — Signature
11-29-12 — Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 11-29-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 1018		Container or Package ID Number:	
Container Type: 7 GALLON CONTAINER		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 90%	Percent Organic Waste: 20%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0%	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7 GALLON CONTAINER (IM)
METAL LABWARE (IM)
PAPER (C)
PLASTIC LABWARE (P)
FIREBRICKS (OIM)
EMPTY TUBES (IM)
DRY RAGS (C)

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1018

	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
[illegible]			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
ERIC BOND — Print Name
Eric Bond — Signature
11-29-12 — Date

Visual Examination Operator 2:
William H. Riley — Print Name
William H. Riley — Signature
11-29-12 — Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 02-21-13		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☒ N/A		Final Container ☐ N/A	
Container or Package ID Number:		Container or Package ID Number: 1193	
Container Type:		Container Type: 30 Gallon Container	
Waste Matrix Code:		Waste Matrix Code: S5400	
Waste Stream:		Waste Stream: AERHDM	
		Rigid Liner: ☒Y ☐N Type: 140 Mil	Rigid Liner Lid: ☐ Y ☒N
		Rigid Liner Vented or Hole Size: NA	
Percent Fill:	Percent Organic Waste:	Percent Fill: 85	Percent Organic Waste: 30
Layers of Confinement:	Closure Method:	Layers of Confinement: 1	Closure Method: Heat Sealed filtered
Comments (e.g., filter information, NCRs): NA			

Waste Description:

Bottom Can: 1028

Top Can: 948

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1193

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: N A

Visual Examination Operator 1:
Gary Redman — Print Name
Gary Redman — Signature
02-21-13 — Date

Visual Examination Operator 2:
William H. Riley — Print Name
William H. Riley — Signature
02-21-13 — Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 11-29-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒N/A	
Container or Package ID Number: 1028		Container or Package ID Number:	
Container Type: 7 GALLON CONTAINER		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHAM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 90%	Percent Organic Waste: 40%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0%	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7 GALLON CONTAINER (IM) PAPER (C)
EMPTY BAGS (P) SAWBLADE (IM)
METAL LABWARE (IM)
DISCHARGED BATTERY (P) (IM) (OM)
DRY RAGS (C)
EMPTY BOTTLES (P) FIREBRICKS (OIM)
TAPE (C)
EMPTY GLASS (OIM) ELECTRICAL CORD (OM) (R) (IM)

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1028

	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
ERIC BOND — Print Name
Eric Bond — Signature
11-29-12 — Date

Visual Examination Operator 2:
William H. Riley — Print Name
William H. Riley — Signature
11-29-12 — Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 09-13-12	Batch Number: NA		
Procedure #: CCP-TP-500	Revision #: 11	Video Number N/A	
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A	Recording Start: NA	Recording Stop: NA	
Initial Container ☐ N/A	Final Container ☒ N/A		
Container or Package ID Number: 948	Container or Package ID Number:		
Container Type: 7 GALLON CONTAINER	Container Type:		
Waste Matrix Code: S5400	Waste Matrix Code:		
Waste Stream: AERHDM	Waste Stream:		
	Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐Y ☐N	
	Rigid Liner Vented or Hole Size:		
Percent Fill: 90	Percent Organic Waste: 20	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

(Im) 7 GALLON CONTAINER
(c) DRY RAGS
(Im) SAW BLADE
(Im) STEEL PIECES
(Om) LEAD PIECE
(Im) STEEL FRAME WITH WHEEL
(Im) METAL HARDWARE
(Am) ALUMINUM TUBES
(P) PLASTIC PIECES
(R-Om-Im) ELECTRICAL CORD
(c) PAPER
(c) TAPE
(R) RUBBER PIECES
(P) PLASTIC TUBING
(Im) MANIPULATOR TAPE

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 948

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
GLORIA RUPPERT — Gloria Ruppert — 09-13-12
Print Name — Signature — Date

Visual Examination Operator 2:
William H. Riley — William H. Riley — 09-13-12
Print Name — Signature — Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 02-21-13		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☒ N/A		Final Container ☐ N/A	
Container or Package ID Number:		Container or Package ID Number: 1195	
Container Type:		Container Type: 30 gallon Container	
Waste Matrix Code:		Waste Matrix Code: S S400	
Waste Stream:		Waste Stream: AERHDM	
		Rigid Liner: ☒Y ☐N Type: 140 Mil	Rigid Liner Lid: ☐ Y ☒N
		Rigid Liner Vented or Hole Size: NA	
Percent Fill:	Percent Organic Waste:	Percent Fill: 85	Percent Organic Waste: 60
Layers of Confinement:	Closure Method:	Layers of Confinement: 1	Closure Method: Heat Sealed Filtered
Comments (e.g., filter information, NCRs): NA			

Waste Description:

Bottom Can: 1119

Top Can: 1030

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1195

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
Gary Redman — Print Name
Gary Redman — Signature
02-21-13 — Date

Visual Examination Operator 2:
William H. Biley — Print Name
Signature
02-21-13 — Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 01-10-13		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒N/A	
Container or Package ID Number: 1119		Container or Package ID Number:	
Container Type: 7- Gallon Container		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 90%	Percent Organic Waste: 60%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7-Gallon Container-(IM)
Metal hardware-(IM)
Empty Plastic bags-(P)
Glass labware-(OIM)
Paper-(C)
Metal Cable-(IM)
Empty Plastic bottles-(P)
Electrical Cord-(R)(IM)(OM)
Saw blade-(IM)
Insulation-(OIM)
Table Sweepings-(IM)(AM)(OM)(OIM)(P)(R)(C)
Met Mounts Fragments(P)

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1119

[redacted]	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
[redacted]			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
William H. Riley — Print Name
[signature] — Signature
01-10-13 — Date

Visual Examination Operator 2:
ERIC BOND — Print Name
[signature] — Signature
1-10-13 — Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 01-10-13		Batch Number: NA	
Procedure #CCP-TP-500		Revision #: 11	Video Number NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒N/A	
Container or Package ID Number: 1030		Container or Package ID Number:	
Container Type: 7-Gallon Container		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 90%	Percent Organic Waste: 70%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description: 7-Gallon Container-(IM)

GLOVE BOX GLOVES-(R)
Metal Hardware-(IM)(AM)
Rubber Pieces-(R)
Plastic Pieces-(P)
Empty Plastic Bags-(P)
Tape-(C)
Dry Rags-(C)
Electrical Cords-(OM)(P)(IM)

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1030

	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
[illegible]			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
William H. Riley — Print Name
[signature] — Signature
01-10-13 — Date

Visual Examination Operator 2:
ERIC [illegible] — Print Name
[signature] — Signature
1-10-13 — Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 2-26-13		Batch Number: NA	
Procedure #: CCP-TP-506		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☒ N/A		Final Container ☐ N/A	
Container or Package ID Number:		Container or Package ID Number: 1197	
Container Type:		Container Type: 30 GALLON CONTAINER	
Waste Matrix Code:		Waste Matrix Code: S5400	
Waste Stream:		Waste Stream: AERHD M1	
		Rigid Liner: ☒Y ☐N Type: 140 MIL	Rigid Liner Lid: ☐ Y ☒N
		Rigid Liner Vented or Hole Size: NA	
Percent Fill:	Percent Organic Waste:	Percent Fill: 85%	Percent Organic Waste: 60%
Layers of Confinement:	Closure Method:	Layers of Confinement: 1	Closure Method: HEAT SEALED FIBERBOARD
Comments (e.g., filter information, NCRs): NA			

Waste Description:

BOTTOM CAN: 1026

TOP CAN: 1095

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Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1197

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
ERIC BOND — Print Name
Eric Bond — Signature
2-26-13 — Date

Visual Examination Operator 2:
William H. Riley — Print Name
William H. Riley — Signature
02-26-13 — Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 01-10-13		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒N/A	
Container or Package ID Number: 1026		Container or Package ID Number:	
Container Type: 7-Gallon Container		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHUM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 90%	Percent Organic Waste: 70 %	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7-Gallon Container-(IM)
Metal Hardware-(IM)(AM)
mop head-(C)
Wood-(C)
Discharged battery-(P)(IM)
Insulation-(OIM)
Plastic Caps-(P)
table Sweepings-(IM)(AM)(P)(OIM)(R)(C)
WAX Pen-(P)
Dry Rags-(C)
Copper Pieces-(OM)
Metal Cable-(IM)

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1026

	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
[illegible]			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
William H. Riley — Print Name
Will H. Riley — Signature
01-10-13 — Date

Visual Examination Operator 2:
ERIC BOND — Print Name
Eric Bond — Signature
1-10-13 — Date

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Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 11-01-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒N/A	
Container or Package ID Number: 1095		Container or Package ID Number:	
Container Type: 7-Gallon Container		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 90%	Percent Organic Waste: 30%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description: 7-Gallon Container-(IM)
Paper-(C)
Empty Metal tubes-(IM)
Lead Brick-(OM)
Discharged Battery-(P)(OM)
Cut up Metal-(IM)(AM)
Empty Cans-(IM)
Metal tools-(IM)(AM)
Plastic Bottles-(P)
Met-Mount Fragments-(IM)(P)
Dry Rag-(C)

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1095

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
William H. Riley — Print Name
William H. Riley — Signature
11-01-12 — Date

Visual Examination Operator 2:
ERIC BOND — Print Name
[signature] — Signature
11-1-12 — Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANC			
Examination Date: 2-27-13		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☒ N/A		Final Container ☐ N/A	
Container or Package ID Number:		Container or Package ID Number: 1199	
Container Type:		Container Type: 30 GALLON CONTAINER	
Waste Matrix Code:		Waste Matrix Code: S5400	
Waste Stream:		Waste Stream: AERHDM	
		Rigid Liner: ☒Y ☐N Type: 140 MIL	Rigid Liner Lid: ☐Y ☒N
		Rigid Liner Vented or Hole Size: NA	
Percent Fill:	Percent Organic Waste:	Percent Fill: 85%	Percent Organic Waste: 40%
Layers of Confinement:	Closure Method:	Layers of Confinement: 1	Closure Method: HEAT SEALED FILTERED
Comments (e.g., filter information, NCRs): NA			

Waste Description:

BOTTOM CAN: 1116

TOP CAN: 928

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1199

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
ERIC BOND (Print Name) — Eric Bond (Signature) — 2-27-13 (Date)

Visual Examination Operator 2:
William H. Riley (Print Name) — William H. Riley (Signature) — 02-27-13 (Date)

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Attachment 1 – Visual Examination Data Form

Site ID: BHANL			
Examination Date: 01-10-13		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒N/A	
Container or Package ID Number: 1116		Container or Package ID Number:	
Container Type: 7- Gallon Container		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 90%	Percent Organic Waste: 70%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7- Gallon Container-(IM)
Tape-(C)
Metal Hardware-(IM)(AM)
Metal Can-empty-(AM)
Dry Rags-(C)
Plastic Labware-(P)
Electrical Cords-(R)(OM)(IM)
Empty Plastic Bags-(P)
Glass Labware-(OIM)
Paper-(C)
Glove Box Glove-(R)
Dry Rags-(C)
Saw blade-(IM)
O-Ring-(R)

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1116

	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
[illegible]			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
William H. Riley — Print Name
Signature — Date: 01-10-13

Visual Examination Operator 2:
Bill Bond — Print Name
Signature — Date: 1-10-13

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 11-8-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 928		Container or Package ID Number:	
Container Type: 7 GALLON CONTAINER		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 90% Percent Organic Waste: 20%		Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7GALLON CONTAINER (IM) DRY RAGS (C)
BATTERY CHARGER (P) (IM) (OM) FIRE BRICK PIECES (OIM)
WIRE (IM)
O-RINGS (R)
METAL LIGHT COVER (IM)
ELECTRICAL CORDS (R) (OM)
METAL LABWARE (IM) (AM)
EMPTY BOTTLES (P)
PAPER (C)

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 928

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
ERIC BOND (Print Name) — Signature — 11-8-12 (Date)

Visual Examination Operator 2:
William H. Riley (Print Name) — Signature — 11-08-12 (Date)

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 2-27-13		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☒ N/A		Final Container ☐ N/A	
Container or Package ID Number:		Container or Package ID Number: 1201	
Container Type:		Container Type: 30 GALLON CONTAINER	
Waste Matrix Code:		Waste Matrix Code: S5400	
Waste Stream:		Waste Stream: AERHDM	
		Rigid Liner: ☒Y ☐N Type: 140 MIL	Rigid Liner Lid: ☐Y ☒N
		Rigid Liner Vented or Hole Size: NA	
Percent Fill:	Percent Organic Waste:	Percent Fill: 85%	Percent Organic Waste: 40%
Layers of Confinement:	Closure Method:	Layers of Confinement: 1	Closure Method: HEAT SEALED FICTEGRID
Comments (e.g., filter information, NCRs): VE COMPLETE ON 2-28-13			

Waste Description:

BOTTOM CAN: 1020

TOP CAN: 1118

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1201

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1: ERIC BOND (Print Name) — Signature — 2-28-13 (Date)

Visual Examination Operator 2: William H. Riley (Print Name) — Signature — 02-28-13 (Date)

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Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 10-25-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 1020		Container or Package ID Number:	
Container Type: 7 GALLON CONTAINER		Container Type:	
Waste Matrix Code: S6400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 90%	Percent Organic Waste: 20%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7 GALLON CONTAINER (IM) GLASS (OIM)
FIRE BRICK (OIM) SAW BLADE (IM)
DRY RAGS (C)
METAL LABWARE (IM) (AM)
PLASTIC LABWARE (P)
MET MOUNT FRAGEMENTS (IM) (P)

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1020

Prohibited Item(s) Summary	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
ERIC BOWS (Print Name) — Signature — 10-25-12 (Date)

Visual Examination Operator 2:
William H. Riley (Print Name) — Signature — 10-25-12 (Date)

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 01-10-13		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 1118		Container or Package ID Number:	
Container Type: 7-Gallon Container		Container Type:	
Waste Matrix Code: 55400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 90%	Percent Organic Waste: 70%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7-Gallon Container-(IM)
Metal Hardware-(IM)
Metal Pieces-(IM)(AM)
Glove Box Gloves-(R)
Dry Rags-(C)
Vacuum filter-(C)(P)
Saw blade-(IM)
Paper-(C)
Empty Plastic Bags-(P)
Tape-(C)

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1118

	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH CH Check			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
William H. Riley — Print Name
Will H. R — Signature
01-10-13 — Date

Visual Examination Operator 2:
ERIC BOND — Print Name
Eric Bond — Signature
1-10-13 — Date

Attachment 2 – Visual Examination Independent Technical Reviewer Checklist

Batch Data Report No.: ANL RHVE13004

1. Were data generation and reduction conducted in a technically correct manner in accordance with the methods (procedure) used?	☐ NO	☒ YES	☐ N/A
2. Was the correct revision of the operating procedure used?	☐ NO	☒ YES	☐ N/A
3. Were all the transcription errors corrected?	☐ NO	☐ YES	☒ N/A
4. Are BDR contents complete and match the Visual Examination Batch Data report Table of Contents?	☐ NO	☒ YES	☐ N/A
5. Does the BDR include VE for no more than 20 containers?	☐ NO	☒ YES	☐ N/A
6. Is all data recorded signed and dated in reproducible ink?	☐ NO	☒ YES	☐ N/A
7. Is all raw data recorded clearly, legibly, and accurately?	☐ NO	☒ YES	☐ N/A
8. Are all changes to original data lined out, initialed and dated by the individual making the changes or an individual authorized to make the change?	☐ NO	☒ YES	☐ N/A
9. Is there an adequate written description of the contents?	☐ NO	☒ YES	☐ N/A
10. Were the recording equipment checks satisfactory?	☐ NO	☐ YES	☒ N/A
11. Has each container in this BDR been evaluated for the presence of prohibited wastes?	☐ NO	☒ YES	☐ N/A
12. Has the physical waste form in each container in this BDR been evaluated against the Waste Stream Description and the Waste Matrix Code?	☐ NO	☒ YES	☐ N/A
13. Have the RH Quality Assurance Objectives (QAOs) for VE been met?	☐ NO	☒ YES	☐ N/A
Precision – reconciled discrepancies between operators or between the operator and ITR.	☐	☒	☐
Accuracy – trained operators	☐	☒	☐
Representativeness – description of container contents	☐	☒	☐
Completeness – completed data form and/or recording	☐	☒	☐
Comparability – proper training and adequate AK source documents are available for unopened containers.	☐	☒	☐
14. Were NCRs generated included in the BDR?	☐ NO	☐ YES	☒ N/A
Comments: N/A			

Independent Technical Reviewer:

F. Wesley Root — Printed Name

F. Wesley Root — Signature

3-7-13 — Date

DIVIDER PAGE ONLY

Not part of page count

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523, 575-234-7431, or 575-234-7095

Fax Number: 575-234-7033

[X] Original Record
[ ] Fax Record
[ ] Electronic Record
[ ] Copy

Attn:	Sheri Punchios	From:	Wes Root
Ship to:	S. M. Stoller WIPP Rec. Mgmt. Govt.	Site:	ANL-E
	CCP Records	Company:	Nuclear Waste Partnership LLC
	4021 National Parks Hwy	Telephone Number:	630-252-8306
	Carlsbad, NM 88220	Date Sent:	3-7-13
Telephone Number:	575-234-7095		

Document Number	Title / Description	Record Date	Total Pages
ANLRHVE13004	Batch Data Report – Waste Container ID Numbers: 1183, 1185, 1187, 1189, 1191, 1193, 1195, 1197, 1199 and 1201.	03-06-13	63
	WR 3-7-13		

Comments

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

	Signature	Printed Name	Date
Records Accepted [X]	Paulette Henry	Paulette Henry	3·12·2013
Records Rejected [ ]			

Reason for Rejection:

Re-submittal:

Signature	Printed Name	Date

****
*** TX REPORT ***
****

TRANSMISSION OK

TX/RX NO	3238
DESTINATION TEL #	916302526706
DESTINATION ID	WES ROOT
ST. TIME	03/12 15:43
TIME USE	00'17
PAGES SENT	1
RESULT	OK

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523, 575-234-7431, or 575-234-7095

Fax Number: 575-234-7033

[X] Original Record [ ] Copy
[ ] Fax Record
[ ] Electronic Record

Attn:	Sheri Punchios	From:	Wes Root
Ship to:	S. M. Stoller WIPP Rec. Mgmt. Govt.	Site:	ANL-E
	CCP Records	Company:	Nuclear Waste Partnership LLC
	4021 National Parks Hwy	Telephone Number:	630-252-8306
	Carlsbad, NM 88220	Date Sent:	3-7-13
Telephone Number:	575-234-7095		

Document Number	Title / Description	Record Date	Total Pages
ANLRHVE13004	Batch Data Report – Waste Container ID Numbers: 1183, 1185, 1187, 1189, 1191, 1193, 1195, 1197, 1199 and 1201.	03-06-13	63
	WR 3-7-13		

Comments

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

DIVIDER PAGE ONLY

Not part of page count

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523, 575-234-7431, or 575-234-7095

Fax Number: 575-234-7033

[ ] Original Record [ ] Copy
[ ] Fax Record
[X] Electronic Record

Attn:	Sheila Pearcy	From:	Laura Nelson
Ship to:	CCP Records	Site:	Denver
	4021 National Parks Highway	Company:	NWP
	MS:GSA:212	Telephone Number:	303-843-2269
	Carlsbad, NM 88220	Date Sent:	3/13/13
Telephone Number:	575-234-7523		

Document Number	Title / Description	Record Date	Total Pages
ANLRHVE13004	SPM Checklist	3/13/13	1
	NA		

Comments

NA

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

Records Accepted [✓] Sheila Pearcy (Signature) SHEILA PEARCY (Printed Name) 3/13/13 (Date)

Records Rejected [ ] _____ (Signature) _____ (Printed Name) _____ (Date)

Reason for Rejection:

Re-submittal: _____ (Signature) _____ (Printed Name) _____ (Date)

```
*********************
***   TX REPORT   ***
*********************
```

TRANSMISSION OK

TX/RX NO	3255
DESTINATION TEL #	913038432208
DESTINATION ID	DENVER
ST. TIME	03/13 13:09
TIME USE	00'16
PAGES SENT	1
RESULT	OK

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220
Telephone Number: 575-234-7523, 575-234-7431, or 575-234-7095
Fax Number: 575-234-7033

[ ] Original Record [ ] Copy
[ ] Fax Record
[X] Electronic Record

Attn:	Sheila Pearcy	From:	Laura Nelson
Ship to:	CCP Records	Site:	Denver
	4021 National Parks Highway	Company:	NWP
	MS:GSA:212	Telephone Number:	303-843-2269
	Carlsbad, NM 88220	Date Sent:	3/13/13
Telephone Number:	575-234-7523		

Document Number	Title / Description	Record Date	Total Pages
ANLRHVE13004	SPM Checklist	3/13/13	1
	NA		

Comments

NA

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

Records Accepted [✓] Sheila Pearcy (Signature) SHEILA PEARCY (Printed Name) 3/13/13 (Date)

AK18

Attachment 3 – Visual Examination Site Project Manager Checklist

Batch Data Report No.: ANLRHVE13007

1. Has all the data received an independent technical review as evidenced by a completed checklist (Attachment 2) and the appropriate ITR signature?		☐ NO	☑ YES
2. Are BDR contents complete and match the Visual Examination Batch Data Report Table of Contents?		☐ NO	☑ YES
3. Is the BDR complete (appropriately filled in forms for each container)?		☐ NO	☑ YES
4. Have the RH Quality Assurance Objectives (QAOs) for VE been met?			
Precision – reconciled discrepancies between operators		☐ NO	☑ YES
Accuracy – trained operators		☐ NO	☑ YES
Representativeness – description of container contents		☐ NO	☑ YES
Completeness – completed data form and/or recording		☐ NO	☑ YES
Comparability – proper training and adequate AK for unopened containers		☐ NO	☑ YES
5. Were NCRs generated included in the BDR?	☐ NO	☐ YES	☑ N/A

Comments

No NCR'S.

SPM:

Laura Nelson
Printed Name

Laura Nelson
Signature

6/12/2013
Date

NTPC RECORDS ORIGINAL
DATE REC'D 6/12/13

Attachment 4 – Visual Examination Batch Data Report Cover Sheet

Batch Data Report No.: ANLRHVE13007 Date: 05-31-13

	Waste Container ID Number:
1	1241
2	1242
3	
4	
5	
6	
7	
8	
9	05-31-13
10	
11	
12	WHR
13	
14	
15	
16	
17	
18	
19	
20	

NTPC RECORDS ORIGINAL
DATE REC'D 6/12/13

01

Attachment 5 – Visual Examination Batch Data Report Table of Contents

Batch Data Report No.: ANLRHVE13007 Date: 05-31-13

Item	Description	Page No.
1	Visual Examination Batch Data Report Cover Sheet (Attachment 4)	1
2	Visual Examination Batch Data Report Table of Contents (Attachment 5)	2
3	Visual Examination Data Forms (Attachment 1)	3
4	Visual Examination Independent Technical Reviewer Checklist (Attachment 2)	15
5	Copy of NCRs (N/A [If not applicable])	NA

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 5-30-13		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☒ N/A		Final Container ☐ N/A	
Container or Package ID Number:		Container or Package ID Number: 1241	
Container Type:		Container Type: 30 GALLON CONTAINER	
Waste Matrix Code:		Waste Matrix Code: S5400	
Waste Stream:		Waste Stream: AERHDM	
		Rigid Liner: ☒Y ☐N Type: 140 MIL	Rigid Liner Lid: ☐ Y ☒N
		Rigid Liner Vented or Hole Size: NA	
Percent Fill:	Percent Organic Waste:	Percent Fill: 85	Percent Organic Waste: 20
Layers of Confinement:	Closure Method:	Layers of Confinement: 1	Closure Method: HEAT SEALED FILTERED
Comments (e.g., filter information, NCRs): NA			

Waste Description:

BOTTOM CAN: 949

TOP CAN: 1070

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1241

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
ERIC BOND — Print Name
[signature] — Signature
5-30-13 — Date

Visual Examination Operator 2:
William H. Riley — Print Name
[signature] — Signature
05-30-13 — Date

04

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 09-13-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 949		Container or Package ID Number:	
Container Type: 7 GALLON CONTAINER		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 90	Percent Organic Waste: 20	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

(Im) 7 GALLON CONTAINER
(Im) SAW BLADE
(c) DRY RAGS
~~(e)~~ (P) WHR-09-13-12 PLASTIC PIECE
(Om) LEAD PIECE
(Im) STEEL FRAME WITH WHEEL
(Im) METAL HARDWARE
(c) TAPE
(c) CARDBOARD
(P) VACUUM HOSE
(R) GLOVE BOX GLOVE
(Im) MANIPULATOR TAPE

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 949

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
GLORIA RUPPERT — Gloria Ruppert — 9-13-12
Print Name — Signature — Date

Visual Examination Operator 2:
William H. Riley — William H. Riley — 09-13-12
Print Name — Signature — Date

Attachment 1 – Visual Examination Data Form

Site ID: RHBNL			
Examination Date: 3-11-13		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 10170		Container or Package ID Number:	
Container Type: 7 GALLON CONTAINER		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AEBHLM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 80%	Percent Organic Waste: 20%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7 GALLON CONTAINER (IM)
METAL LABWARE (IM)(AM)
EMPTY BAGS (P)
EMPTY BOTTLES (P)
TAPE (C)
PAPER (C)
SAW BLADES (IM)

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1070

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:

Print Name	Signature	Date
ERIC BOND	Eric Bond	3-11-13

Visual Examination Operator 2:

Print Name	Signature	Date
William H. Riley	William H. Riley	03-11-13

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 5-30-13		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☒ N/A		Final Container ☐ N/A	
Container or Package ID Number:		Container or Package ID Number: 1242	
Container Type:		Container Type: 30 GALLON CONTAINER	
Waste Matrix Code:		Waste Matrix Code: S5400	
Waste Stream:		Waste Stream: AERHDM	
		Rigid Liner: ☒Y ☐N Type: 140 mil	Rigid Liner Lid: ☐ Y ☒N
		Rigid Liner Vented or Hole Size: NA	
Percent Fill:	Percent Organic Waste:	Percent Fill: 85%	Percent Organic Waste: 30%
Layers of Confinement:	Closure Method:	Layers of Confinement:	Closure Method: HEAT SEALED FILTERED
Comments (e.g., filter information, NCRs): NA			

Waste Description:

BOTTOM CAN: 1133

TOP CAN: 1021

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1242

	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
ERIC BROWN — Print Name
[signature] — Signature
5-30-13 — Date

Visual Examination Operator 2:
William H. Riley — Print Name
[signature] — Signature
05-30-13 — Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANC			
Examination Date: 3-11-13		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 1133		Container or Package ID Number:	
Container Type: 7 GALLON CONTAINER		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHAM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 90%	Percent Organic Waste: 30%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:
7 GALLON CONTAINER (IM)
MANIPULATOR TAPE (IM)
GLOVEBOX GLOVES (R)
METAL LABWARE (IM)
TAPE (C)
EMPTY CANS (AM)
O-RING (R)
PLASTIC LABWARE (P)
CARDBOARD (C)

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1133

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: N/A

Visual Examination Operator 1:
Print Name: ERIC BOND Signature: [signature] Date: 3-11-13

Visual Examination Operator 2:
Print Name: William H. Riley Signature: [signature] Date: 03-11-13

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 11-01-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒N/A	
Container or Package ID Number: 1021		Container or Package ID Number:	
Container Type: 7-Gallon Container		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 90%	Percent Organic Waste: 30%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description: 7-Gallon Container-(IM)
Metal Pieces-(IM)
Asbestos Insulation-(OIM)
Dry Rags-(C)
Empty tubes-(IM)
Metal hardware-(IM)
Empty Cans WHR 11-01-12 ~~(AM)~~ (IM)
Plastic Cap - (P)
Empty plastic bags-(P)
tape-(C)
Paper-(C)

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1021

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
William H. Riley — Print Name
Signature
11-01-12 — Date

Visual Examination Operator 2:
Eric Bond — Print Name
Signature
11-1-12 — Date

Attachment 2 – Visual Examination Independent Technical Reviewer Checklist

Batch Data Report No.: ANL RHVE 13 007

1. Were data generation and reduction conducted in a technically correct manner in accordance with the methods (procedure) used?	☐ NO	☒ YES	☐ N/A
2. Was the correct revision of the operating procedure used?	☐ NO	☒ YES	☐ N/A
3. Were all the transcription errors corrected?	☐ NO	☐ YES	☒ N/A
4. Are BDR contents complete and match the Visual Examination Batch Data report Table of Contents?	☐ NO	☒ YES	☐ N/A
5. Does the BDR include VE for no more than 20 containers?	☐ NO	☒ YES	☐ N/A
6. Is all data recorded signed and dated in reproducible ink?	☐ NO	☒ YES	☐ N/A
7. Is all raw data recorded clearly, legibly, and accurately?	☐ NO	☒ YES	☐ N/A
8. Are all changes to original data lined out, initialed and dated by the individual making the changes or an individual authorized to make the change?	☐ NO	☒ YES	☐ N/A
9. Is there an adequate written description of the contents?	☐ NO	☒ YES	☐ N/A
10. Were the recording equipment checks satisfactory?	☐ NO	☐ YES	☒ N/A
11. Has each container in this BDR been evaluated for the presence of prohibited wastes?	☐ NO	☒ YES	☐ N/A
12. Has the physical waste form in each container in this BDR been evaluated against the Waste Stream Description and the Waste Matrix Code?	☐ NO	☒ YES	☐ N/A
13. Have the RH Quality Assurance Objectives (QAOs) for VE been met?	☐ NO	☒ YES	☐ N/A
Precision – reconciled discrepancies between operators or between the operator and ITR.	☐	☒	☐
Accuracy – trained operators	☐	☒	☐
Representativeness – description of container contents	☐	☒	☐
Completeness – completed data form and/or recording	☐	☒	☐
Comparability – proper training and adequate AK source documents are available for unopened containers.	☐	☒	☐
14. Were NCRs generated included in the BDR?	☐ NO	☐ YES	☒ N/A

Comments: NA

Independent Technical Reviewer:

Gary Redman — Printed Name

Gary Redman — Signature

06-10-13 — Date

DIVIDER PAGE ONLY

Not part of page count

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523, 575-234-7431, or 575-234-7095

Fax Number: 575-234-7033

[X] Original Record [ ] Copy
[ ] Fax Record
[ ] Electronic Record

Attn:	Sheila Pearcy	From:	Wes Root
Ship to:	S.M. Stoller Rec. Mgmt. Govt.	Site:	ANL-E
	CCP Records	Company:	Nuclear Waste Partnership LLC
	4021 National Parks Hwy	Telephone Number:	630-252-8306
	Carlsbad, NM 88220	Date Sent:	6-10-13
Telephone Number:	575-234-7523		

Document Number	Title / Description	Record Date	Total Pages
ANLRHVE13007	Batch Data Report – Waste Container ID Numbers: 1241, 1242	5-31-13	15
	WR 6-10-13		

Comments

None

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

	Signature	Printed Name	Date
Records Accepted [✓]	Jeff Patterson	Jeffrey Patterson	6/11/13
Records Rejected [ ]			

Reason for Rejection:

Re-submittal:

Signature	Printed Name	Date

****
*** TX REPORT ***
****

TRANSMISSION OK

TX/RX NO	2540
DESTINATION TEL #	916302526706
DESTINATION ID	WES ROOT
ST. TIME	06/12 09:40
TIME USE	00'16
PAGES SENT	1
RESULT	OK

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523, 575-234-7431, or 575-234-7095

Fax Number: 575-234-7033

[X] Original Record [ ] Copy
[ ] Fax Record
[ ] Electronic Record

Attn:	Sheila Pearcy	From:	Wes Root
Ship to:	S.M. Stoller Rec. Mgmt. Govt.	Site:	ANL-E
	CCP Records	Company:	Nuclear Waste Partnership LLC
	4021 National Parks Hwy	Telephone Number:	630-252-6306
	Carlsbad, NM 88220	Date Sent:	6-10-13
Telephone Number:	575-234-7523		

Document Number	Title / Description	Record Date	Total Pages
ANLRHVE13007	Batch Data Report – Waste Container ID Numbers: 1241 1242	5-31-13	15
	WR 6-12-13		

Comments

None

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523, 575-234-7431, or 575-234-7095

Fax Number: 575-234-7033

[ ] Original Record [ ] Copy
[ ] Fax Record
[X] Electronic Record

Attn:	Jeff Patterson	From:	Laura Nelson
Ship to:	CCP Records	Site:	Denver
	4021 National Parks Highway	Company:	NWP
	MS:GSA:212	Telephone Number:	303-843-2269
	Carlsbad, NM 88220	Date Sent:	6/10/13
Telephone Number:	575-234-7523		

Document Number	Title / Description	Record Date	Total Pages
ANLRHVE13007	SPM Checklist	6/10/13	1
	NA		

Comments

NA

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

	Signature	Printed Name	Date
Records Accepted [✓]	[signature]	Jeffrey Patterson	6/12/13
Records Rejected [ ]			

Reason for Rejection:

Re-submittal:

Signature	Printed Name	Date

```
*********************
***   TX REPORT   ***
*********************

TRANSMISSION OK

TX/RX NO                4747
DESTINATION TEL #       913038432208
DESTINATION ID          DENVER
ST. TIME                06/12 10:55
TIME USE                00'15
PAGES SENT                1
RESULT                  OK
```


Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523, 575-234-7431, or 575-234-7095

Fax Number: 575-234-7033

[ ] Original Record
[ ] Fax Record
[X] Electronic Record
[ ] Copy

Attn:	Jeff Patterson	From:	Laura Nelson
Ship to:	CCP Records	Site:	Denver
	4021 National Parks Highway	Company:	NWP
	MS:GSA:212	Telephone Number:	303-843-2269
	Carlsbad, NM 88220	Date Sent:	6/10/13
Telephone Number:	575-234-7523		

Document Number	Title / Description	Record Date	Total Pages
ANLRHVE13007	SPM Checklist	6/10/13	1
	NA		

Comments

NA

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

AK19

Attachment 3 – Visual Examination Site Project Manager Checklist

Batch Data Report No.: ANLRHVE13002

1. Has all the data received an independent technical review as evidenced by a completed checklist (Attachment 2) and the appropriate ITR signature?		☐ NO	☑ YES
2. Are BDR contents complete and match the Visual Examination Batch Data Report Table of Contents?		☐ NO	☑ YES
3. Is the BDR complete (appropriately filled in forms for each container)?		☐ NO	☑ YES
4. Have the RH Quality Assurance Objectives (QAOs) for VE been met?			
Precision – reconciled discrepancies between operators		☐ NO	☑ YES
Accuracy – trained operators		☐ NO	☑ YES
Representativeness – description of container contents		☐ NO	☑ YES
Completeness – completed data form and/or recording		☐ NO	☑ YES
Comparability – proper training and adequate AK for unopened containers		☐ NO	☑ YES
5. Were NCRs generated included in the BDR?	☐ NO	☐ YES	☑ N/A

Comments

No NCRs.

SPM:

Laura Nelson
Printed Name

Laura Nelson
Signature

2-13-13
Date

NTPC RECORDS ORIGINAL
DATE REC'D 2.14.13

Attachment 4 – Visual Examination Batch Data Report Cover Sheet

Batch Data Report No.: ANLRHVE13002 Date: 02-07-13

	Waste Container ID Number:
1	1172
2	1174
3	1176
4	1178
5	1180
6	1182
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	GR 02-07-13
17	
18	
19	
20	

CCP RECORDS ORIGINAL
DATE REC'D 2.12.13

01

Attachment 5 – Visual Examination Batch Data Report Table of Contents

Batch Data Report No.: ANLRHVE13002 Date: 02-07-13

Item	Description	Page No.
1	Visual Examination Batch Data Report Cover Sheet (Attachment 4)	1
2	Visual Examination Batch Data Report Table of Contents (Attachment 5)	2
3	Visual Examination Data Forms (Attachment 1)	3
4	Visual Examination Independent Technical Reviewer Checklist (Attachment 2)	63
5	Copy of NCRs (N/A [If not applicable])	NA

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 1-24-13		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☒ N/A		Final Container ☐ N/A	
Container or Package ID Number:		Container or Package ID Number: 1172	
Container Type:		Container Type: 30 GALLON CONTAINER	
Waste Matrix Code:		Waste Matrix Code: S5400	
Waste Stream:		Waste Stream: AEBHDM	
		Rigid Liner: ☒Y ☐N Type: 140 MIL	Rigid Liner Lid: ☐ Y ☒N
		Rigid Liner Vented or Hole Size: NA	
Percent Fill:	Percent Organic Waste:	Percent Fill: 85%	Percent Organic Waste: 0%
Layers of Confinement:	Closure Method:	Layers of Confinement: 1	Closure Method: HEAT SEALED FILTER
Comments (e.g., filter information, NCRs): NA			

Waste Description:

BOTTOM CAN: 1016

TOP CAN: 990

03

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1172

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:

Print Name	Signature	Date
ERIC BOND	[signature]	1-24-13

Visual Examination Operator 2:

Print Name	Signature	Date
GLORIA RUPPERT	Gloria Ruppert	1-24-13

04

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 12-06-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒N/A	
Container or Package ID Number: 1016		Container or Package ID Number:	
Container Type: 7 Gallon Container		Container Type:	
Waste Matrix Code: S 5400		Waste Matrix Code:	
Waste Stream: AERHOM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 85	Percent Organic Waste: 0	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7 Gallon Container (IM)
Shield Pot Centering Ring (IM)
Shield Pot # 8269

05

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1016

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:		
Gary Redman	Gary Redman	12-06-12
Print Name	Signature	Date

Visual Examination Operator 2:		
ERIC BOND	[signature]	12-6-12
Print Name	Signature	Date

06

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 11-28-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒N/A	
Container or Package ID Number: 8269		Container or Package ID Number:	
Container Type: 1-Gallon Shield Pot		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 90%	Percent Organic Waste: 0%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

Vented 1-Gallon 3/4-INCH Thick Lead Lined Shield Pot-(OM)(IM)

Loop debris - (OM)(IM)

TMI Grab Sample debris - (OM)(IM)

07

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 8269

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
William H. Riley — Print Name
Signature — Date: 11-28-12

Visual Examination Operator 2:
ERIC BOND — Print Name
Signature — Date: 11-28-12

08

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 12-06-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒N/A	
Container or Package ID Number: 990		Container or Package ID Number:	
Container Type: 7 Gallon Container		Container Type:	
Waste Matrix Code: S 5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 85	Percent Organic Waste: 0	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7 Gallon Container (Im)
Shield Pot Centering Ring (Im)
Shield Pot # 7233

09

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 990

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: N.A

Visual Examination Operator 1:

Print Name	Signature	Date
Gary Redman	Gary Redman	12-06-12

Visual Examination Operator 2:

Print Name	Signature	Date
ERIC BOND	[illegible]	12-6-12

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 8-7-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 7233		Container or Package ID Number:	
Container Type: 1 gallon Shield pot		Container Type:	
Waste Matrix Code: S 5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 60	Percent Organic Waste: 0	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): ~~NA~~ GR 12-6-12 VE completed GR 12-6-12 ON 12-6-12			

Waste Description:
Vented 1 gallon 3/4" Thick lead lined Shield Pot (OM) (IM)
Fuel and Cladding pieces (OM) (IM)

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Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 7233

	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:		
Gary Redman	Gary Redman	08-07-12
Print Name	Signature	Date
Gary Redman	Gary Redman	12-6-12

Visual Examination Operator 2:		
ERIC BOND	Eric Bond	8-7-12
Print Name	Signature	Date
ERIC BOND	Eric Bond	12-6-12

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 1-24-13		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☒ N/A		Final Container ☐ N/A	
Container or Package ID Number:		Container or Package ID Number: 1174	
Container Type:		Container Type: 30 GALLON CONTAINER	
Waste Matrix Code:		Waste Matrix Code: S5400	
Waste Stream:		Waste Stream: AERAD M	
		Rigid Liner: ☒Y ☐N Type: 140 MIL	Rigid Liner Lid: ☐ Y ☒N
		Rigid Liner Vented, or Hole Size: NA	
Percent Fill:	Percent Organic Waste:	Percent Fill: 85%	Percent Organic Waste: 0%
Layers of Confinement:	Closure Method:	Layers of Confinement: 1	Closure Method: HEAT SEALED FILTERED
Comments (e.g., filter information, NCRs): NA			

Waste Description:

BOTTOM CAN: 974

TOP CAN: 1088

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1174

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:

Print Name	Signature	Date
ERIC BOWA	Eric Bowa	1-24-13

Visual Examination Operator 2:

Print Name	Signature	Date
GLORIA RUPPERT	Gloria Ruppert	1-24-13

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 12-06-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒N/A	
Container or Package ID Number: 979		Container or Package ID Number:	
Container Type: 7 Gallon Container		Container Type:	
Waste Matrix Code: S 5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 85	Percent Organic Waste: 0	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7 Gallon Container (IM)
Shield Pot Centering Ring (IM)
Shield Pot # 8255

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 974

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on *liner* bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:

Print Name	Signature	Date
Gary Redman	Gary Redman	12-06-12

Visual Examination Operator 2:

Print Name	Signature	Date
ERIC ISONA	[illegible]	12-6-12

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 11-27-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 8255		Container or Package ID Number:	
Container Type: 1GALLON SHIELD POT		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 70%	Percent Organic Waste: 0%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:
VENTED 1GALLON "3/4" INCH THICK LEAD LINED SHIELD POT (OM) (IM)

FUEL AND CLADDING (OM) (IM)
PIECES

LOOP SECTION FRAGMENTS (OM) (IM)

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 8255

Prohibited Items	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1: ERIC BOND Print Name	Eric Bond Signature	11-27-12 Date
Visual Examination Operator 2: William H. Riley Print Name	William H. Riley Signature	11-27-12 Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 12-06-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒N/A	
Container or Package ID Number: 1088		Container or Package ID Number:	
Container Type: 7 Gallon Container		Container Type:	
Waste Matrix Code: S 5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 85	Percent Organic Waste: 0	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7 Gallon Container (IM)
Shield Pot Centering Ring (IM)
Shield Pot # 8271

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1088

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1: Gary Redman Print Name	Gary Redman Signature	12-06-12 Date
Visual Examination Operator 2: ERIC BOWLS Print Name	Signature	12-6-12 Date

Attachment 1 – Visual Examination Data Form

Site ID: RHAN1			
Examination Date: 11-27-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 8271		Container or Package ID Number:	
Container Type: 1 GALLON SHIELD POT		Container Type:	
Waste Matrix Code: S 5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 80%	Percent Organic Waste: 0%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description: VENTED 1 GALLON "3/4" INCH THICK LEAD LINED SHIELD POT (OM) (IM)

FUEL AND CLADDING (OM) (IM)
FRAGMENTS

LOOP SECTION PIECES (OM) (IM)

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 8271

	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
Trivial Checks			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: N/A

Visual Examination Operator 1:
ERIC BOND — Print Name
Signature
11-27-12 — Date

Visual Examination Operator 2:
William H. Riley — Print Name
Signature
11-27-12 — Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 1-28-13		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☒ N/A		Final Container ☐ N/A	
Container or Package ID Number:		Container or Package ID Number: 1176	
Container Type:		Container Type: 30 GALLON CONTAINER	
Waste Matrix Code:		Waste Matrix Code: S5400	
Waste Stream:		Waste Stream: AERHAM	
		Rigid Liner: ☒Y ☐N Type: 140 mil	Rigid Liner Lid: ☐ Y ☒N
		Rigid Liner Vented or Hole Size: NA	
Percent Fill:	Percent Organic Waste:	Percent Fill: 85%	Percent Organic Waste: 0%
Layers of Confinement:	Closure Method:	Layers of Confinement: 1	Closure Method: HEAT SEALED FILTERED
Comments (e.g., filter information, NCRs): NA			

Waste Description:

BOTTOM CAN: 1017

TOP CAN: 993

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1176

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1: ERIC BOND — Print Name; Eric Bond — Signature; 1-28-13 — Date

Visual Examination Operator 2: GLORIA RUPPERT — Print Name; Gloria Ruppert — Signature; 1-28-13 — Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 05-07-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒N/A	
Container or Package ID Number: 1017		Container or Package ID Number:	
Container Type: 7-Gallon Container		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 85%	Percent Organic Waste: 0%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7-Gallon Container-(IM)
Shield Pot Centering Ring-(IM)
Shield Pot # 9223

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1017

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:		
William H. Riley	William H. Riley	05-07-12
Print Name	Signature	Date

Visual Examination Operator 2:		
Pat Beallis	Pat Beallis	5-7-12
Print Name	Signature	Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 04-25-12		Batch Number: N/A	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: N/A
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: N/A	Recording Stop: N/A
Initial Container G-R 04-26-12 ☐ N/A		Final Container ☒N/A	
Container or Package ID Number: ~~7223~~ 9223		Container or Package ID Number:	
Container Type: 1 Gallon Shield Pot		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHIDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 10%	Percent Organic Waste: 0	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: N/A	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): N/A			

Waste Description:

Vented 1 Gallon 3/4 inch Thick Lead Lined Shield Pot (OM)(IM)
Fuel Pieces (OM) (IM)
Fuel and cladding (OM)(IM)

Attachment 1 – Visual Examination Data Form (continued)

G-R 04-26-12
9223

Container or Package ID Number ~~7223~~

Prohibited Item(s) Summary	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: N/A

Visual Examination Operator 1: Spencer Pattee Print Name Spencer Pattee	Signature	04-25-12 Date 4-26-12
Visual Examination Operator 2: Gary Redman Print Name Gary Redman	Signature Gary Redman	04-25-12 Date 04-26-12

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 05-07-12		Batch Number: NA	
Procedure #CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒N/A	
Container or Package ID Number: 993		Container or Package ID Number:	
Container Type: 7-Gallon Container		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 85%	Percent Organic Waste: 0%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7-Gallon Container-(IM)
Shield Pot Centering Ring-(IM)
Shield Pot # 7256

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 993

Prohibited Items Summary	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:		
William H. Riley	William H. Riley	05-07-12
Print Name	Signature	Date

Visual Examination Operator 2:		
Pat Beallis	Pat Beallis	5-7-12
Print Name	Signature	Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 04-25-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒N/A	
Container or Package ID Number: 7256		Container or Package ID Number:	
Container Type: 1 Gallon Shield Pot		Container Type:	
Waste Matrix Code: S 5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 20	Percent Organic Waste: 0	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description: Vented 1 Gallon 3/4" Thick lead lined Shield Pot (Om) (Im)

Loop Section (IRRegular Shape) (Im) (Om) ~~(0 Im)~~ GR 04-25-12

Fuel and Cladding (Im)(Om) ~~(0 Im)~~ GR 04-25-12

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 7256

Prohibited Items Summary	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
Gary Redman — Print Name
Gary Redman — Signature
04-25-12 — Date

Visual Examination Operator 2:
Spencer Pattee — Print Name
Spencer Pattee — Signature
04-25-12 — Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 1-29-13		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☒ N/A		Final Container ☐ N/A	
Container or Package ID Number:		Container or Package ID Number: 1178	
Container Type:		Container Type: 30 GALLON CONTAINER	
Waste Matrix Code:		Waste Matrix Code: S5400	
Waste Stream:		Waste Stream: AERHAM	
		Rigid Liner: ☒Y ☐N Type: 140 MIL	Rigid Liner Lid: ☐Y ☒N
		Rigid Liner Vented or Hole Size: NA	
Percent Fill:	Percent Organic Waste:	Percent Fill: 85%	Percent Organic Waste: 10%
Layers of Confinement:	Closure Method:	Layers of Confinement: 1	Closure Method: HEAT SEALED FILTERED
Comments (e.g., filter information, NCRs): NA			

Waste Description:

BOTTOM CAN: 931

TOP CAN: 1029

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1178

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
ERIC BOND — Print Name
Eric Bond — Signature
1-29-13 — Date

Visual Examination Operator 2:
GLORIA RUPPERT — Print Name
Gloria Ruppert — Signature
1-29-13 — Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 11-26-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 931		Container or Package ID Number:	
Container Type: 7 GALLON CONTAINER		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 85% Percent Organic Waste: 10%		Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7 GALLON CONTAINER (TM)
SHIELD POT CENTERING RING (TM)
SHIELD POT # 8256

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Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 931

	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
TRU/2B Checks			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:

Print Name	Signature	Date
ERIC BOND	[signature]	11-26-12

Visual Examination Operator 2:

Print Name	Signature	Date
William H. Biley	[signature]	11-26-12

Attachment 1 – Visual Examination Data Form

Site ID: RHANC			
Examination Date: 10-10-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 8256		Container or Package ID Number:	
Container Type: 1 GALLON SHIELD POT		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHAM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 60%	Percent Organic Waste: 10%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:
VENTED 1 GALLON 3/4 INCH THICK LEAD LINED SHIELD POT (OM) (IM)
MET MOUNT PIECES (IM) (OM) (P)
DEBRIS AND RUBBLE (IM) (OM)

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 8256

Prohibited Item(s) Summary	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH-72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
William H. Riley — Print Name
Will H. Ri — Signature
10-10-12 — Date

Visual Examination Operator 2:
ERIC BOND — Print Name
Eric Bond — Signature
10-10-12 — Date

Attachment 1 – Visual Examination Data Form

Site ID: BHAWL			
Examination Date: 11-26-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒N/A	
Container or Package ID Number: 1029		Container or Package ID Number:	
Container Type: 7 GALLON CONTAINER		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: A E B H D M		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 85%	Percent Organic Waste: 10%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7 GALLON CONTAINER (TM)
SHIELD POT CENTERING RING (TM)
SHIELD POT # 8252

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1029

	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
TRU72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
William H. Riley — Print Name
Signature — Date: 11-26-12

Visual Examination Operator 2:
ERIC BOND — Print Name
Signature — Date: 11-26-12

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 10-9-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 8252		Container or Package ID Number:	
Container Type: 1 GALLON SHIELD POT		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 60%	Percent Organic Waste: 10%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): VE COMPLETED ON 10-10-12			

Waste Description:
VENTED 1-GALLON 3/4 INCH THICK LEAD LINED SHIELD POT (OM) (IM)
DEBRIS AND RUBBLE (IM) (OM) (P)
MET MOUNT PIECES (IM) (OM) (P)
DISK FRAGMENTS (IM) (OM)

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 8252

Prohibited Item(s) Summary	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
William H. Riley — Print Name
Signature — Date: 10-10-12

Visual Examination Operator 2:
ERIC BOND — Print Name
Signature — Date: 10-10-12

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 01-30-13		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☒ N/A		Final Container ☐ N/A	
Container or Package ID Number:		Container or Package ID Number: 1180	
Container Type:		Container Type: 30 gallon Container	
Waste Matrix Code:		Waste Matrix Code: S 5400	
Waste Stream:		Waste Stream: AE RH DM	
		Rigid Liner: ☒Y ☐N Type: 140 mil	Rigid Liner Lid: ☐ Y ☒N
		Rigid Liner Vented or Hole Size: NA	
Percent Fill:	Percent Organic Waste:	Percent Fill: 85	Percent Organic Waste: 0
Layers of Confinement:	Closure Method:	Layers of Confinement: 1	Closure Method: Heat Sealed Filtered
Comments (e.g., filter information, NCRs): NA			

Waste Description:

Bottom Can #1087

Top Can #1092

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1180

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
Gary Redman — Print Name
Gary Redman — Signature
01-30-13 — Date

Visual Examination Operator 2:
GLORIA RUPPERT — Print Name
Gloria Ruppert — Signature
01-30-13 — Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 11-28-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒N/A	
Container or Package ID Number: 1087		Container or Package ID Number:	
Container Type: 7-Gallon Container		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 85%	Percent Organic Waste: 0%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: C	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7-Gallon Container - (IM)

Shield Pot Centering Ring - (IM)

Shield Pot # 8254

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1087

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
William H. Riley — Print Name
Will H. R — Signature
11-28-12 — Date

Visual Examination Operator 2:
ERIC BOND — Print Name
Eric Bond — Signature
11-28-12 — Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 11-20-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 8254		Container or Package ID Number:	
Container Type: 1 GALLON SHIELD POT		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 70%	Percent Organic Waste: 0%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description: VENTED 1 GALLON 3/4" INCH THICK LEAD LINED SHIELD POT (OM)(IM)

CLADDING AND FUEL PIECES (OM)(IM)

TMI GRAB SAMPLE DEBRIS (OM)(IM)

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 8254

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
ERIC BOND — Print Name
Eric Bond — Signature
11-20-12 — Date

Visual Examination Operator 2:
William H. Riley — Print Name
Will. H. Ri — Signature
11-20-12 — Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 11-28-12		Batch Number: NA	
Procedure #CCP-TP-500		Revision #: 11	Video Number NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒N/A	
Container or Package ID Number: 1092		Container or Package ID Number:	
Container Type: 7-Gallon Container		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 85%	Percent Organic Waste: 0%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7-Gallon Container-(IM)
Shield Pot Centering Ring-(IM)
Shield Pot # 8259

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1092

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
William H. Riley — Print Name
[signature] — Signature
11-28-12 — Date

Visual Examination Operator 2:
ERIC ISOLD — Print Name
[signature] — Signature
11-28-12 — Date

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Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 11-20-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 8259		Container or Package ID Number:	
Container Type: 1 GALLON SHIELD POT		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 60% Percent Organic Waste: 0%		Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description: VENTED 1 GALLON "3/4" INCH THICK LEAD LINED SHIELD POT (OM) (IM)

CLADDING AND FUEL PIECES (OM) (IM)

TMI GRAB SAMPLE DEBRIS (OM) (IM)

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 8259

	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
TRU/PB Check			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
William H. Biley — Print Name
Will. H. Ki — Signature
11-20-12 — Date

Visual Examination Operator 2:
ERIC BOND — Print Name
Eric Bond — Signature
11-20-12 — Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 01-30-13		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☒ N/A		Final Container ☐ N/A	
Container or Package ID Number:		Container or Package ID Number: 1182	
Container Type:		Container Type: 30 gallon container	
Waste Matrix Code:		Waste Matrix Code: S 5400	
Waste Stream:		Waste Stream: AERHDM	
		Rigid Liner: ☒Y ☐N Type: 140 Mil	Rigid Liner Lid: ☐ Y ☒N
		Rigid Liner Vented or Hole Size: NA	
Percent Fill:	Percent Organic Waste:	Percent Fill: 85	Percent Organic Waste: 0
Layers of Confinement:	Closure Method:	Layers of Confinement: 1	Closure Method: Heat Sealed Filtered
Comments (e.g., filter information, NCRs): NA			

Waste Description:

Bottom Can: 1091

Top Can: 1086

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1182

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
Gary Redman — Print Name
Gary Redman — Signature
01-30-13 — Date

Visual Examination Operator 2:
GLORIA RUPPERT — Print Name
Gloria Ruppert — Signature
01-30-13 — Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 12-06-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒N/A	
Container or Package ID Number: 1091		Container or Package ID Number:	
Container Type: 7 Gallon Container		Container Type:	
Waste Matrix Code: S S400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 85	Percent Organic Waste: 0	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7 Gallon Container (Im)
Shield Pot Centering Ring (Im)
Shield Pot# 8263

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1091

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
Gary Redman — Print Name
Gary Redman — Signature
12-06-12 — Date

Visual Examination Operator 2:
ERIC BONS — Print Name
Eric Bons — Signature
12-6-12 — Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 11-21-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 8263		Container or Package ID Number:	
Container Type: 1-Gallon Shield Pot		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 90%	Percent Organic Waste: 0%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs):			

EB 11-26-12 ~~NA~~ RB 11-26-12 VE COMPLETED 11-26-12

Waste Description:

Vented 1-Gallon 3/4-INCH Thick Lead Lined Shield Pot - (OM) (IM)

FUEL AND CLADDING DEBRIS - (OM) (IM)

LOOP SECTION FRAGMENTS - (OM) (IM)

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 8263

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:		
William H. Riley	Will. H. Ri	11-21-12
Print Name	Signature	Date
William H. Riley	Will. H. Ri	11-26-12
Visual Examination Operator 2:		
ERIC BOND	Eric Bond	11-21-12
Print Name	Signature	Date
ERIC BOND	Eric Bond	11-26-12

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 11-28-12		Batch Number: NA	
Procedure #: CCP-TP 500		Revision #: 11	Video Number NA
Recording Equipment Check: ☐SAT ☐UNSAT ☑N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒N/A	
Container or Package ID Number: 1086		Container or Package ID Number:	
Container Type: 7-Gallon Container		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 85%	Percent Organic Waste: 0%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7- Gallon Container- (IM)
Shield Pot Centering Ring - (IM)
Shield Pot # 8265

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1086

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:

Print Name	Signature	Date
William H. Riley	[signature]	11-28-12

Visual Examination Operator 2:

Print Name	Signature	Date
ERIC BOWD	[signature]	11-28-12

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 11-26-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 8265		Container or Package ID Number:	
Container Type: 1 GALLON SHIELD POT		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 70%	Percent Organic Waste: 0%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description: VENTED 1 GALLON (3/4" INCH THICK LEAD LINED SHIELD POT (OM) (IM)

FUEL AND CLADDING (OM) (IM) FRAGMENTS

61

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 8265

	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
ERIC BONP — Print Name
Eric Bonp — Signature
11-26-12 — Date

Visual Examination Operator 2:
William H. Riley — Print Name
William H. Riley — Signature
11-26-12 — Date

67

Attachment 2 – Visual Examination Independent Technical Reviewer Checklist

Batch Data Report No.: ANLRHVE13002

1. Were data generation and reduction conducted in a technically correct manner in accordance with the methods (procedure) used?	☐ NO	☒ YES	☐ N/A
2. Was the correct revision of the operating procedure used?	☐ NO	☒ YES	☐ N/A
3. Were all the transcription errors corrected?	☐ NO	☐ YES	☒ N/A
4. Are BDR contents complete and match the Visual Examination Batch Data report Table of Contents?	☐ NO	☒ YES	☐ N/A
5. Does the BDR include VE for no more than 20 containers?	☐ NO	☒ YES	☐ N/A
6. Is all data recorded signed and dated in reproducible ink?	☐ NO	☒ YES	☐ N/A
7. Is all raw data recorded clearly, legibly, and accurately?	☐ NO	☒ YES	☐ N/A
8. Are all changes to original data lined out, initialed and dated by the individual making the changes or an individual authorized to make the change?	☐ NO	☒ YES	☐ N/A
9. Is there an adequate written description of the contents?	☐ NO	☒ YES	☐ N/A
10. Were the recording equipment checks satisfactory?	☐ NO	☐ YES	☒ N/A
11. Has each container in this BDR been evaluated for the presence of prohibited wastes?	☐ NO	☒ YES	☐ N/A
12. Has the physical waste form in each container in this BDR been evaluated against the Waste Stream Description and the Waste Matrix Code?	☐ NO	☒ YES	☐ N/A
13. Have the RH Quality Assurance Objectives (QAOs) for VE been met?	☐ NO	☒ YES	☐ N/A
Precision – reconciled discrepancies between operators or between the operator and ITR.	☐	☒	☐
Accuracy – trained operators	☐	☒	☐
Representativeness – description of container contents	☐	☒	☐
Completeness – completed data form and/or recording	☐	☒	☐
Comparability – proper training and adequate AK source documents are available for unopened containers.	☐	☒	☐
14. Were NCRs generated included in the BDR?	☐ NO	☐ YES	☒ N/A

Comments:

NA

Independent Technical Reviewer:

Monty Harris
Printed Name

Monty Harris
Signature

2-8-13
Date

DIVIDER PAGE ONLY

Not part of page count

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523 or 575-234-7431

Fax Number: 575-234-7033

[X] Original Record
[ ] Fax Record
[ ] Electronic Record
[ ] Copy

Attn:	Sheri Punchios	From:	Wes Root
Ship to:	S. M. Stoller WIPP Rec. Mgmt. Govt.	Site:	ANL-E
	CCP Records	Company:	Nuclear Waste Partnership LLC
	4021 National Parks Hwy	Telephone Number:	630-252-8306
	Carlsbad, NM 88220	Date Sent:	2-8-13
Telephone Number:	575-234-7095		

Document Number	Title / Description	Record Date	Total Pages
ANLRHVE13002	Batch Data Report – Waste Container ID Numbers: 1172, 1174, 1176, 1178, 1180 and 1182.	02-07-13	63

Comments

None

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

Records Accepted [✓]	Linda Martin	LINDA MARTIN	2.12.13
	Signature	Printed Name	Date
Records Rejected [ ]			
	Signature	Printed Name	Date

Reason for Rejection:

Re-submittal:

Signature	Printed Name	Date

```
**********************
***   TX REPORT   ***
**********************

TRANSMISSION OK

TX/RX NO                3004
DESTINATION TEL #       916302526706
DESTINATION ID          WES ROOT
ST. TIME                02/12 07:48
TIME USE                00'18
PAGES SENT                1
RESULT                  OK
```

Controlled Copy

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523 or 575-234-7431

Fax Number: 575-234-7033

[X] Original Record [ ] Copy
[ ] Fax Record
[ ] Electronic Record

Attn:	Sheri Punchios	From:	Wes Root
Ship to:	S. M. Stoller WIPP Rec. Mgmt. Govt.	Site:	ANL-E
	CCP Records	Company:	Nuclear Waste Partnership LLC
	4021 National Parks Hwy	Telephone Number:	630-252-8306
	Carlsbad, NM 88220	Date Sent:	2-8-13
Telephone Number:	575-234-7095		

Document Number	Title / Description	Record Date	Total Pages
ANLRHVE13002	Batch Data Report – Waste Container ID Numbers: 1172, 1174, 1176, 1178, 1180 and 1182.	02-07-13	63

Comments

None

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

Records Accepted [✓]	Linda Martin	LINDA MARTIN	2.12.13
	Signature	Printed Name	Date
Records Rejected [ ]			
	Signature	Printed Name	Date

Reason for Rejection:

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523 or 575-234-7431

Fax Number: 575-234-7033

[ ] Original Record
[ ] Fax Record
[x] Electronic Record
[ ] Copy

Attn:	Linda Martin	From:	Laura Nelson
Ship to:	CCP Records	Site:	Denver
	4021 National Parks Hwy	Company:	WTS
	MS:GSA:212	Telephone Number:	303-843-2269
	Carlsbad, NM 88220	Date Sent:	2-13-13
Telephone Number:	575-234-7523		

Document Number	Title / Description	Record Date	Total Pages
ANLRHVE13002	SPM Checklist	2-13-13	1
	NA		

Comments

NA

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

Records Accepted [✓] Linda Martin — LINDA MARTIN — 2.14.13
Signature — Printed Name — Date

Records Rejected [ ] _____ — _____ — _____
Signature — Printed Name — Date

Reason for Rejection:

Re-submittal: _____ — _____ — _____
Signature — Printed Name — Date

```
*********************
***   TX REPORT   ***
*********************

TRANSMISSION OK

TX/RX NO                3066
DESTINATION TEL #       913038432208
DESTINATION ID          DENVER
ST. TIME                02/14 08:09
TIME USE                00'20
PAGES SENT                1
RESULT                  OK
```


Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523 or 575-234-7431

Fax Number: 575-234-7033

- [ ] Original Record
- [ ] Fax Record
- [x] Electronic Record
- [ ] Copy

Attn:	Linda Martin	From:	Laura Nelson
Ship to:	CCP Records	Site:	Denver
	4021 National Parks Hwy	Company:	WTS
	MS:GSA:212	Telephone Number:	303-843-2269
	Carlsbad, NM 88220	Date Sent:	2-13-13
Telephone Number:	575-234-7523		

Document Number	Title / Description	Record Date	Total Pages
ANLRHVE13002	SPM Checklist	2-13-13	1
	NA		

Comments

NA

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

AK20

Attachment 3 – Visual Examination Site Project Manager Checklist

Batch Data Report No.: ANL RH VE11010

1. Has all the data received an independent technical review as evidenced by a completed checklist (Attachment 2) and the appropriate ITR signature?		☐ NO	☑ YES
2. Are BDR contents complete and match the Visual Examination Batch Data Report Table of Contents?		☐ NO	☑ YES
3. Is the BDR complete (appropriately filled in forms for each container)?		☐ NO	☑ YES
4. Have the RH Quality Assurance Objectives (QAOs) for VE been met?			
Precision – reconciled discrepancies between operators		☐ NO	☑ YES
Accuracy – trained operators		☐ NO	☑ YES
Representativeness – description of container contents		☐ NO	☑ YES
Completeness – completed data form and/or recording		☐ NO	☑ YES
Comparability – proper training and adequate AK for unopened containers		☐ NO	☑ YES
5. Were NCRs generated included in the BDR?	☐ NO	☐ YES	☑ N/A

Comments

No NCR's

SPM:

LAURA NELSON
Printed Name

Laura Nelson
Signature

7/5/2011
Date

ORIGINAL

Attachment 4 – Visual Examination Batch Data Report Cover Sheet

Batch Data Report No.: ANLRHVE11010 Date: 6-30-11

	Waste Container ID Number:
1	RW 18875
2	RW 18876
3	RW 18877
4	RW 18878
5	RW 18879
6	RW 18880
7	RW 18881
8	RW 18904
9	
10	
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	

6-30-11

ORIGINAL 01

Attachment 5 – Visual Examination Batch Data Report Table of Contents

Batch Data Report No.: ANLRHVE11010 Date: 6-30-11

Item	Description	Page No.
1	Visual Examination Batch Data Report Cover Sheet (Attachment 4)	01
2	Visual Examination Batch Data Report Table of Contents (Attachment 5)	02
3	Visual Examination Data Forms (Attachment 1)	03
4	Visual Examination Independent Technical Reviewer Checklist (Attachment 2)	19
5	Copy of NCRs (N/A [If not applicable])	NA

Attachment 1 – Visual Examination Data Form

Site ID and Location of Packaging Activity: RHANL - 205 CAR 8-23-10	
Examination Date: 12-01-09	Batch Number: NA
Procedure #: CCP-TP-500	Revision #: 8 / Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A	Recording Start: NA / Recording Stop: NA
Initial Container ☒ N/A	Final Container ☐ N/A
Container or Package ID Number: N/A	Container or Package ID Number: RW18875
Container Type: N/A	Container Type: 55-GALLON CONTAINER
Waste Matrix Code: N/A	Waste Matrix Code: S5400
Waste Stream: N/A	Waste Stream: AERHDM
	Rigid Liner: ☒Y ☐N Type:90 mil / Rigid Liner Lid: ☐ Y ☒N
	Rigid Liner Vented or Hole Size: NA
	Percent Fill: 67-90%
Layers of Confinement: N/A / Closure Method: N/A	Layers of Confinement: 1 / Closure Method: Heat Sealed Filtered
Comments (e.g., filter information, NCRs): VE complete and drum closed on 12-03-09. FIBERBOARD RIGID LINER VOLUME OF ORGANIC WASTE 20%	

Waste Description: Vented steel FEW container #5 (IM) containing irradiated test material ANL #6 (OM)

Plywood discs (C)
Stainless steel thimble (IM)
Stainless steel cap (IM)
Stainless steel cables (IM)
Tape (C)
Plastic pouch (P)
Load cell base (IM) (OM) (R)
Plastic bottles (P)
Paper labels (C)
Stainless steel contactor legs (IM)
Plastic piece (P)
Ultrasonic cleaner (P) (IM)
Hardware (IM) (AM)
Dry rag (C)
Labware (P)
Plastic bag (P)
Stainless steel tubing (IM)
Stainless steel fitting (IM)
Glass labware (OIM)
Rubber stopper (R)
Plastic tubing (P)
Thermocouple (P) (OM)
Stainless steel pipes (IM)
Ceramic funnel (OIM)

Primary Contents (check one)	☐ Concrete ☒ Steel ☐ Organic Material

03

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number _RW18875_

Prohibited Item(s) Summary			
	YES	NO	N/A
Is there liquid in the container?	☐	☒	
Is there any liquid in the waste, including internal containers, that DOES **NOT** meet the criteria of residual (waste shall contain as little residual liquid as is reasonably achievable by pouring, pumping and/or aspirating, and internal containers shall contain less than 1 inch or 2.5 centimeters of liquid in the bottom of the container)?	☐	☐	☒
Is the total volume of liquid in the container **GREATER** than 1% of the container?	☐	☐	☒
Is there detectable liquid in containers with an Environmental Protection Agency Hazardous Waste Number of U134?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: N/A

Visual Examination Operator 1:
Pat Beallis — Pat Beallis — 12-03-09
Print Name — Signature — Date

Visual Examination Operator 2:
GLORIA RUPPERT — Gloria Ruppert — 12-03-09
Print Name — Signature — Date

04

Attachment 1 – Visual Examination Data Form

Site ID and Location of Packaging Activity: RHANL - 205 WHR 8-23-10			
Examination Date: 12-07-09	Batch Number: NA		
Procedure #: CCP-TP-500	Revision #: 8	Video Number: NA	
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A	Recording Start: NA	Recording Stop: NA	
Initial Container ☒ N/A	Final Container ☐ N/A		
Container or Package ID Number: NA	Container or Package ID Number: RW18876		
Container Type: NA	Container Type: 55-GALLON CONTAINER		
Waste Matrix Code: NA	Waste Matrix Code: S5400		
Waste Stream: NA	Waste Stream: AERHDM		
	Rigid Liner: ☒Y ☐N Type:90 mil	Rigid Liner Lid: ☐ Y ☒N	
	Rigid Liner Vented or Hole Size: NA		
	Percent Fill: 67-90%		
Layers of Confinement: NA	Closure Method: NA	Layers of Confinement: 1	Closure Method: Heat Sealed Filtered
Comments (e.g., filter information, NCRs): VE complete and drum closed on 12-08-09. FIBERBOARD RIGID LINER VOLUME OF ORGANIC WASTE 30%			

Waste Description: Vented steel FEW container #8 (IM) containing irradiated test material ANL #1 (OM) and ANL #5 (OM). Vented steel FEW container #9 (IM) containing irradiated test material ANL #2 (OM), ANL #3 (OM) and ANL #4 (OM).

Plywood Discs (C)
Stainless steel cables (IM)
Stainless steel hose clamps (IM)
Paper labels (C)
Contactor 4-pack labware (IM)
Plastic tubing (P)
Plastic labware (P)
Metal hardware (IM)
Plastic sheeting (P)
Glass labware (OIM)
Rubber pieces (R)
Stainless steel rods (IM)
Electrical cord (IM) (P) (OM)
Dry epoxy (P)
Thermocouple (IM) (P)
Stage drain valve (IM)
Cladding (IM)
Stainless steel thimbles (IM)

Open 5 gallon container (P)
Open stainless steel secondary container (IM)
Metal plate (IM) (OM)
Fiberglass tape (OIM)
Metal tubing (IM)
Wire (OM) (P)
Cardboard (C)
Paper towel (C)
Dry rag (C)
Foam pieces (P)
Plastic case (P)

Primary Contents (check one)	☐ Concrete ☒ Steel ☐ Organic Material

05

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number _RW18876_

Prohibited Item(s) Summary			
	YES	NO	N/A
Is there liquid in the container?	☐	☒	
Is there any liquid in the waste, including internal containers, that DOES **NOT** meet the criteria of residual (waste shall contain as little residual liquid as is reasonably achievable by pouring, pumping and/or aspirating, and internal containers shall contain less than 1 inch or 2.5 centimeters of liquid in the bottom of the container)?	☐	☐	☒
Is the total volume of liquid in the container **GREATER** than 1% of the container?	☐	☐	☒
Is there detectable liquid in containers with an Environmental Protection Agency Hazardous Waste Number of U134?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
William H. Riley — Print Name
Will H. Ri — Signature
12-08-09 — Date

Visual Examination Operator 2:
GLORIA RUPPERT — Print Name
Gloria Ruppert — Signature
12-08-09 — Date

06

Attachment 1 – Visual Examination Data Form

Site ID and Location of Packaging Activity: RHANL - 205 WHR 8-23-10			
Examination Date: 12-14-09		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 8	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☒ N/A		Final Container ☐ N/A	
Container or Package ID Number: NA		Container or Package ID Number: RW18877	
Container Type: NA		Container Type: 55-GALLON CONTAINER	
Waste Matrix Code: NA		Waste Matrix Code: S5400	
Waste Stream: NA		Waste Stream: AERHDM	
		Rigid Liner: ☒Y ☐N Type:90 mil	Rigid Liner Lid: ☐ Y ☒N
		Rigid Liner Vented or Hole Size: NA	
		Percent Fill: 67-90%	
Layers of Confinement: NA	Closure Method: NA	Layers of Confinement: 1	Closure Method: Heat Sealed Filtered
Comments (e.g., filter information, NCRs): VE complete and drum closed on 12-15-09. FIBERBOARD RIGID LINER VOLUME OF ORGANIC WASTE 10%			

Waste Description: Vented lead shot filled FEW container #14 (OM)(IM) containing irradiated test material #11 (OM) and #12 (OM). Vented lead shot filled FEW container #13 (OM)(IM) containing irradiated test material #13 (OM) and #16 (OM).

Plywood Discs (C)
Cladding (OM)
Stainless Steel Caps (IM)
Stainless Steel Hardware (IM)
Stainless Steel Cables (IM)
Stainless Steel Thimbles (IM)
Rubber O Ring (R)
Plastic Pouches (P)
Aluminum Cans (AM)
Contactor Four Pack Labware (IM) (P) (OM)
Electrical Wires and Connectors (R) (OM)
Contactor Leg (IM)
Stainless Rods (IM)
Balance Weights (OM)
Thermocouple Wires and Connectors (OM) (P)
Aluminum Plate (AM)
Plastic Hoses (P)
Plastic Bottles (P)
Plastic Labware (P)
String (C)
Plastic Tubing (P)
Plastic Bottle Caps (P)
Glass Pieces (OIM)
Paper Pieces (C)
Plastic Pieces (P)

Primary Contents (check one)	☐ Concrete ☒ Steel ☐ Organic Material

07

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number _RW18877_

Prohibited Item(s) Summary			
	YES	NO	N/A
Is there liquid in the container?	☐	☒	
Is there any liquid in the waste, including internal containers, that DOES NOT meet the criteria of residual (waste shall contain as little residual liquid as is reasonably achievable by pouring, pumping and/or aspirating, and internal containers shall contain less than 1 inch or 2.5 centimeters of liquid in the bottom of the container)?	☐	☐	☒
Is the total volume of liquid in the container GREATER than 1% of the container?	☐	☐	☒
Is there detectable liquid in containers with an Environmental Protection Agency Hazardous Waste Number of U134?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags NOT defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: N/A

Visual Examination Operator 1:
Pat Beallis (Print Name) — Pat Beallis (Signature) — Date: 12-15-09

Visual Examination Operator 2:
William H. Riley (Print Name) — Will. H. Ri (Signature) — Date: 12-15-09

08

Attachment 1 – Visual Examination Data Form

Site ID and Location of Packaging Activity: RHANL - 205 WHR 8-23-10	
Examination Date: 12-17-09	Batch Number: NA
Procedure #: CCP-TP-500	Revision #: 8 / Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A	Recording Start: NA / Recording Stop: NA
Initial Container ☒ N/A	Final Container ☐ N/A
Container or Package ID Number: NA	Container or Package ID Number: RW18878
Container Type: NA	Container Type: 55-GALLON CONTAINER
Waste Matrix Code: NA	Waste Matrix Code: S5400
Waste Stream: NA	Waste Stream: AERHDM
	Rigid Liner: ☒Y ☐N Type:90 mil / Rigid Liner Lid: ☐ Y ☒N
	Rigid Liner Vented or Hole Size: NA
	Percent Fill: 67-90%
Layers of Confinement: NA / Closure Method: NA	Layers of Confinement: 1 / Closure Method: Heat Sealed Filtered
Comments (e.g., filter information, NCRs): FIBERBOARD RIGID LINER VOLUME OF ORGANIC WASTE 40%	

Waste Description: Vented lead shot filled FEW container #15 (OM)(IM) containing open glass jars (OIM) of irradiated test material (OM): #AG611-C4 (OM) and #AG611-C22 with cladding (OM).

Plywood discs (C)
Hand tools (IM) (OM)
Glass lab ware (OIM)
Open stainless steel can (IM)
Stainless steel lids (IM)
Steel ball bearing (IM)
Paper (C)
Plastic caps (P)
Rubber o-ring (R)
Plastic tubing (P)
Aluminum pipe (AM)
Stainless steel pipe (IM)
Open aluminum cans (AM)
Steel hardware (IM)
Plastic bottle (P)
Plastic Liner (P)
Tape (C)
Plastic Bags (P)

High Intensity Light fixture (P) (C) (OIM) (IM)
Light Bulb (OIM)(OM)
Electrical Cord (OM) (R)

Primary Contents (check one)	☐ Concrete ☒ Steel ☐ Organic Material

09

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number _RW18878_

Prohibited Item(s) Summary			
	YES	NO	N/A
Is there liquid in the container?	☐	☒	
Is there any liquid in the waste, including internal containers, that DOES **NOT** meet the criteria of residual (waste shall contain as little residual liquid as is reasonably achievable by pouring, pumping and/or aspirating, and internal containers shall contain less than 1 inch or 2.5 centimeters of liquid in the bottom of the container)?	☐	☐	☒
Is the total volume of liquid in the container **GREATER** than 1% of the container?	☐	☐	☒
Is there detectable liquid in containers with an Environmental Protection Agency Hazardous Waste Number of U134?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: N/A

Visual Examination Operator 1:
Pat Beallis — Print Name
Pat Beallis — Signature
12-17-09 — Date

Visual Examination Operator 2:
William H. Riley — Print Name
Will. H. Ri — Signature
12-17-09 — Date

Attachment 1 – Visual Examination Data Form

Site ID and Location of Packaging Activity: RHANL - 205 EB 8-23-10			
Examination Date: 03-09-10		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 8	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☒ N/A		Final Container ☐ N/A	
Container or Package ID Number:		Container or Package ID Number: RW18879	
Container Type:		Container Type: 55-GALLON CONTAINER	
Waste Matrix Code:		Waste Matrix Code: S5400	
Waste Stream:		Waste Stream: AERHDM	
		Rigid Liner: ☒Y ☐N Type:90 mil	Rigid Liner Lid: ☐ Y ☒N
		Rigid Liner Vented or Hole Size: NA	
		Percent Fill: 67% - 90%	
Layers of Confinement:	Closure Method:	Layers of Confinement: 1	Closure Method: Heat Sealed Filtered
Comments (e.g., filter information, NCRs): VE complete and drum lid closed on 3-10-10 FIBERBOARD RIGID LINER VOLUME OF ORGANIC WASTE 40%			

Waste Description:

Vented 1 Gallon "1" Thick Lead Lined Shield Pot #101 (OM) (IM) containing irradiated test materials(OM):

#ATM-103 segment W rodlet (OM);

MOX (OM) from #AG498B-8A, #AG498A-7B, #AG498A-4C, #AG498A-4G, #AG498A-4D, #AG498A-7C, #AG498A-7A;

ATM-109 material (OM) from F4 Vial #2, capsule AG539-B4A, capsule AG539-D3, F4 Vial #4, B1B Vial #4, D1B Vial #4, B1B Vial #2, B1B Vial #3, D1B Vial #3;

ATM-106 powder 10/99 (OM); ATM-103 powder 10/99 OM); ATM-103 PDT F3-1 (OM); ATM-103 PDT F3-7 (OM); ATM-103 PDT F3-8 (OM); ATM-103 <325 mesh washed (OM); ATM-103 <325 mesh (OM)

Plywood Discs (C)	Plastic Labware (P)	Rubber Ties (R)
Open Glass containers (OIM)	Rubber O-Rings (R)	Paper (C)
Tape (C)	Dry Rags (C)	
Plastic Caps (P)	Tyvek Sleeves (C)	
Open plastic bottles (P)	Wood Pieces (C)	
Teflon (P)	Plastic Funnels (P)	
Stainless Steel Fittings (IM)	Aluminum Lids (AM)	
Thermocouple Wire (IM) (P)	Aluminum Plate (AM)	
Steel Tray (IM)	Scale Weight (IM) (OM)	
Metal Hardware (IM)	Acid Bond solidification granules (P)	
Steel Cables (IM)	Electrical Outlet (IM) (OM) (P)	
Manipulator Part (IM) (AM) (R)	Open Plastic Bottles (P)	
Glove Box Glove (R)	PH Paper (C)	
Open Plastic Pouches (P)	Rubber Stoppers (R)	

Primary Contents (check one)	☐ Concrete ☒ Steel ☐ Organic Material

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Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number _ RW18879_

Prohibited Item(s) Summary	YES	NO	N/A
Is there liquid in the container?	☐	☒	
Is there any liquid in the waste, including internal containers, that DOES **NOT** meet the criteria of residual (waste shall contain as little residual liquid as is reasonably achievable by pouring, pumping and/or aspirating, and internal containers shall contain less than 1 inch or 2.5 centimeters of liquid in the bottom of the container)?	☐	☐	☒
Is the total volume of liquid in the container **GREATER** than 1% of the container?	☐	☐	☒
Is there detectable liquid in containers with an Environmental Protection Agency Hazardous Waste Number of U134?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments:
NA

Visual Examination Operator 1:
ERIC BOND — Print Name
Eric Bond — Signature
3-10-10 — Date

Visual Examination Operator 2:
GLORIA RUPPERT — Print Name
Gloria Ruppert — Signature
3-10-10 — Date

Attachment 1 – Visual Examination Data Form

Site ID and Location of Packaging Activity: RHANL - 205 8-23-10 WHR	
Examination Date: 03-19-10	Batch Number: NA
Procedure #: CCP-TP-500	Revision #: 8 / Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☑N/A	Recording Start: NA / Recording Stop: NA
Initial Container ☑ N/A	Final Container ☐ N/A
Container or Package ID Number:	Container or Package ID Number: RW18880
Container Type:	Container Type: 55-GALLON CONTAINER
Waste Matrix Code:	Waste Matrix Code: S5400
Waste Stream:	Waste Stream: AERHDM
	Rigid Liner: ☑Y ☐N Type:90 mil / Rigid Liner Lid: ☐ Y ☑N
	Rigid Liner Vented or Hole Size: NA
	Percent Fill: 67 – 90%
Layers of Confinement: / Closure Method:	Layers of Confinement: 1 / Closure Method: Heat Sealed Filtered
Comments (e.g., filter information, NCRs): VE completed and lid closed on 3-23-10 FIBERBOARD RIGID LINER VOLUME OF ORGANIC WASTE 30%	

Waste Description: Vented steel FEW container # 4(IM) containing irradiated test material ATM-106 Segment EE with cladding (OM)

Plywood Discs (C)
Steel plate IPNS Targets# IP10P, IP14P, IP27C (IM)
Open metal containers (IM)(AM)
Metal hardware (IM)
Metal caps (IM)
Empty bottles (P)
Dry rags (C)
Dry paper towel (C)
Labware (P)(R)
Electrical wire (R) (OM)
Open diaphragm pump (IM) (AM) (P) (OM)
Tape (C)
Empty glass bottles (OIM)
Machine part (P) (IM) (AM)
Electric saw (IM) (AM) (OM) (P)
Open electric pump (IM)(AM)(P)(OM)(R)(P)
Stainless steel tray (IM)
Plastic Pieces (P)
Plastic pouch (P)
O-ring (R)
Plastic tubing (P)

Primary Contents (check one)	☐ Concrete ☑ Steel ☐ Organic Material

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number _RW18880_

Prohibited Item(s) Summary			
	YES	NO	N/A
Is there liquid in the container?	☐	☒	
Is there any liquid in the waste, including internal containers, that DOES **NOT** meet the criteria of residual (waste shall contain as little residual liquid as is reasonably achievable by pouring, pumping and/or aspirating, and internal containers shall contain less than 1 inch or 2.5 centimeters of liquid in the bottom of the container)?	☐	☐	☒
Is the total volume of liquid in the container **GREATER** than 1% of the container?	☐	☐	☒
Is there detectable liquid in containers with an Environmental Protection Agency Hazardous Waste Number of U134?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☑	☐	

Comments: NA

Visual Examination Operator 1:
William H. Riley — Print Name
Will. H. Ri — Signature
03-23-10 — Date

Visual Examination Operator 2:
GLORIA RUPPERT — Print Name
Gloria Ruppert — Signature
03-23-10 — Date

Attachment 1 – Visual Examination Data Form

Site ID and Location of Packaging Activity: RHANL – 205 WR 08-23-10			
Examination Date: 04-06-10		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 8	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☑N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☑ N/A		Final Container ☐ N/A	
Container or Package ID Number:		Container or Package ID Number: RW18881	
Container Type:		Container Type: 55-GALLON CONTAINER	
Waste Matrix Code:		Waste Matrix Code: S5400	
Waste Stream:		Waste Stream: AERHDM	
		Rigid Liner: ☑Y ☐N Type:90 mil	Rigid Liner Lid: ☐ Y ☑ N
		Rigid Liner Vented or Hole Size: NA	
		Percent Fill: 67% - 90%	
Layers of Confinement:	Closure Method:	Layers of Confinement: 1	Closure Method: Heat Sealed Filtered
Comments (e.g., filter information, NCRs): VE complete and drum lid installed on 04-07-10. FIBERBOARD RIGID LINER VOLUME OF ORGANIC WASTE 40%			

Waste Description: Vented 1 Gallon "1" Thick Lead Lined Shield Pot #102 (OM) (IM) containing irradiated test material (OM): #Limerick (OM), #AG340A2 (OM), #AG340J10 (OM), #AG340A3 (OM), #AG340D3 (OM), #AG340E6 (OM), #AG340C4D13 (OM), #AG340H2 (OM), #AG340G2 (OM), #MPDT3 (OM), #ATM109F3 (OM), #AG340A2D5 (OM), #AG562-2B (OM), #AG5621H5 (OM), and #ATM103 G2 (OM), AG5621H Metal (OM)(IM), AG5621H Clad (OM)(IM).

Plywood Discs (C)	Tape (C)	Electric mixer(IM)(AM)(OM)(P)(R)
Glass pieces (OIM)	Paper pieces (C)	Battery charger (P)(OM)(IM)
Aluminum piece (AM)	Open glass containers (OIM)	Electrical cord (R) (OM)
Lead weight (OM)(IM)	Metal piping (IM)	
Wire (IM)	Metal plugs (IM)	
Open plastic bottles (P)	Saw blade (IM)	
Swabs (C)	Metal hardware (IM)	
Sponge (P)	Laboratory Scale (IM) (AM)(R)(OM)(P)	
Plastic pieces(P)	Small scale circuit board (OM) (P)	
Metal hand tools (IM)	Stainless steel Cap (IM)	
Wood piece (C)	Electric polish wheel (IM)(OM)(P)(R)	
Paper towels (C)	Electric box (IM)(OM)(R)(P)	
Plastic Caps (P)	Unistrut pieces (IM)	
Metal cans(IM)	Hose clamps (IM)	
O-Rings (R)	Wood plug (C)	
Plastic pouches (P)	Sheet metal pieces (IM)	
Dry rags (C)	Labware (P)	
Rubber stoppers (R)	Plastic tubing (P)	

Primary Contents (check one)	☐ Concrete ☑ Steel ☐ Organic Material

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number RW18881__

Prohibited Item(s) Summary			
	YES	NO	N/A
Is there liquid in the container?	☐	☒	
Is there any liquid in the waste, including internal containers, that DOES **NOT** meet the criteria of residual (waste shall contain as little residual liquid as is reasonably achievable by pouring, pumping and/or aspirating, and internal containers shall contain less than 1 inch or 2.5 centimeters of liquid in the bottom of the container)?	☐	☐	☒
Is the total volume of liquid in the container **GREATER** than 1% of the container?	☐	☐	☒
Is there detectable liquid in containers with an Environmental Protection Agency Hazardous Waste Number of U134?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: N/A

Visual Examination Operator 1:
Pat Beallis — Print Name
Pat Beallis — Signature
04/07/10 — Date

Visual Examination Operator 2:
F. Wesley Root — Print Name
F. Wesley Root — Signature
4-7-10 — Date

Attachment 1 – Visual Examination Data Form

Site ID and Location of Packaging Activity: RHANL-205 EB 8-23-10			
Examination Date: 5-20-10		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 8	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☑N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☑ N/A		Final Container ☐ N/A	
Container or Package ID Number:		Container or Package ID Number: RW18904	
Container Type:		Container Type: 55-GALLON CONTAINER	
Waste Matrix Code:		Waste Matrix Code: S5400	
Waste Stream:		Waste Stream: AERHDM	
		Rigid Liner: ☑Y ☐N Type:90 mil	Rigid Liner Lid: ☐ Y ☑N
		Rigid Liner Vented or Hole Size: NA	
		Percent Fill: 67-90%	
Layers of Confinement: NA	Closure Method: NA	Layers of Confinement: 1	Closure Method: Heat sealed filtered
Comments (e.g., filter information, NCRs): VE complete and drum closed on 6-4-10 FIBERBOARD RIGID LINER VOLUME OF ORGANIC WASTE 30%			

Waste Description: Vented 1-gallon 1-inch thick lead lined Shield Pot #103 (OM)(IM) containing irradiated test materials with holders #103V(IM)(OM), #109AV(IM)(OM), #106V(IM)(OM), #109BV(IM)(OM), #109CV(IM)(OM), #106L(IM)(OM), #109AH(IM)(OM), #103H(IM)(OM), #109CH(IM)(OM), #106H(IM)(OM), #103L(IM)(OM), #MOX2 -vessel 403(IM)(OM), #MOX1 -vessel 402(IM)(OM), #MOX4 -vessel 401(IM)(OM), #UUT1-vessel 425(IM)(OM);

Irradiated test materials SFV-2 [ATM-103 Segment M] (OM),SFV-1 [ATM-103 Segment G2] (OM), SFV-4 [ATM-103 Segment Y] (OM), SFV-3 [ATM-103 Segment Y] (OM);
Open glass vials #AV-12 [ATM-109A] (OIM)(OM), #BV-12 [ATM-109B] (OIM)(OM), #CV-12 [ATM-109C] (OIM)(OM), #CJ-12 [ATM-109C] (OIM)(OM); Open jar #SFWA 2/14/01 containing Quad City Samples (ATM-109), ATM-103 samples, and TMI Samples (OIM)(OM); SFV-4 [NB 1698] cut pieces(IM)(OM), Jar #2 [Limerick residue] (IM)(OM), Jar #1 [MOX-7B-AG498A residue] (IM)(OM), #AG 340-J6 piece with cladding(OM), empty glass containers(OIM)

Plastic pouch (P)
0-Ring (R)
Plywood disks (C)
Epoxy pieces (P)
Pieces (P)(AM)
Empty containers (P)
Empty glass containers (OIM)
Copper hardware (OM)
Caps (IM)(P)
Metal tools (IM)
Metal parts (IM)
Metal dissolver (IM)(P)OM(OM)

Thermocouple(IM)(OM)(P)
Depleted uraninum IPNS part (OM)
Acid bond solidification granules (P)
Glass pieces (OIM)
Solidified material pieces (IGM)
Zircaloy cladding (OM)
Paper pieces (C)

Primary Contents (check one)	☐ Concrete ☑ Steel ☐ Organic Material

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number _RW18904_

Prohibited Item(s) Summary			
	YES	NO	N/A
Is there liquid in the container?	☐	☑	
Is there any liquid in the waste, including internal containers, that DOES **NOT** meet the criteria of residual (waste shall contain as little residual liquid as is reasonably achievable by pouring, pumping and/or aspirating, and internal containers shall contain less than 1 inch or 2.5 centimeters of liquid in the bottom of the container)?	☐	☐	☑
Is the total volume of liquid in the container **GREATER** than 1% of the container?	☐	☐	☑
Is there detectable liquid in containers with an Environmental Protection Agency Hazardous Waste Number of U134?	☐	☑	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☑	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☑	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☑	
Is there an indication of wastes containing explosives or compressed gases?	☐	☑	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☑	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☑	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☑	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☑	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☑	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☑	
Is the waste consistent with the TRUCON Code?	☑	☐	

Comments: NA

Visual Examination Operator 1:
William H. Riley — Print Name
William H. Ri — Signature
06-04-10 — Date

Visual Examination Operator 2:
ERIC BOND — Print Name
Eric Bond — Signature
06-04-10 — Date

Attachment 2 – Visual Examination Independent Technical Reviewer Checklist

Batch Data Report No.: ANL RH VE 11010

1. Were data generation and reduction conducted in a technically correct manner in accordance with the methods (procedure) used?	☐ NO	☒ YES	☐ N/A
2. Was the correct revision of the operating procedure used?	☐ NO	☒ YES	☐ N/A
3. Were all the transcription errors corrected?	☐ NO	☐ YES	☒ N/A
4. Are BDR contents complete and match the Visual Examination Batch Data report Table of Contents?	☐ NO	☒ YES	☐ N/A
5. Does the BDR include VE for no more than 20 containers?	☐ NO	☒ YES	☐ N/A
6. Is all data recorded signed and dated in reproducible ink?	☐ NO	☒ YES	☐ N/A
7. Is all raw data recorded clearly, legibly, and accurately?	☐ NO	☒ YES	☐ N/A
8. Are all changes to original data lined out, initialed and dated by the individual making the changes or an individual authorized to make the change?	☐ NO	☐ YES	☒ N/A
9. Is there an adequate written description of the contents?	☐ NO	☒ YES	☐ N/A
10. Were the recording equipment checks satisfactory?	☐ NO	☐ YES	☒ N/A
11. Has each container in this BDR been evaluated for the presence of prohibited wastes?	☐ NO	☒ YES	☐ N/A
12. Has the physical waste form in each container in this BDR been evaluated against the Waste Stream Description and the Waste Matrix Code?	☐ NO	☒ YES	☐ N/A
13. Have the RH Quality Assurance Objectives (QAOs) for VE been met?	☐ NO	☒ YES	☐ N/A
Precision – reconciled discrepancies between operators or between the operator and ITR.	☐	☒	☐
Accuracy – trained operators	☐	☒	☐
Representativeness – description of container contents	☐	☒	☐
Completeness – completed data form and/or recording	☐	☒	☐
Comparability – proper training and adequate AK source documents are available for unopened containers.	☐	☒	☐
14. Were NCRs generated included in the BDR?	☐ NO	☐ YES	☒ N/A
Comments: None			

Independent Technical Reviewer:

Gary Redman — Printed Name

Gary Redman — Signature

06-30-11 — Date

DIVIDER PAGE ONLY

Not part of page count

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523 or 575-234-7431

Fax Number: 575-234-7033

[X] Original Record [ ] Copy
[ ] Fax Record
[ ] Electronic Record

Attn:	Tami Parker	From:	Laura Nelson
Ship to:	CCP Records	Site:	SWB
	4021 Nat'l Parks Hwy	Company:	WTS
	Carlsbad, NM 88220	Telephone Number:	575-234-7056 (fax)
		Date Sent:	7/5/2011
Telephone Number:	575-234-7617		

Document Number	Title / Description	Record Date	Total Pages
ANLRHVE11010	Batch Data Report	6/30/2011	19
SPM checklist	CCP-TP-500 Attachment 3	7/5/2011	1

AN 7-6-2011

Comments

NA

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

	Signature	Printed Name	Date
Records Accepted [X]	Tami Parker	TAMI PARKER	7/7/11
Records Rejected [ ]			

Reason for Rejection:

Re-submittal:

Signature	Printed Name	Date

```
*********************
***   TX REPORT   ***
*********************
```

TRANSMISSION OK

TX/RX NO	2377
DESTINATION TEL #	916302526706
DESTINATION ID	WES ROOT
ST. TIME	07/07 07:40
TIME USE	00'16
PAGES SENT	1
RESULT	OK

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523 or 575-234-7431

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[X] Original Record [ ] Copy
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Attn:	Tami Parker	From:	Laura Nelson
Ship to:	CCP Records	Site:	SWB
	4021 Nat'l Parks Hwy	Company:	WTS
	Carlsbad, NM 88220	Telephone Number:	575-234-7056 (fax)
		Date Sent:	7/5/2011
Telephone Number:	575-234-7617		

Document Number	Title / Description	Record Date	Total Pages
ANLRHVE11010	Batch Data Report	6/30/2011	19
SPM checklist	CCP-TP-500 Attachment 3	7/5/2011	1

Comments

NA

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

AK21

Attachment 3 – Visual Examination Site Project Manager Checklist

Batch Data Report No.: ANLRHVE11017

1. Has all the data received an independent technical review as evidenced by a completed checklist (Attachment 2) and the appropriate ITR signature?		☐ NO	☑ YES
2. Are BDR contents complete and match the Visual Examination Batch Data Report Table of Contents?		☐ NO	☑ YES
3. Is the BDR complete (appropriately filled in forms for each container)?		☐ NO	☑ YES
4. Have the RH Quality Assurance Objectives (QAOs) for VE been met?			
Precision – reconciled discrepancies between operators		☐ NO	☑ YES
Accuracy – trained operators		☐ NO	☑ YES
Representativeness – description of container contents		☐ NO	☑ YES
Completeness – completed data form and/or recording		☐ NO	☑ YES
Comparability – proper training and adequate AK for unopened containers		☐ NO	☑ YES
5. Were NCRs generated included in the BDR?	☐ NO	☐ YES	☑ N/A

Comments

NO NCR'S.

SPM:

LAURA NELSON — Printed Name

Laura Nelson — Signature

9-15-11 — Date

CCP RECORDS ORIGINAL
DATE REC'D 9/15/11

Attachment 4 – Visual Examination Batch Data Report Cover Sheet

Batch Data Report No.: ANLRHVE11017 Date: 09-12-11

	Waste Container ID Number:
1	RW48261
2	RW48262
3	RW48263
4	RW48267
5	RW48268
6	RW49813
7	RW49814
8	RW49815
9	RW49816
10	RW49817
11	
12	
13	09-12-11 WHR
14	
15	
16	
17	
18	
19	
20	

Attachment 5 – Visual Examination Batch Data Report Table of Contents

Batch Data Report No.: ANLRHVE11017 Date: 09-12-11 09-15-11

Item	Description	Page No.
1	Visual Examination Batch Data Report Cover Sheet (Attachment 4)	1
2	Visual Examination Batch Data Report Table of Contents (Attachment 5)	2
3	Visual Examination Data Forms (Attachment 1)	3
4	Visual Examination Independent Technical Reviewer Checklist (Attachment 2)	39
5	Copy of NCRs (N/A [If not applicable])	NA

Attachment 1 – Visual Examination Data Form

Site ID: RHAWL	
Examination Date 02-02-11	Batch Number NA
Procedure # CCP.TP 500	Revision # 11 / Video Number NA
Recording Equipment Check ☐SAT ☐UNSAT ☒N/A	Recording Start NA / Recording Stop NA
Initial Container ☒ N/A	Final Container ☐ N/A
Container or Package ID Number:	Container or Package ID Number: W48261
Container Type:	Container Type: 55 Gallon Container
Waste Matrix Code:	Waste Matrix Code: S 5400
Waste Stream:	Waste Stream: AERHDM
	Rigid Liner ☒Y ☐N Type: 90 Mil / Rigid Liner Lid: ☐Y ☒N
	Rigid Liner Vented or Hole Size: NA
Percent Fill / Percent Organic Waste	Percent Fill 40 / Percent Organic Waste 20
Layers of Confinement / Closure Method:	Layers of Confinement 1 / Closure Method: Heat Sealed Filtered
Comments (e.g., filter information, NCRs) Fiberboard Rigid Liner ~~NA~~ GR 02-02-11	

Waste Description

Wooden Disks (c)
Pouch Stub (P)
O'ring (R)
Chop Saw (Im)(OM)(AM)(R)
Metal Hardware (Im)
Table Top Pieces (Im)(AM)
dry rags (c)
Unstrut pieces (Im)
Paper (c)
metal part (Im)
Copper Tubing (OM)
Piece of plexiglass (P)
Plastic labware (P)
hand Tools (Im)(P)
Piece of plastic sheeting (P)
electrical connector (OM)(IM)
Tie wraps (P)
electrical cord (OM)(R)
Cut up plastic tubing (P)
glass pieces (OIm)
rubber piece (R)
Empty glass bottles (OIm)
Plastic caps (P)
electrical plug (OM)(P)
Saw blades (Im)
Small metal weight (Im)

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number Ru 48261

Prohibited Item(s) Summary	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
Gary Redman — Print Name
Gary Redman — Signature
08-02-11 — Date

Visual Examination Operator 2:
ERIC BIRD — Print Name
Eric Bird — Signature
8-2-11 — Date

04

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 08-03-11		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☒ N/A		Final Container ☐ N/A	
Container or Package ID Number:		Container or Package ID Number: RW 42262	
Container Type:		Container Type: 55 gallon Container	
Waste Matrix Code:		Waste Matrix Code: S 5-100	
Waste Stream:		Waste Stream: AL RHDM	
		Rigid Liner ☒Y ☐N Type: 90 Mil	Rigid Liner Lid: ☐ Y ☒N
		Rigid Liner Vented or Hole Size: NA	
Percent Fill:	Percent Organic Waste:	Percent Fill: 85	Percent Organic Waste: 30
Layers of Confinement:	Closure Method:	Layers of Confinement: 1	Closure Method: Heat Sealed Fitted

Comments (e.g., filter information, NCRs):
Lid installed VE Complete on 08-04-11
Fiberboard Rigid Liner

Waste Description:
Plywood Disks(C)
Pouch Stub (P)
O Ring (R)
Vented Steel Can #602841
3gallon glass container (OIM)
5gallon Stainless Steel Secondary (IM)
Plastic liner (P)
Pieces of Table Top (IM)
C clamp (IM)
Unistrut (IM)
5gallon Can (IM)
Plastic bags (P)

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number RW 48267

Prohibited Item(s) Summary	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags NOT defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments N/A

Visual Examination Operator 1: Gary Redman (Print Name)	Gary Redman (Signature)	08-04-11 (Date)
Visual Examination Operator 2: ERIC BOND (Print Name)	[signature] (Signature)	8-4-11 (Date)

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 4-28-11		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 6284		Container or Package ID Number:	
Container Type: 1 GALLON CONTAINER		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 85%	Percent Organic Waste: 20%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description: VENTED 1 GALLON CONTAINER

PAPER (C)

PLASTIC LABWARE (P)

METAL LABWARE (IM)

GLASS (OIM)

PVROFOAM (OIM)

WIRE (IM)

EMPTY BOTTLES (P)(OIM)

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 6284

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1: ERIC BOND — Eric Bond — 4-28-11
Print Name — Signature — Date

Visual Examination Operator 2: CELERIA RUPPERT — Celeria Ruppert — 4-28-11
Print Name — Signature — Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 08-05-11		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☒ N/A		Final Container ☐ N/A	
Container or Package ID Number:		Container or Package ID Number: RW48263	
Container Type:		Container Type: 55 Gallon Container	
Waste Matrix Code:		Waste Matrix Code: S 5400	
Waste Stream:		Waste Stream: AERHDM	
		Rigid Liner: ☒Y ☐N Type: 90 Mil	Rigid Liner Lid ☐Y ☒N
		Rigid Liner Vented or Hole Size: NA	
Percent Fill:	Percent Organic Waste:	Percent Fill: 90	Percent Organic Waste: 40
Layers of Confinement:	Closure Method:	Layers of Confinement: /	Closure Method: Heat Sealed Filtered
Comments (e.g., filter information, NCRs): Fiberboard Rigid Liner ~~AA~~ GR 08-05-11			

Waste Description:

Plywood disks (c)
Pouch stub (P)
Vented Steel can #6282
5gallon Stainless Steel Secondary (IM)
5gallon buckets (P)
dry rags (c)
rubber glove (R)
Oring (R)
hand Tools (IM)(R)
Empty bottles (P)(cIM)
Saw blades (IM)
Plastic caps (P)
Paper (c)
Tape (c)
Tubing (P)
dried strip coat (P)
Plastic bag (P)
broken glass (oIM)
Table Top pieces (AM)
C clamp (IM)
plastic labware (P)
wire (oM)

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number RW 418263

Prohibited Item(s) Summary	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments N/A

Visual Examination Operator 1		
Gary R Coman	Gary Reckman	08-05-11
Print Name	Signature	Date

Visual Examination Operator 2		
ERIC BOND	[illegible]	08-5-11
Print Name	Signature	Date

Attachment 1 – Visual Examination Data Form

Site ID and Location of Packaging Activity: ~~RHANL-212~~ WHR 04-21-11 RHANL-205			
Examination Date: 04-21-11	Batch Number: NA		
Procedure #: CCP-TP-500	Revision #: 10	Video Number NA	
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A	Recording Start: NA	Recording Stop: NA	
Initial Container ☐ N/A	Final Container ☒N/A		
Container or Package ID Number: 6282	Container or Package ID Number:		
Container Type: 1-Gallon Container	Container Type:		
Waste Matrix Code: S 5400	Waste Matrix Code:		
Waste Stream: AERHDM	Waste Stream:		
	Rigid Liner ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N	
	Rigid Liner Vented or Hole Size:		
Percent Fill: 91-100 %	Percent Fill:		
Layers of Confinement: 0 / Closure Method: NA	Layers of Confinement:	Closure Method:	

Comments (e.g., filter information, NCRs)

Volume of organic waste: 60%

Waste Description: 1-Gallon Container-(IM), Vented

Metal Pieces-(IM)(AM)(OM)
Plastic Pieces-(P)
Paper-(C)
Tape-(C)
Rubber-(R)
Metal hardware-(IM)
Plastic Labware-(P)
Fiber glass-(OIM)
Pyrofoam-(OIM)
Copper tubing-(OM)
Electrical wire-(P)(IM)

Primary Contents (check one)	☐ Concrete	☐ Steel	☒ Organic Material

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 6282

	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?		X	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
[illegible] Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags NOT defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
William H. Riley — Print Name
Will. H. Ri — Signature
04-21-11 — Date

Visual Examination Operator 2:
Gary Rodman — Print Name
Gary Rodman — Signature
04-21-11 — Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 08-24-11		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☒N/A		Final Container ☐ N/A	
Container or Package ID Number:		Container or Package ID Number: RW48267	
Container Type:		Container Type: 55 Gallon Container	
Waste Matrix Code:		Waste Matrix Code: 55400	
Waste Stream:		Waste Stream: AERHDM	
		Rigid Liner: ☒Y ☐N Type: 90 Mil	Rigid Liner Lid: ☐Y ☒N
		Rigid Liner Vented or Hole Size: NA	
Percent Fill:	Percent Organic Waste:	Percent Fill: 90%	Percent Organic Waste: 10%
Layers of Confinement:	Closure Method:	Layers of Confinement: 1	Closure Method: Heat Sealed filtered

Comments (e.g., filter information, NCRs):

Fiberboard Rigid Liner

Waste Description: Vented 1-Gallon Container-6281
Plywood Discs-(C)
Pouch Material-(P)
O-Ring-(R)
Tape-(C)
Metal Hardware-(IM)
C-Clamps-(IM)
Rubber Gasket-(R)
Metal Plates-(IM)(AM)
Fan-(IM)(P)(OM)
Electrical compressor-(IM)(OM)(AM)(R)
Plastic Labware-(P)
Floor sweeping-(P)(IM)(OM)(R)(AM)
Wire-(IM)

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number RW48267

	YES	NO	N/A
Prohibited Item(s) Summary			
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH-28 Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments NA

Visual Examination Operator 1
William H. Riley — Print Name
William H. Riley — Signature
08-24-11 — Date

Visual Examination Operator 2
GLORIA RUPPERT — Print Name
Gloria Ruppert — Signature
08-24-11 — Date

Attachment 1 – Visual Examination Data Form

Site ID and Location of Packaging Activity: RHANL-212 wyle 04-21-11 RHANL-205			
Examination Date: 04-21-11	Batch Number: NA		
Procedure #: CCP-TP-500	Revision #: 10	Video Number: NA	
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A	Recording Start: NA	Recording Stop: NA	
Initial Container ☐ N/A	Final Container ☒ N/A		
Container or Package ID Number: 6281	Container or Package ID Number:		
Container Type: 1 Gallon Container	Container Type:		
Waste Matrix Code: S540D	Waste Matrix Code:		
Waste Stream: AERHDM	Waste Stream:		
	Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N	
	Rigid Liner Vented or Hole Size:		
Percent Fill: 91-100 %	Percent Fill:		
Layers of Confinement: 0 / Closure Method: NA	Layers of Confinement:	Closure Method:	

Comments (e.g., filter information, NCRs):

Volume Of Organic Waste: 60%

Waste Description: 1-Gallon container-(IM), vented

Metal Pieces - (IM)(AM)(OM)
Plastic Pieces- (P)
Paper -(C)
Tape-(C)
Rubber Pieces-(R)
Plastic Gloves-(P)
Metal hardware-(IM)
Plastic Labware-(P)
Broken Glass- (OIM)
Wooden Pieces -(C)
fiber Glass- (OIM)
Pyrofoam - (OIM)
Plastic Labware - (P)
Plastic tubing- (P)
Electrical wire-(P)(IM)

Primary Contents (check one)	☐ Concrete ☐ Steel ☒ Organic Material

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 6281

	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?		☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
[illegible] Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags NOT defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
William H. Riley — Print Name
Will. H. Ri — Signature
04-21-11 — Date

Visual Examination Operator 2:
Gary Redman — Print Name
Gary Redman — Signature
04-21-11 — Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 08-25-11		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☒N/A		Final Container ☐ N/A	
Container or Package ID Number:		Container or Package ID Number: RW48268	
Container Type:		Container Type: 55-Gallon Container	
Waste Matrix Code:		Waste Matrix Code: S5400	
Waste Stream:		Waste Stream: AERHDM	
		Rigid Liner: ☒Y ☐N Type: 90 MiL	Rigid Liner Lid: ☐ Y ☒N
		Rigid Liner Vented or Hole Size: NA	
Percent Fill:	Percent Organic Waste:	Percent Fill: 90%	Percent Organic Waste: 60%
Layers of Confinement:	Closure Method:	Layers of Confinement: 1	Closure Method: Heat Sealed filtered

Comments (e.g., filter information, NCRs): Continued VE on 08-26-11

Fiber board Rigid Liner

Waste Description: Vented 1-Gallon container - 6283

Plywood Discs-(C)
Filter Paper-(C)
Empty Plastic bottles-(P)
Metal Hardware-(IM)
Plastic Labware-(P)
Tape-(C)
WIRE-(IM)
Paper-(C)
Broken Glass-(OIM)
Rubber Pieces-(R)
Gasket-(R)
Metal Plates-(AM)(IM)
Plastic Labware-(P)

C-Clamps-(IM)
Unistrut-(IM) ~~08~~ 8-25-11 WHR
Empty Condensor Coil-(IM)
~~Metal Condensor-(IM)~~ 8-25-11 WHR
Dry Rag-(C)
Hand tools-(IM)(P)
Metal Pieces-(IM)

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number RW 48268

Prohibited Item(s) Summary	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments NA

Visual Examination Operator 1

William H. Riley — Print Name
Will. H. R — Signature
08-26-11 — Date

Visual Examination Operator 2

GLORIA RUPPERT — Print Name
Gloria Ruppert — Signature
08-26-11 — Date

Attachment 1 – Visual Examination Data Form

Site ID and Location of Packaging Activity: RHANL-205			
Examination Date: 04-21-11	Batch Number: NA		
Procedure #: CCP-TP-500	Revision #: 10	Video Number NA	
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A	Recording Start: NA	Recording Stop NA	
Initial Container ☐ N/A	Final Container ☒N/A		
Container or Package ID Number: 6283	Container or Package ID Number:		
Container Type: 1-Gallon Container	Container Type:		
Waste Matrix Code: S5400	Waste Matrix Code:		
Waste Stream: AERHDM	Waste Stream:		
	Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N	
	Rigid Liner Vented or Hole Size:		
Percent Fill: 91-100%	Percent Fill:		
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:

Comments (e.g., filter information, NCRs):

Volume of organic waste: 60%

Waste Description: 1-Gallon Container-(IM), Vented

Metal Pieces-(IM)(AM)(OM)
Plastic Pieces-(P)
Paper-(C)
Tape-(C)
Rubber Pieces-(R)
Metal hardware-(IM)
Plastic Labware-(P)
Broken Glass-(OIM)
Pyrofoam-(OIM)
Electrical wire-(P)(IM)
fiber glass-(OIM)

Primary Contents (check one)	☐ Concrete	☐ Steel	☒ Organic Material

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 6283

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?		☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1
William H. Riley — Print Name
Will. H. Ri — Signature
04-21-11 — Date

Visual Examination Operator 2
Gary Redman — Print Name
Gary Redman — Signature
04-21-11 — Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 08-29-11		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☒N/A		Final Container ☐ N/A	
Container or Package ID Number:		Container or Package ID Number: RW49813	
Container Type:		Container Type: 55 Gallon Container	
Waste Matrix Code:		Waste Matrix Code: S5400	
Waste Stream:		Waste Stream: AERHDM	
		Rigid Liner: ☒Y ☐N Type: 90 mil	Rigid Liner Lid: ☐ Y ☒N
		Rigid Liner Vented or Hole Size: NA	
Percent Fill:	Percent Organic Waste:	Percent Fill: 90%	Percent Organic Waste: 60%
Layers of Confinement:	Closure Method:	Layers of Confinement: 1	Closure Method: Heat Sealed filtered

Comments (e.g., filter information, NCRs): VE Completed on 08-30-11

Fiberboard Rigid Liner

Waste Description: Vented 1-Gallon Container · 6288

Plywood Discs-(C)
O-Ring-(R)
Paper-(C)
Plastic Pieces-(P)
Tape-(C)
Wood-(C)
Metal Plates-(AM)(IM)
Rubber-(R)
Saw Blade-(IM)
Metal wire-(IM)
Metal Lids-(IM)
C-Clamps-(IM)
Pouch Material-(P)
Vacuum Hose-(P)(IM)

Plastic Labware-(P)
Empty Plastic Bottles-(P)
Filter Paper-(C)
Metal Hardware-(IM)
Broken Glass-(OIM)
Manipulator Tape-(IM)
Pyrofoam-~~(P)~~ 08-30-11 WHR (OIM)

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number RW49813

Unpitted Item(s) Only	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH-72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments
NA

Visual Examination Operator 1
William H. Riley — Print Name
Will H. Ry — Signature
08-30-11 — Date

Visual Examination Operator 2
GLORIA RUPPERT — Print Name
Gloria Ruppert — Signature
08-30-11 — Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 05-04-11		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒N/A	
Container or Package ID Number: 6288		Container or Package ID Number:	
Container Type: 1 GALLON CONTAINER		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 90%	Percent Organic Waste: 20%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

VENTED 1 GALLON CONTAINER (IM) METAL HARDWARE (IM)
PLASTIC LABWARE (P)
GLASS LABWARE (OIM)
METAL LABWARE (IM)
WIRE (IM)
PYROFOAM (OIM)
RUBBER (R)
MANIPULATOR TAPE (IM)
METAL SHAVINGS (IM)

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 6288

Prohibited Item(s) Summary	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: N/A

Visual Examination Operator 1

Print Name	Signature	Date
GLORIA RUPPERT	Gloria Ruppert	05-04-11

Visual Examination Operator 2

Print Name	Signature	Date
ERIC BOND	Eric Bond	5-4-11

Attachment 1 – Visual Examination Data Form

Site ID RHANL			
Examination Date 8-30-11		Batch Number NA	
Procedure # CCP-TP 500		Revision # 11	Video Number NA
Recording Equipment Check ☐SAT ☐UNSAT ☒N/A		Recording Start NA	Recording Stop NA
Initial Container ☒ N/A		Final Container ☐ N/A	
Container or Package ID Number:		Container or Package ID Number RW49814	
Container Type:		Container Type 55 GALLON CONTAINER	
Waste Matrix Code:		Waste Matrix Code S5400	
Waste Stream:		Waste Stream AERHDM	
		Rigid Liner ☒Y ☐N Type 90 MIL	Rigid Liner Lid ☐ Y ☒N
		Rigid Liner Vented or Hole Size NA	
Percent Fill:	Percent Organic Waste:	Percent Fill 90%	Percent Organic Waste 70%
Layers of Confinement:	Closure Method:	Layers of Confinement 1	Closure Method HEAT SEALED FILTERED
Comments (e.g., filter information, NCRs) VE COMPLETE 9-1-11 FIBERBOARD RIGID LINER			

Waste Description Vented 1 gallon Container #6285
GR 08-30-11
~~VENTED 1 GALLON PAINT CAN~~ METAL FITTINGS (IM)(OM)
POUCH STUB (P)
O-RING (R)
METAL CONTAINER (IM)
PAPER (C)
PLASTIC LABWARE (P)
EMPTY PLASTIC BOTTLES (P)
GLASS (OM)
RUBBER GLOVES (R)
METAL VALVES (IM)
TAPE (C)
PLASTIC CAPS (P)
METAL PIPES (IM)
CARDBOARD PIECES (C)
CUTUP HEPA FILTER (AM)(C)
C-CLAMP (IM)
ELECTRICAL CABLE (R)(OM)
ALUMINUM LIDS (AM)

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number RW 49814

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments NA

Visual Examination Operator 1		
ERIC BOND	Eric Bond	9-1-11
Print Name	Signature	Date
Visual Examination Operator 2		
Gary Redman	Gary Redman	09-01-11
Print Name	Signature	Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 05-04-11		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 6285		Container or Package ID Number:	
Container Type: 1 GALLON CONTAINER		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 90%	Percent Organic Waste: 20%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

VENTED 1 GALLON CONTAINER (IM) METAL SHAVINGS (IM)
METAL LABWARE (IM) METAL HARDWARE (IM)
PLASTIC LABWARE (P)
GLASS LABWARE (OIM)
PYROFOAM (OIM)
WIRE (IM)
PAPER (C)
RUBBER (R)
MANIPULATOR TAPE (IM)

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 6285

Prohibited Item(s) Summary	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1

Print Name	Signature	Date
GLORIA RUPPERT	Gloria Ruppert	05-04-11

Visual Examination Operator 2

Print Name	Signature	Date
ERIC BOND	Eric Bond	5-4-11

Attachment 1 – Visual Examination Data Form

Site ID: BHANL			
Examination Date: 09-01-11		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☒N/A		Final Container ☐ N/A	
Container or Package ID Number:		Container or Package ID Number: ~~RW49815~~ 09-01-11 WHR RW49815	
Container Type:		Container Type: 55-Gallon Container	
Waste Matrix Code:		Waste Matrix Code: S5400	
Waste Stream:		Waste Stream: AERHDM	
		Rigid Liner: ☒Y ☐N Type: 90 MIL	Rigid Liner Lid: ☐ Y ☒N
		Rigid Liner Vented or Hole Size: NA	
Percent Fill:	Percent Organic Waste:	Percent Fill: 90%	Percent Organic Waste: 80%
Layers of Confinement:	Closure Method:	Layers of Confinement: 1	Closure Method: Heat Sealed filtered
Comments (e.g., filter information, NCRs): Continued VE on 09-02-11			

Fiberboard Rigid Liner

Waste Description: Vented 1-Gallon Container-6289

Plywood Discs-(C)
O-Ring-(R)
Pouch Material-(P)
Plastic Pieces-(P)
Tape-(C)
Wood-(C)
Copper tubing-(OM)
Glass Labware-(OIM)
Plastic Labware-(P)
Metal Hardware-(IM)(AM)
Vacuum Pump-(IM)(AM)(OM)(P)
Plastic Labware-(P)
Glass Labware-(OIM)
Camera-(P)(OIM)(OM)(IM)
Saw-(P)(IM)(OM)(AM)
~~TYVEK (C)~~ TYVEK Suits-(P) 9-12-11 WHR
Plastic Gloves-(P)
Metal Tools-(IM)
Electrical Box-(OM)(IM)

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number RW49815

Prohibited Items Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH-72B Items			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1: William H. Riley	Will H. R	09-12-11
William H. Riley (Print Name)	Will H. R (Signature)	09-02-11 (Date)
Visual Examination Operator 2: GLORIA RUPPERT	Gloria Ruppert	09-12-11
GLORIA RUPPERT (Print Name)	Gloria Ruppert (Signature)	09-02-11 (Date)

Attachment 1 – Visual Examination Data Form

Site ID: BHAN			
Examination Date: 4-28-11		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 6289		Container or Package ID Number:	
Container Type: 1 GALLON CONTAINER		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 85% Percent Organic Waste: 20%		Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description

VENTED 1 GALLON CONTAINER (IM)
PAPER (C)
PLASTIC LABWARE (P)
METAL LABWARE (IM)
GLASS (OIM)
PYROFOAM (OIM)
WIRE (IM)
EMPTY BOTTLES (P) (OIM)

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 6289

Prohibited Item(s) Summary	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1: ERIC BOND (Print Name) — Eric Bond (Signature) — 4-28-11 (Date)

Visual Examination Operator 2: GLORIA RUPPERT (Print Name) — Gloria Ruppert (Signature) — 4-28-11 (Date)

Attachment 1 – Visual Examination Data Form

Site ID: RHANL	
Examination Date: 09-07-11	Batch Number: NA
Procedure # CCP-TP-500	Revision # 11 / Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A	Recording Start: NA / Recording Stop: NA
Initial Container ☒N/A	Final Container ☐ N/A
Container or Package ID Number:	Container or Package ID Number: RW49816
Container Type:	Container Type: 55-Gallon Container
Waste Matrix Code:	Waste Matrix Code: S5400
Waste Stream:	Waste Stream: AERHDM
	Rigid Liner ☒Y ☐N Type 90 MiL / Rigid Liner Lid: ☐ Y ☒N
	Rigid Liner Vented or Hole Size: NA
Percent Fill / Percent Organic Waste:	Percent Fill 90% / Percent Organic Waste: 90%
Layers of Confinement / Closure Method:	Layers of Confinement 1 / Closure Method: Heat Sealed filtered

Comments (e.g., filter information, NCRs):

Fiberboard Rigid Liner

Waste Description

Plywood Discs - (C)
Pouch Material - (P)
O-Ring - (R)
Plastic Disc - (P)
Fiberboard Liner cut up - (C)
Hepa filter media - (C)(IM)(AM)
Wood - (C)
Saw blades (IM)
Empty Plastic bags - (P)
Electrical Cord - (IM)(OM)(R)
Copper tubing - (OM)
Rubber Gasket - (R)
Plastic Labware - (P)
Tape - (C)
Gloves - (P)
Metal hardware - (IM)
Unistrut - (IM)
Open Peristatic pump - (IM) - (AM)(P)(OM)
C-Clamp - (IM)

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number RW 49816

Prohibited Item(s) Summary	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags NOT defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments NA

Visual Examination Operator 1

Print Name	Signature	Date
William H. Riley	William H. Riley	09-07-11

Visual Examination Operator 2

Print Name	Signature	Date
GLORIA RUPPERT	Gloria Ruppert	09-07-11

Attachment 1 – Visual Examination Data Form

Site ID: RHANL	
Examination Date 09-08-11	Batch Number: NA
Procedure # CCP-TP-500	Revision #: 11 / Video Number NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A	Recording Start NA / Recording Stop: NA
Initial Container ☒N/A	Final Container ☐ N/A
Container or Package ID Number	Container or Package ID Number: RW49817
Container Type	Container Type: 55-Gallon Container
Waste Matrix Code:	Waste Matrix Code: S5400
Waste Stream	Waste Stream: AERHDM
	Rigid Liner ☒Y ☐N Type: 90 MiL / Rigid Liner Lid: ☐Y ☒N
	Rigid Liner Vented or Hole Size: NA
Percent Fill / Percent Organic Waste	Percent Fill 90% / Percent Organic Waste 80%
Layers of Confinement / Closure Method	Layers of Confinement 1 / Closure Method Heat Sealed filtered
Comments (e.g. filter information, NCRs)	

Fiberboard Rigid Liner

Waste Description Vented 1-Gallon Container - 6287

Wooden Discs - (C)
Plastic Labware - (P)
Plastic Bags - (P)
Metal Hardware - (IM)
C-Clamps - (IM)
Metal Plates - (AM)
Unistrut - (IM)
Plastic Hardware - (P)
Metal Cable - (IM)
Wooden Pieces - (C)
Tape - (C)
Filter media - (C)(IM)(AM)(R)
Plastic Gloves (P)
Paper - (C)
Copper tubing - (OM)

TYVEK Suits - (P)
~~TYVEKS - (C)~~ 09-08-11 WHR
Dry Rags - (C)
Pouch Material - (P)
O-Ring - (R)

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number RW 49817

Prohibited Item(s) Summary	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments N/A

Visual Examination Operator 1		
William H. Riley	William H. Riley	09-08-11
Print Name	Signature	Date

Visual Examination Operator 2		
GLORIA RUPPERT	Gloria Ruppert	09-08-11
Print Name	Signature	Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL	
Examination Date: 5-4-11	Batch Number: NA
Procedure #: CCP-TP-500	Revision #: 11 / Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A	Recording Start: NA / Recording Stop: NA
Initial Container ☐ N/A	Final Container ☒ N/A
Container or Package ID Number: 6287	Container or Package ID Number:
Container Type: 1 GALLON CONTAINER	Container Type:
Waste Matrix Code: S5400	Waste Matrix Code:
Waste Stream: AERHDM	Waste Stream:
	Rigid Liner ☐Y ☐N Type / Rigid Liner Lid: ☐ Y ☐N
	Rigid Liner Vented or Hole Size:
Percent Fill: 90% / Percent Organic Waste: 20%	Percent Fill / Percent Organic Waste:
Layers of Confinement: 0 / Closure Method: NA	Layers of Confinement / Closure Method
Comments (e.g., filter information, NCRs): NA	

Waste Description

VENTED 2 GALLON CONTAINER (IM)
PYROFOAM (OIM)
MANIPULATOR TAPE (IM)
GLASS (OIM)
WIRE (IM)
METAL LABWARE (IM)
PLASTIC LABWARE (P)
RUBBER (R)
PAPER (C)

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 6287

Prohibited Item(s) Summary	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1

Print Name	Signature	Date
ERIC BOND	Eric Bond	5-4-11

Visual Examination Operator 2

Print Name	Signature	Date
GLORIA RUPPERT	Gloria Ruppert	5-4-11

Attachment 2 – Visual Examination Independent Technical Reviewer Checklist

Batch Data Report No.: ANLRHVE11017

1. Were data generation and reduction conducted in a technically correct manner in accordance with the methods (procedure) used?	☐ NO	☒ YES	☐ N/A
2. Was the correct revision of the operating procedure used?	☐ NO	☒ YES	☐ N/A
3. Were all the transcription errors corrected?	☐ NO	☐ YES	☒ N/A
4. Are BDR contents complete and match the Visual Examination Batch Data report Table of Contents?	☐ NO	☒ YES	☐ N/A
5. Does the BDR include VE for no more than 20 containers?	☐ NO	☒ YES	☐ N/A
6. Is all data recorded signed and dated in reproducible ink?	☐ NO	☒ YES	☐ N/A
7. Is all raw data recorded clearly, legibly, and accurately?	☐ NO	☒ YES	☐ N/A
8. Are all changes to original data lined out, initialed and dated by the individual making the changes or an individual authorized to make the change?	☐ NO	☒ YES	☐ N/A
9. Is there an adequate written description of the contents?	☐ NO	☒ YES	☐ N/A
10. Were the recording equipment checks satisfactory?	☐ NO	☐ YES	☒ N/A
11. Has each container in this BDR been evaluated for the presence of prohibited wastes?	☐ NO	☒ YES	☐ N/A
12. Has the physical waste form in each container in this BDR been evaluated against the Waste Stream Description and the Waste Matrix Code?	☐ NO	☒ YES	☐ N/A
13. Have the RH Quality Assurance Objectives (QAOs) for VE been met?	☐ NO	☒ YES	☐ N/A
Precision – reconciled discrepancies between operators or between the operator and ITR.	☐	☒	☐
Accuracy – trained operators	☐	☒	☐
Representativeness – description of container contents	☐	☒	☐
Completeness – completed data form and/or recording	☐	☒	☐
Comparability – proper training and adequate AK source documents are available for unopened containers	☐	☒	☐
14. Were NCRs generated included in the BDR?	☐ NO	☐ YES	☒ N/A
Comments: None			

Independent Technical Reviewer:

F. Wesley Root	F. Wesley Root	09-12-11
Printed Name	Signature	Date

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Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523 or 575-234-7431

Fax Number: 575-234-7033

[X] Original Record [ ] Copy
[ ] Fax Record
[ ] Electronic Record

Attn:	Tami Parker	From:	Wes Root
Ship to:	S. M. Stoller WIPP Rec. Mgmt. Govt.	Site:	ANL-E
	CCP Records	Company:	Washington TRU Solutions
	4021 National Parks Hwy	Telephone Number:	630-252-8306
	Carlsbad, NM 88220	Date Sent:	09-12-11
Telephone Number:	575-234-7617		

Document Number	Title / Description	Record Date	Total Pages
ANLRHVE11017	Batch Data Report – Waste Container ID Numbers: RW48261, RW48262, RW48263, RW48267, RW48268, RW49813, RW49814, RW49815, RW49816 and RW49817	09-12-11	39
	WR 9-12-11		

Comments

None

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

	Signature	Printed Name	Date
Records Accepted [X]	Tami Parker	TAMI PARKER	9/13/11
Records Rejected [ ]			

Reason for Rejection:

Re-submittal:

Signature	Printed Name	Date

```
*********************
***   TX REPORT   ***
*********************

TRANSMISSION OK

TX/RX NO                4937
DESTINATION TEL #       916302526706
DESTINATION ID          WES ROOT
ST. TIME                09/13 13:12
TIME USE                00'17
PAGES SENT                1
RESULT                  OK
```


Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523 or 575-234-7431

Fax Number: 575-234-7033

[X] Original Record
[ ] Fax Record
[ ] Electronic Record
[ ] Copy

Attn:	Tami Parker	From:	Wes Root
Ship to:	S. M. Stoller WIPP Rec. Mgmt. Govt.	Site:	ANL-E
	CCP Records	Company:	Washington TRU Solutions
	4021 National Parks Hwy	Telephone Number:	630-252-8306
	Carlsbad, NM 88220	Date Sent:	09-12-11
Telephone Number:	575-234-7617		

Document Number	Title / Description	Record Date	Total Pages
ANLRHVE11017	Batch Data Report – Waste Container ID Numbers: RW48261, RW48262, RW48263, RW48267, RW48268, RW49813, RW49814, RW49815, RW49816 and RW49817	09-12-11	39
	WR 9-12-11		

Comments

None

(When the Record accepted line has been completed, the rest of the page below may be left blank.)

AK22

Attachment 13 – CCP Waste Stream Characterization Checklist – Example Form

CCP Waste Stream Characterization Checklist

Site(s): ANL

Waste Stream Number: AERHDM

Waste Stream Description: Argonne Heterogeneous Debris

Lot # (if applicable) 40

Acceptable Knowledge Information or other data points[a]	Characterization Method(s)[b]	Acceptable Knowledge Re-evaluation Required? Yes/No[c]?	Comments[d]
Physical waste form/description	AK, VE	NO	VE data sheets indicate consistency with Attachment 6 of CCP-TP-005 and section 5.0 of CCP-AK-ANLE-500
Waste material parameters weights	AK	NO	VE and RTR data sheets indicate consistency with Attachment 6 of CCP-TP-005 and Section 5.0 of CCP-AK-ANLE-500
Waste percent volume consistent with nondestructive examination or visual examination data and audio/video tapes or equivalent media	AK, VE	NO	VE data sheets indicate consistency with waste stream description in Section 5.0 of CCP-AK-ANLE-500
Summary category group assignment	AK, VE	NO	Assignment of Summary Category Group S5000 is consistent with VE data sheets
Waste matrix code assignment	AK, VE	NO	Assignment of Waste Matrix Code S5400 is consistent with VE data sheets
Absence of prohibited items	AK,VE	NO	VE confirmed the absence of prohibited items
Tentatively identified compounds[f]	HSG	NO	No TIC's were identified
EPA Hazardous Waste Number assignment[e]	AK, HSG	NO	HSG results did not conflict with EPA HWN assignments for waste stream
Toxicity characteristic code assignment	AK,HSG	NO	HSG results did not conflict with VOC EPA HWN assignments for the waste stream.
UCL_{90} > PRQL?	HSG	NO	Based on the UCL90 statistical evaluation, no compound in the target analyte list exceeded the PRQL.
VOCs from packaging materials or radiolysis present	AK,HSG	NO	No VOC's associated with packaging or radiolysis were identified by AK, CCP-TP-005, Attachment 5
State Hazardous Waste Number assignment	AK	NO	Illinois State HWN's are identical to EPA assignment
Radionuclides present	AK, DTC	NO	Radionuclides Present were determined according to CCP-AK-ANLE-501 and quantified using the DTC method.
Other radiological parameters: (specify)	AK, DTC	NO	The 14 radionuclides constituting greater than 97% of the hazard were calculated and reported, CCP-AK-ANLE-501

NTPC RECORDS ORIGINAL
DATE REC'D 4-18-15

Attachment 13 – CCP Waste Stream Characterization Checklist – Example Form (Continued)

CCP Waste Stream Characterization Checklist

Additional Comments:

VE BDR's: ANLRHVE12011
DTC/DG BDR's: ANLE-RH-50-57, ANLE-RH-50-58, ANLE-RH-50-59, ANLE-RH-50-60, ANLE-RH-50-61
HSG BDR's:ANLHSGS070001, ECL07038M, ECL07038G, ANLHSGS090001, ECL09014M, ECL09014G, ANLHSGS100001, ECL10012M, ECL10012G, ANLHSGS100002, ECL10014M, ECL10014G, ANLHSGS100003, ECL10033M, ECL10033G, ANHSG1201, ECL12014M, ANHSG1202, ECL12017M

a. Identified in the AK Summary Report or included in the in-process record documentation (e.g., BDR's)
b. Use the *Acceptable Knowledge and Waste Characterization Data Cross-Reference (Attachment 9)* to identify applicable testing, sampling, and analysis information to resolve the acceptable knowledge information, as applicable.
c. If "yes," AKE completes an *Acceptable Knowledge Re-evaluation Checklist*.
d. Identify the source of the waste characterization information (e.g., batch data report). Note if AK sufficiency scenarios 1, 2, or 3 are applicable.
e. Ensure that, if a toxicity characteristic contaminant is identified, it is not included as a listed waste, and if analytical data regarding the concentration are not available, the corresponding EPA Hazardous Waste Number is applied.
f. Tentatively Identified Compounds identified in the Headspace Gas Summary Report were identified on the Hazardous Constituent List, Attachment 5

Site Project Manager:

Laura Nelson — Laura Nelson — Date: 4-17-13
Print — Sign

Acceptable Knowledge Expert:

Kevin J. Peters — [signature] — Date: 4/14/2013
Print — Sign

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Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523, 575-234-7431, or 575-234-7095

Fax Number: 575-234-7033

[ ] Original Record [ ] Copy
[ ] Fax Record
[X] Electronic Record

Attn:	Austin Peralta	From:	Laura Nelson
Ship to:	CCP Records	Site:	Denver
	4021 National Parks Highway	Company:	NWP
	MS:GSA:212	Telephone Number:	303-843-2269
	Carlsbad, NM 88220	Date Sent:	4/17/13
Telephone Number:	575-234-7523		

Document Number	Title / Description	Record Date	Total Pages
~~Attachment 13 RH ANL Lot 40~~ N/A	Attachment 13 Characterization Checklist for RH ANL Lot 40	4/17/13	2
	AP 4-18-13		
	NA		

Comments

NA

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

	Signature	Printed Name	Date
Records Accepted [X]	[signature]	Austin Peralta	4-18-13
Records Rejected [ ]			

Reason for Rejection:

Re-submittal:

Signature	Printed Name	Date

```
*********************
***   TX REPORT   ***
*********************

TRANSMISSION OK

TX/RX NO                4314
DESTINATION TEL #       913038432208
DESTINATION ID          DENVER
ST. TIME                04/18 07:12
TIME USE                00'17
PAGES SENT                1
RESULT                  OK
```


Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA:212, Carlsbad, New Mexico 88220
Telephone Number: 575-234-7523, 575-234-7431, or 575-234-7095
Fax Number: 575-234-7033

[ ] Original Record [ ] Copy
[ ] Fax Record
[X] Electronic Record

Attn:	Austin Peralta	From:	Laura Nelson
Ship to:	CCP Records	Site:	Denver
	4021 National Parks Highway	Company:	NWP
	MS:GSA:212	Telephone Number:	303-843-2269
	Carlsbad, NM 88220	Date Sent:	4/17/13
Telephone Number:	575-234-7523		

Document Number	Title / Description	Record Date	Total Pages
~~Attachment 13 RH ANL Lot 40~~ N/A	Attachment 13 Characterization Checklist for RH ANL Lot 40	4/17/13	2
	AP 4-18-13		
	NA		

Comments

NA

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

DIVIDER

PAGE

Nuclear Waste Partnership LLC

A URS-led partnership with B&W and AREVA

CP:13:01180
UFC:5900.00

INTER-OFFICE CORRESPONDENCE

DATE: April 30, 2013

FROM: L. M. Nelson LM Nelson — LOCATION: CCP Certification

TO: NTPC Records Custodian GSA-212 — LOCATION: National TRU Program Certification

SUBJECT: TRANSMITTAL OF CHARACTERIZATION INFORMATION SUMMARY FOR REMOTE-HANDLED LOT 40 AERHDM AT THE ARGONNE NATIONAL LABORATORY

Please accept the attached Characterization Information Summary for the Remote-Handled Argonne National Laboratory Lot 40 AERHDM.

LMN:jmc

Attachment

cc: (without attachment)

I. S. Joo ED

NTPC RECORDS ORIGINAL
DATE REC'D 5-3-13 AP

CHARACTERIZATION INFORMATION SUMMARY

WSPF # AERHDM

Lot 40

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CIS-001

CCP Characterization Information Summary Cover Page

Waste Stream # AERHDM Lot #: 40

AK Expert Review: Kevin Peters Date: 4/17/2013

SPM Review: Laura Nelson Date: 4/17/13

SPM signature certifies that through Acceptable Knowledge testing and/or analysis that the waste identified in this summary is not corrosive, ignitable, reactive, or inc with the TSDF.

A summary of the Acceptable Knowledge regarding this waste stream containing specific information about the corrosivity, reactivity, and ignitability of the waste stre included as an attachment to the Waste Stream Profile Form. By reference, that information is included in this lot.

List of procedures used:

Radiography (RTR/NDE)

NA NA NA NA

Headspace Gas Sampling and Analysis (HSG):

CCP-TP-093	Rev. 17	11/20/12	CCP Sampling of TRU Waste Containers
CCP-TP-093	Rev. 16	09/07/11	CCP Sampling of TRU Waste Containers
CCP-TP-093	Rev. 15	03/10/11	CCP Sampling of TRU Waste Containers
CCP-TP-093	Rev. 14	12/29/10	CCP Sampling of TRU Waste Containers
CCP-TP-093	Rev. 13	03/19/07	CCP Sampling of TRU Waste Containers
CCP-TP-106	Rev. 8	02/04/13	CCP Headspace Gas Sampling Batch Data Report Preparation
CCP-TP-106	Rev. 7	12/29/10	CCP Headspace Gas Sampling Batch Data Report Preparation
CCP-TP-106	Rev. 6	07/12/07	CCP Headspace Gas Sampling Batch Data Report Preparation
CCP-TP-106	Rev. 5	11/16/06	CCP Headspace Gas Sampling Batch Data Report Preparation
CCP-TP-173	Rev. 1	09/30/09	CCP Analysis of Gas Samples for VOCs by GC/FID
CCP-TP-173	Rev. 0	05/03/07	CCP Analysis of Gas Samples for VOCs by GC/FID
CCP-TP-175	Rev. 3	08/02/11	CCP Analysis of Gas Samples for VOCs by GC/MS
CCP-TP-175	Rev. 2	12/29/10	CCP Analysis of Gas Samples for VOCs by GC/MS
CCP-TP-175	Rev. 1	03/29/10	CCP Analysis of Gas Samples for VOCs by GC/MS
CCP-TP-175	Rev. 0	05/02/07	CCP Analysis of Gas Samples for VOCs by GC/MS

Visual Examination (VE):

CCP-TP-500	Rev. 11	04/21/11	CCP Remote-Handled Waste Visual Examination
CCP-TP-500	Rev. 10	12/29/10	CCP Remote-Handled Waste Visual Examination
CCP-TP-500	Rev. 9	06/30/10	CCP Remote-Handled Waste Visual Examination
CCP-TP-500	Rev. 8	07/24/08	CCP Remote-Handled Waste Visual Examination
CCP-TP-500	Rev. 7	02/27/08	CCP Remote-Handled Waste Visual Examination
CCP-TP-500	Rev. 6	10/25/07	CCP Remote-Handled Waste Visual Examination
CCP-TP-500	Rev. 5	06/01/07	CCP Remote-Handled Waste Visual Examination
CCP-TP-500	Rev. 4	11/16/06	CCP Remote-Handled Waste Visual Examination
CCP-TP-500	Rev. 3	10/12/06	CCP Remote-Handled Waste Visual Examination

Project Level Data Validation / DQO Reconciliation:

CCP-TP-001	Rev. 20	9/27/2012	CCP Project Level Data Validation and Verification
CCP-TP-001	Rev. 19	12/29/2010	CCP Project Level Data Validation and Verification
CCP-TP-001	Rev. 18	8/9/2010	CCP Project Level Data Validation and Verification
CCP-TP-001	Rev. 17	09/24/07	CCP Project Level Data Validation and Verification
CCP-TP-001	Rev. 16	04/26/07	CCP Project Level Data Validation and Verification
CCP-TP-001	Rev. 15	11/22/06	CCP Project Level Data Validation and Verification
CCP-TP-001	Rev. 14	11/16/06	CCP Project Level Data Validation and Verification
CCP-TP-001	Rev. 13	07/21/06	CCP Project Level Data Validation and Verification

CIS-002

CCP Characterization Information Summary Cover Page

CCP-TP-002	Rev. 25	02/11/13	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-002	Rev. 24	12/28/11	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-002	Rev. 23	12/29/10	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-002	Rev. 22	06/30/10	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-002	Rev. 21	08/04/09	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-002	Rev. 20	8/1808	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-002	Rev. 19	12/22/06	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-002	Rev. 18	11/16/06	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-002	Rev. 17	10/10/06	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-003	Rev. 19	11/02/12	CCP Data Analysis for S3000, S4000, and S5000 Characterization
CCP-TP-003	Rev. 18	12/29/10	CCP Data Analysis for S3000, S4000, and S5000 Characterization
CCP-TP-003	Rev. 17	11/09/09	CCP Data Analysis for S3000, S4000, and S5000 Characterization
CCP-TP-003	Rev. 16	10/02/07	CCP Data Analysis for S3000, S4000, and S5000 Characterization
CCP-TP-003	Rev. 15	11/16/06	CCP Data Analysis for S3000, S4000, and S5000 Characterization
CCP-TP-003	Rev. 14	09/03/03	CCP Data Analysis for S3000, S4000, and S5000 Characterization
CCP-TP-005	Rev. 24	11/28/11	CCP Acceptable Knowledge Documentation
CCP-TP-005	Rev. 23	06/30/11	CCP Acceptable Knowledge Documentation
CCP-TP-005	Rev. 22	04/21/11	CCP Acceptable Knowledge Documentation
CCP-TP-005	Rev. 21	12/29/10	CCP Acceptable Knowledge Documentation
CCP-TP-005	Rev. 20	11/01/10	CCP Acceptable Knowledge Documentation
CCP-TP-005	Rev. 19	07/06/10	CCP Acceptable Knowledge Documentation
CCP-TP-005	Rev. 18	11/16/06	CCP Acceptable Knowledge Documentation
CCP-TP-005	Rev. 17	06/05/06	CCP Acceptable Knowledge Documentation
CCP-TP-530	Rev. 10	04/25/11	RH TRU Waste Certification and WWIS Data Entry
CCP-TP-530	Rev. 9	12/1'/09	RH TRU Waste Certification and WWIS Data Entry
CCP-TP-530	Rev. 8	09/09/09	RH TRU Waste Certification and WWIS Data Entry
CCP-TP-530	Rev. 7	07/11/08	RH TRU Waste Certification and WWIS Data Entry

WAP Certification:

CCP-PO-001	Rev. 20	06/16/11	CCP Transuranic Waste Characterization Quality Assurance Project Plan
CCP-PO-00'	Rev. 19	12/29/10	CCP Transuranic Waste Characterization Quality Assurance Project Plan
CCP-PO-001	Rev. 18	06/30/10	CCP Transuranic Waste Characterization Quality Assurance Project Plan
CCP-PO-001	Rev. 17	06/23/09	CCP Transuranic Waste Characterization Quality Assurance Project Plan
CCP-PO-001	Rev. 16	10/31/07	CCP Transuranic Waste Characterization Quality Assurance Project Plan
CCP-PO-001	Rev. 15	08/10/07	CCP Transuranic Waste Characterization Quality Assurance Project Plan
CCP-PO-001	Rev. 14	03/28/07	CCP Transuranic Waste Characterization Quality Assurance Project Plan
CCP-PO-001	Rev. 13	11/16/06	CCP Transuranic Waste Characterization Quality Assurance Project Plan
CCP-PO-001	Rev. 12	03/22/06	CCP Transuranic Waste Characterization Quality Assurance Project Plan
CCP-PO-500	Rev. 5	2/11/2013	CCP/ANL RH-TRU Waste Interface Document
CCP-PO-500	Rev.4	10/11/2012	CCP/ANL RH-TRU Waste Interface Document
CCP-PO-500	Rev. 2	8/2/2011	CCP/ANL RH-TRU Waste Interface Document
CCP-PO-500	Rev. 1	11/16/06	CCP/ANL RH-TRU Waste Interface Document

WAC Certification:

CCP-PO-002	Rev. 26	7/14/2011	CCP Transuranic Waste Certification Plan
CCP-PO-002	Rev. 25	12/29/2010	CCP Transuranic Waste Certification Plan
CCP-PO-002	Rev. 24	6/30/2010	CCP Transuranic Waste Certification Plan
CCP-PO-002	Rev. 23	4/7/2010	CCP Transuranic Waste Certification Plan
CCP-PO-002	Rev. 22	1/12/2010	CCP Transuranic Waste Certification Plan
CCP-PO-002	Rev. 21	1/26/2009	CCP Transuranic Waste Certification Plan

CIS-003

CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

Waste Stream: # AERHDM

Lot # 40

Container ID Number	Historical Container ID	NDA BDR or Radiological Characterization BDR (CH only)	VE BDR	RTR BDR	Solids Sampling BDR	Solids Analytical BDR	Load Management/ Overpack Yes	Permit Required Headspace Gas BDR			
								Sample	Analysis		
1101	NA	ANLE-RH-50-58	ANLRHVE12011	NA	NA	NA		NA	NA	NA	NA
1136	NA	ANLE-RH-50-59	ANLRHVE12011	NA	NA	NA		NA	NA	NA	NA
1099	NA	ANLE-RH-50-60	ANLRHVE12011	NA	NA	NA		NA	NA	NA	NA
1170	NA	ANLE-RH-50-61	ANLRHVE12011	NA	NA	NA		NA	NA	NA	NA
1109	NA	ANLE-RH-50-57	ANLRHVE12011	NA	NA	NA		NA	NA	NA	NA

Laura Nelson
Signature of Site Project Manager

Laura Nelson
Printed Name

4-17-13
Date

CIS-001

CCP Headspace Gas UCL_{90} Evaluation Form

WSPF #: AERHDM **Waste Stream Lot Number** 1 through 6

ANALYTE	Transform Data Used (No, Data-Log, SQRT other)	# Samples above MDL (1)	# Samples	Maximum (ppmv)	Mean (ppmv)	SD (ppmv)	UCL_{90} (ppmv)	PRQL (ppmv)	Transformed PRQL (N/A or Value)	UCL_{90} > PRQL Yes	EPA Code
Benzene	LOG	15	56.00	-0.36	-2.89	0.90	-2.74	10	2.30		
Bromoform	LOG	0	56.00	-1.58	-4.06	0.65	-3.95	10	2.30		
Carbon tetrachloride	LOG	1	56.00	-1.09	-3.85	0.67	-3.73	10	2.30		
Chlorobenzene	LOG	0	56.00	-0.77	-3.58	0.70	-3.46	10	2.30		
Chloroform	LOG	9	56.00	1.03	-3.12	1.33	-2.89	10	2.30		
Cyclohexane [a]	LOG	5	56.00	-0.51	-3.02	0.72	-2.89	10	2.30		
1,1-Dichloroethane	LOG	0	56.00	-0.36	-3.11	0.70	-2.99	10	2.30		
1,2-Dichloroethane	LOG	0	56.00	-0.60	-3.28	0.68	-3.16	10	2.30		
1,1-Dichloroethylene	LOG	0	56.00	-0.36	-3.12	0.67	-3.01	10	2.30		
cis-1,2-Dichloroethylene	LOG	0	56.00	-0.51	-3.47	0.77	-3.33	10	2.30		
trans-1,2-Dichloroethylene	LOG	0	56.00	-0.43	-3.18	0.80	-3.04	10	2.30		
Ethyl benzene	LOG	15	56.00	1.67	-2.73	1.66	-2.44	10	2.30		
Ethyl ether	LOG	0	56.00	-0.11	-2.89	0.70	-2.77	10	2.30		
Methylene chloride	LOG	5	56.00	-0.51	-3.00	0.73	-2.87	10	2.30		
1,1,2,2-Tetrachloroethane	LOG	0	56.00	-1.45	-3.91	0.58	-3.81	10	2.30		
Tetrachloroethylene	LOG	8	56.00	2.77	-3.37	1.64	-3.08	10	2.30		
Toluene	LOG	38	56.00	4.38	-1.44	1.91	-1.11	10	2.30		
1,1,1-Trichloroethane	LOG	2	56.00	-0.98	-3.76	0.74	-3.63	10	2.30		
Trichloroethylene	LOG	4	56.00	0.59	-3.40	1.01	-3.22	10	2.30		
1,1,2-Trichloro-1,2,2-trifluoroethane	LOG	1	56.00	-0.80	-3.76	0.77	-3.63	10	2.30		
1,2,4-Trimethylbenzene[a]	LOG	15	56.00	1.13	-2.61	1.46	-2.36	10	2.30		
1,3,5-Trimethylbenzene[a]	LOG	14	56.00	0.00	-2.90	1.06	-2.71	10	2.30		
m,p-Xylene[b]	LOG	22	56.00	3.00	-2.18	2.25	-1.79	10	2.30		
o-Xylene	LOG	20	56.00	2.23	-2.48	1.92	-2.15	10	2.30		
Acetone	LOG	47	56.00	4.70	0.79	1.99	1.13	100	4.61		
Butanol	LOG	30	56.00	1.74	-1.75	1.39	-1.51	100	4.61		
Methanol	LOG	20	56.00	4.70	2.47	0.77	2.60	100	4.61		
Methyl ethyl ketone	log	29	56.00	2.94	-1.19	1.66	-0.90	100	4.61		
Methyl isobutyl ketone	LOG	12	56.00	0.10	-2.96	0.84	-2.81	100	4.61		
Chloromethane[c]	LOG	25	56.00	1.50	-1.90	1.40	-1.66	10	2.30		
Carbon Disulfide[c]	LOG	23	56.00	-0.01	-2.24	0.81	-2.10	10	2.30		
1,2-Dichloropropane[c]	LOG	0	56.00	-0.78	-3.55	0.74	-3.43	10	2.30		
Trichlorofluoromethane[c]	LOG	0	56.00	-0.60	3.46	0.70	-3.34	10	2.30		

[a] These compounds are from the TRAMPAC and are flammable VOCs that do not appear in the QAPjP or the WIPP WAP. These are not part of the target analyte list, but samples may be analyzed for these compounds.

[b] These xylene isomers cannot be resolved by the analytical methods employed in the program. m-Xylene and p-Xylene will be reported as "Total m-p-Xylene."

CK-0005 JW 11-17-15

CCP Headspace Gas UCL_{90} Evaluation Form

WSPF #: AERHDM **Waste Stream Lot Number** 1 through 6

ANALYTE	Transform Data Used (No, Data-Log, SQRT, other)	# Samples above MDL (1)	# Samples	Maximum (ppmv)	Mean (ppmv)	SD (ppmv)	UCL_{90} (ppmv)	PRQL (ppmv)	Transformed PRQL (N/A or Value)	UCL_{90} > PRQL Yes	EPA Code

[c] Compounds are reported as target analytes by the Idaho Laboratory and have been added to the evaluation accordingly.

Comments:

(1) For analytes where there were no samples measured above the MDL value, 1/2 of the MDL value was used. (Per section B4 of the WAP, 1/2 of the MDL value is used in calculating the mean concentration.)

Laura Nelson
Signature of Site Project Manager

Laura Nelson
Printed Name

4-17-13
Date

015-000

CCP Headspace Gas Summary Data

Waste Stream Number AERHDM Lot Number (s) 40

Tentatively Identified Compound	Maximum Observed Estimated Concentrations (ppmv)	# Samples Containing TIC	% Detected
None			

Data Supports EPA Hazardous Waste Numbers Assigned by AK? Yes ☑ No ☐

If no, describe the basis for assigning the EPA Hazardous Waste Codes:

SPM Signature Anna Nelson Date 4-17-13

4-17-13
JN
CIS-0087

CCP RTR/VE Summary of Prohibited Items and AK Confirmation

Waste Stream Number: AERHDM

Lot(s)#: 40

Container Number	RTR Prohibited Items [a]	Visual Examination Prohibited Items [a]
See correlation of container ID numbers for list of remaining drum numbers in this Lot.	Radiography was not used for verification of prohibited items in this lot.	None of the containers in this lot had prohibited items identified in Visual Examination.

a. See Batch Data Reports
b. If AK has assigned U134 to this waste stream, then any liquids in these containers are prohibited items (not acceptable by the TSDF).

Justification for the selection of RTR and/or VE: VE was selected as the characterization method for this lot because the containers were newly generated and met all the Data Quality Objectives for NDE for the waste stream AERHDM.

Laura Nelson
Site Project Manager Signature

Laura Nelson
Printed Name

4-17-13
Date

C15-008

CCP Reconcilliation with Data Quality Objectives

WSF# AERHDM Lot # 40

Sampling Completeness

VE
Number of Valid Samples: 5 Number of Total Samples Analyzed: 5
Percent Complete: 100 (QAO is 100%)

RTR
Number of Valid Samples: NA Number of Total Samples Analyzed: NA
Percent Complete: NA (QAO is 100%)

HSG
Number of Valid Samples: 56 Number of Total Samples collected: 56
Percent Complete: 100 (QAO is ≥90%)

Total VOC
Number of Valid Samples: NA Number of Total Samples collected: NA
Percent Complete: NA (QAO is ≥90%)
Number of Valid Samples: NA Number of Total Samples analyzed: NA
Percent Complete: NA (QAO is ≥90%)

Total SVOC
Number of Valid Samples: NA Number of Total Samples collected: NA
Percent Complete: NA (QAO is ≥90%)
Number of Valid Samples: NA Number of Total Samples analyzed: NA
Percent Complete: NA (QAO is ≥90%)

Total Metals
Number of Valid Samples: NA Number of Total Samples collected: NA
Percent Complete: NA (QAO is ≥90%)
Number of Valid Samples: NA Number of Total Samples analyzed: NA
Percent Complete: NA (QAO is ≥90%)

C15-009

CCP Reconcilliation with Data Quality Objectives

WSF# AERHDM Lot # 40

	Y/N/NA	Reconcilliation Parameter
1	Y	Waste Matrix Code.
2	Y	Waste Material Parameter Weights.
3	Y	The waste matrix code identified is consistent with the type of sampling and analysis used to characterize the waste.
4	Y	The TRU activity reported in the BDRs for each container demonstrates with a 95% probability that the container of waste contains TRU radioactive waste.
5	NA	AK Sufficiency. Is there an approved AK sufficiency Determination for this waste stream?
6	Y	Mean concentrations, UCL90 values for the mean concentration, standard deviations, and the number of samples collected for each VOC in the HSG of each container were calculated and compared with the program required quantitation limits, as reported in CCP TP 003, Attachment 3, and additional Environmental Protection Agency (EPA) Hazardous Waste Numbers were assigned as required. Samples were randomly collected (when appropriate).
7a	NA	Mean concentrations, UCL90 values for the mean concentration, standard deviations, and the number of samples collected for solids VOCs were calculated and compared with the program required quantitation limits and regulatory thresholds, as reported in the Characterization Information Summary, CCP-TP-003-Attachment 4, and additional EPA Hazardous Waste Numbers were assigned as required. Samples were randomly collected.
7b	NA	Mean concentrations, UCL90 values for the mean concentration, standard deviations, and the number of samples collected for solids SVOCs were calculated and compared with the program required quantitation limits and regulatory thresholds, as reported in the Characterization Information Summary, CCP TP 003 Attachment 5, and additional EPA Hazardous Waste Numbers were assigned as required. Samples were randomly collected.
7c	NA	Mean concentrations, (UCL90) values for the mean concentration, standard deviations, and the number of samples collected for total metals were calculated and compared with the program required quantitation limits and regulatory thresholds, as reported in the Characterization Information Summary, CCP TP 003 Attachment 6, and additional EPA Hazardous Waste Numbers were assigned as required. Samples were randomly collected.

CIS-DID

CCP Reconcilliation with Data Quality Objectives

WSF# AERHDM Lot # 40

8	Y	The data demonstrates whether the waste stream exhibits a toxicity characteristic under Title 40 Code of Federal Regulations (CFR), Part 261, Identification and Listing of Hazardous Waste, Subpart C, Characteristics of Hazardous Waste.
9	Y	Does the waste stream contain listed waste found in 20.4.1.200 NMAC incorporating 40 CFR Part 261, Subpart D, Lists of Hazardous Wastes.
10	Y	Waste stream can be classified as hazardous or nonhazardous at the 90-percent confidence level.
11	Y	Appropriate packaging configuration and Drum Age Criteria (DAC) is applied and documented in the headspace gas sampling documentation, and the drum age met prior to sampling.
12	Y	TICs were appropriately identified and reported in accordance with the requirements of Section C3-1 of the QAPjP.
13	Y	The PRQLs for headspace gas VOCs were met for all analyses as evidenced by the analytical batch data reports.
14		The overall completeness, comparability, and representativeness QAOs were met for each of the analytical and testing procedures as specified in CCP-PO-001 Sections C3-2 through C3-9 prior to submittal of a waste stream profile form for a waste steam or waste stream lot.

	Completeness	Comparability	Representativeness
Radiography	NA	NA	NA
VE	Y	Y	Y
Headspace Gas Analysis	Y	Y	Y
Solids Sampling	NA	NA	NA
Solids VOCs	NA	NA	NA
Solids SVOCs	NA	NA	NA
Solids Metals	NA	NA	NA

Comments: N/A

Laura Nelson
Signature of Site Project Manager

Laura Nelson
Printed Name

4-17-13
Date

C15-011

DIVIDER

PAGE

Attachment 13 – CCP Waste Stream Characterization Checklist – Example Form

CCP Waste Stream Characterization Checklist

Site(s): ANL

Waste Stream Number: AERHDM Lot # (if applicable) 45

Waste Stream Description: ARGONE HETEROGENEOUS DEBRIS

Acceptable Knowledge Information or other data points[a]	Characterization Method(s)	Acceptable Knowledge Re-evaluation Required? Yes/No[b]?	Comments[c]
Physical waste form/description	AK, VE	NO	VE Data sheets indicate consistency with Attachment 6 of CCP-TP-005 and section 5.0 of CCP-AK-ANLE-500
Waste material parameters weights	AK	NO	VE Data sheets indicate consistency with Attachment 6 of CCP-TP-005 and section 5.0 of CCP-AK-ANLE-500
Waste percent volume consistent with nondestructive examination or visual examination data and audio/video tapes or equivalent media	AK, VE	NO	VE data sheets indicate consistency with waste stream description in section 5.0 of CCP-AK-ANLE-500
Summary Category Group assignment	AK, VE	NO	Assignment of Summary Category Group S5000 is consistent with VE
Waste Matrix Code assignment	AK, VE	NO	Assignment of Waste Matrix Code S5400 is consistent with VE data sheets
Absence of prohibited items	AK, VE	NO	VE confirmed absence of prohibited items
EPA Hazardous Waste Number assignment[d]	AK	NO	AK assigned appropriate EPA HWNs for this waste stream
Toxicity characteristic code assignment	AK	NO	AK assigned VOC EPA for the waste stream
VOCs from packaging materials or radiolysis present	AK	NO	No VOCs associated with packaging or radiolysis were identified by AK, CCP-TP-005 Attachment 5
State Hazardous Waste Number assignment	AK	NO	Illinois State HWNs are identical to EPA assignment
Radionuclides present	AK, VE	NO	Radionuclides present were determined according to CCP-AK-ANLE-501 and quantified using the DTC method
Other radiological parameters: (specify)	AK, VE	NO	The 14 radionuclides constituting greater than 97% of the hazard were calculated and reported, CCP-AK-ANLE-501

Attachment 13 – CCP Waste Stream Characterization Checklist – Example Form (Continued)

CCP Waste Stream Characterization Checklist

Additional Comments:
NDE BDRs: ANLRHVE13004
DTC BDRS: ANLRHDTC13004

a. Identified in the AK Summary Report or included in the in-process record documentation (e.g., BDR's)
b. If "yes," AKE completes an *Acceptable Knowledge Re-evaluation Checklist.*
c. Identify the source of the waste testing information (e.g., VE or RTR batch data reports). Note if an AK Sufficiency Determination has been approved to meet any characterization parameter.
d. Ensure that, if a toxicity characteristic contaminant is identified, it is not included as a listed waste, and if analytical data regarding the concentration are not available, the corresponding EPA Hazardous Waste Number is applied.

Site Project Manager:

Laura Nelson — Laura Nelson — Date: 7/2/2013
Print — Sign

Acceptable Knowledge Expert:

Kevin J. Peters — [signature] — Date: 6/28/2013
Print — Sign

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523, 575-234-7431, or 575-234-7095

Fax Number: 575-234-7033

[ ] Original Record [ ] Copy
[ ] Fax Record
[X] Electronic Record

Attn:	Jeff Patterson	From:	Laura Nelson
Ship to:	CCP Records	Site:	Denver
	4021 National Parks Highway	Company:	NWP
	MS:GSA:212	Telephone Number:	303-843-2269
	Carlsbad, NM 88220	Date Sent:	7-2-13
Telephone Number:	575-234-7523		

Document Number	Title / Description	Record Date	Total Pages
Attachment 13 for RH ANL AERHDM Lot 45	Characterization Checklist for RH ANL waste stream AERHDM Lot 45	7-2-13	2
	NA		

Comments

NA

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

Records Accepted [ ] _____ Signature _____ Printed Name _____ Date

Records Rejected [ ] _____ Signature _____ Printed Name _____ Date

Reason for Rejection:

Re-submittal: _____ Signature _____ Printed Name _____ Date

Nuclear Waste Partnership LLC

A URS-led partnership with B&W and AREVA

CP:13:01294
UFC:5900.00

INTER-OFFICE CORRESPONDENCE

DATE: July 10, 2013

FROM: L. M. Nelson L.M. Nelson LOCATION: CCP Certification

TO: NTPC Records Custodian GSA-212 LOCATION: National TRU Program Certification

SUBJECT: REVISED TRANSMITTAL OF CHARACTERIZATION INFORMATION SUMMARY FOR REMOTE-HANDLED LOT 45 AERHDM AT THE ARGONNE NATIONAL LABORATORY

REFERENCE: NWP Memorandum CP:13:01277 from L.M. Nelson to NTPC Records Custodian, dated July 3, 2013, subject: Transmittal of Characterization Information Summary for Remote-Handled Lot 45 AERHDM at the Argonne National Laboratory.

This memorandum was revised to incorporate CCP-TP-002 Rev. 26 changes to page 5 of this Characterization Information Summary (CIS). Please accept the attached CIS for the Remote-Handled Argonne National Laboratory Lot 45 AERHDM.

LMN:jmc

Attachment

cc: (without attachment)

I. S. Joo ED

CHARACTERIZATION INFORMATION SUMMARY

WSPF # AERHDM

Lot 45

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CIS-001

CCP Characterization Information Summary Cover Page

Waste Stream #	AERHDM	Lot #:	45
AK Expert Review:	Kevin Peters	Date:	6/28/2013
SPM Review:	Laura Nelson	Date:	7/2/2013

SPM signature certifies that through Acceptable Knowledge testing and/or analysis that the waste identified in this summary is not corrosive, ignitable, reactive, or incompatible with the TSDF.

A summary of the Acceptable Knowledge regarding this waste stream containing specific information about the corrosivity, reactivity, and ignitability of the waste stream is included as an attachment to the Waste Stream Profile Form. By reference, that information is included in this lot.

List of procedures used:

Radiography (RTR/NDE)

NA	NA	NA	NA

Visual Examination (VE):

CCP-TP-500	Rev. 11	04/21/11	CCP Remote-Handled Waste Visual Examination
CCP-TP-500	Rev. 10	12/29/10	CCP Remote-Handled Waste Visual Examination
CCP-TP-500	Rev. 9	06/30/10	CCP Remote-Handled Waste Visual Examination
CCP-TP-500	Rev. 8	07/24/08	CCP Remote-Handled Waste Visual Examination
CCP-TP-500	Rev. 7	02/27/08	CCP Remote-Handled Waste Visual Examination
CCP-TP-500	Rev. 6	10/25/07	CCP Remote-Handled Waste Visual Examination
CCP-TP-500	Rev. 5	06/01/07	CCP Remote-Handled Waste Visual Examination
CCP-TP-500	Rev. 4	11/16/06	CCP Remote-Handled Waste Visual Examination
CCP-TP-500	Rev. 3	10/12/06	CCP Remote-Handled Waste Visual Examination

Project Level Data Validation / DQO Reconciliation:

CCP-TP-001	Rev. 21	6/6/2013	CCP Project Level Data Validation and Verification
CCP-TP-001	Rev. 20	9/27/2012	CCP Project Level Data Validation and Verification
CCP-TP-001	Rev. 19	12/29/2010	CCP Project Level Data Validation and Verification
CCP-TP-001	Rev. 18	8/9/2010	CCP Project Level Data Validation and Verification
CCP-TP-001	Rev. 17	09/24/07	CCP Project Level Data Validation and Verification
CCP-TP-001	Rev. 16	04/26/07	CCP Project Level Data Validation and Verification
CCP-TP-001	Rev. 15	11/22/06	CCP Project Level Data Validation and Verification
CCP-TP-001	Rev. 14	11/16/06	CCP Project Level Data Validation and Verification
CCP-TP-001	Rev. 13	07/21/06	CCP Project Level Data Validation and Verification

CIS-002

CCP Characterization Information Summary Cover Page

CCP-TP-002	Rev. 28	06/19/13	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-002	Rev. 25	02/11/13	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-002	Rev. 24	12/28/11	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-002	Rev. 23	12/29/10	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-002	Rev. 22	06/30/10	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-002	Rev. 21	08/04/09	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-002	Rev. 20	8/1808	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-002	Rev. 19	12/22/06	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-002	Rev. 18	11/16/06	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-002	Rev. 17	10/10/06	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-005	Rev. 25	06/19/13	CCP Acceptable Knowledge Documentation
CCP-TP-005	Rev. 24	11/28/11	CCP Acceptable Knowledge Documentation
CCP-TP-005	Rev. 23	06/30/11	CCP Acceptable Knowledge Documentation
CCP-TP-005	Rev. 22	04/21/11	CCP Acceptable Knowledge Documentation
CCP-TP-005	Rev. 21	12/29/10	CCP Acceptable Knowledge Documentation
CCP-TP-005	Rev. 20	11/01/10	CCP Acceptable Knowledge Documentation
CCP-TP-005	Rev. 19	07/06/10	CCP Acceptable Knowledge Documentation
CCP-TP-005	Rev. 18	11/16/06	CCP Acceptable Knowledge Documentation
CCP-TP-005	Rev. 17	06/05/06	CCP Acceptable Knowledge Documentation
CCP-TP-530	Rev. 11	06/19/13	RH TRU Waste Certification and WWIS Data Entry
CCP-TP-530	Rev. 10	04/25/11	RH TRU Waste Certification and WWIS Data Entry
CCP-TP-530	Rev. 9	12/11/09	RH TRU Waste Certification and WWIS Data Entry
CCP-TP-530	Rev. 8	09/09/09	RH TRU Waste Certification and WWIS Data Entry
CCP-TP-530	Rev. 7	07/11/08	RH TRU Waste Certification and WWIS Data Entry

WAP Certification:

CCP-PO-001	Rev. 21	05/31/13	CCP Transuranic Waste Characterization Quality Assurance Project Plan
CCP-PO-001	Rev. 20	06/16/11	CCP Transuranic Waste Characterization Quality Assurance Project Plan
CCP-PO-001	Rev. 19	12/29/10	CCP Transuranic Waste Characterization Quality Assurance Project Plan
CCP-PO-001	Rev. 18	06/30/10	CCP Transuranic Waste Characterization Quality Assurance Project Plan
CCP-PO-001	Rev. 17	06/23/09	CCP Transuranic Waste Characterization Quality Assurance Project Plan
CCP-PO-001	Rev. 16	10/31/07	CCP Transuranic Waste Characterization Quality Assurance Project Plan
CCP-PO-001	Rev. 15	08/10/07	CCP Transuranic Waste Characterization Quality Assurance Project Plan
CCP-PO-001	Rev. 14	03/28/07	CCP Transuranic Waste Characterization Quality Assurance Project Plan
CCP-PO-001	Rev. 13	11/16/06	CCP Transuranic Waste Characterization Quality Assurance Project Plan
CCP-PO-001	Rev. 12	03/22/06	CCP Transuranic Waste Characterization Quality Assurance Project Plan
CCP-PO-500	Rev. 6	6/21/2013	CCP/ANL RH-TRU Waste Interface Document
CCP-PO-500	Rev. 5	2/11/2013	CCP/ANL RH-TRU Waste Interface Document
CCP-PO-500	Rev.4	10/11/2012	CCP/ANL RH-TRU Waste Interface Document
CCP-PO-500	Rev. 2	8/2/2011	CCP/ANL RH-TRU Waste Interface Document
CCP-PO-500	Rev. 1	11/16/06	CCP/ANL RH-TRU Waste Interface Document

WAC Certification:

CCP-PO-002	Rev. 27	5/31/2013	CCP Transuranic Waste Certification Plan
CCP-PO-002	Rev. 26	7/14/2011	CCP Transuranic Waste Certification Plan
CCP-PO-002	Rev. 25	12/29/2010	CCP Transuranic Waste Certification Plan
CCP-PO-002	Rev. 24	6/30/2010	CCP Transuranic Waste Certification Plan
CCP-PO-002	Rev. 23	4/7/2010	CCP Transuranic Waste Certification Plan
CCP-PO-002	Rev. 22	1/12/2010	CCP Transuranic Waste Certification Plan
CCP-PO-002	Rev. 21	1/26/2009	CCP Transuranic Waste Certification Plan

QS-003

CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

Waste Stream: # AERHDM

Lot # 45

Container ID Number	Historical Container ID	NDA BDR or Radiological Characterization BDR (CH only)	VE BDR	RTR BDR	Load Management/ Overpack Yes
1183	NA	NA	ANLRHVE13004	NA	
1185	NA	NA	ANLRHVE13004	NA	
1187	NA	NA	ANLRHVE13004	NA	
1189	NA	NA	ANLRHVE13004	NA	
1191	NA	NA	ANLRHVE13004	NA	
1193	NA	NA	ANLRHVE13004	NA	
1195	NA	NA	ANLRHVE13004	NA	
1197	NA	NA	ANLRHVE13004	NA	
1199	NA	NA	ANLRHVE13004	NA	
1201	NA	NA	ANLRHVE13004	NA	

Laura Nelson
Signature of Site Project Manager

Laura Nelson
Printed Name

7/2/13
Date

CJS-001

CCP RTR/VE Summary of Prohibited Items and AK Confirmation

Waste Stream Number: AERHDM Lot(s)#: 45

Container Number	RTR Prohibited Items [ab]	Visual Examination Prohibited Items [ab]	Does the Physical Form of the Waste
See correlation of container ID numbers for list of remaining drum numbers in this Lot.	Radiography was not used for verification of prohibited items in this lot.	None of the containers in this lot had prohibited items identified in Visual Examination.	The physical form of the waste found in all the containers in this lot match the Waste Stream Description as Determined by AK.
a. See Batch Data Reports b. If AK has assigned U134 to this waste stream, then any liquids in these containers are prohibited items (not acceptable by the TSDF).			
Justification for the selection of RTR and/or VE: VE was selected as the characterization method for this lot because the containers were newly generated and met all the Data Quality Objectives for NDE for the waste stream AERHDM.			

Laura Nelson — Site Project Manager Signature
Laura Nelson — Printed Name
7/9/13 — Date

CS-005

CCP Reconcilliation with Data Quality Objectives

WSF# AERHDM Lot # 45

Sampling Completeness

VE

Number of Valid Samples: 10 Number of Total Samples Analyzed: 10
Percent Complete: 100 (QAO is 100%)

RTR

Number of Valid Samples: NA Number of Total Samples Analyzed: NA
Percent Complete: NA (QAO is 100%)

	Y/N/NA	Reconcilliation Parameter
1	Y	Waste Matrix Code.
2	Y	Waste Material Parameter Weights.
3	Y	The waste matrix code identified is consistent with the type of sampling and analysis used to characterize the waste.
4	Y	The TRU activity reported in the BDRs for each container demonstrates with a 95% probability that the container of waste contains TRU radioactive waste.
5	NA	AK Sufficiency. Is there an approved AK sufficiency Determination for this waste stream?
6	Y	The data demonstrates whether the waste stream exhibits a toxicity characteristic under Title 40 Code of Federal Regulations (CFR), Part 261, Identification and Listing of Hazardous Waste, Subpart C, Characteristics of Hazardous Waste.

CIS 004

CCP Reconcilliation with Data Quality Objectives

WSF# AERHDM Lot # 45

7	Y	Does the waste stream contain listed waste found in 20.4.1.200 NMAC incorporating 40 CFR Part 261, Subpart D, Lists of Hazardous Wastes.
8	Y	Waste stream can be classified as hazardous or nonhazardous at the 90-percent confidence level.
9		The overall completeness, comparability, and representativeness QAOs were met for each of the analytical and testing procedures as specified in CCP-PO-001 Sections C3-2 through C3-9 prior to submittal of a waste stream profile form for a waste steam or waste stream lot.

	Completeness	Comparability	Representativeness
Radiography	NA	NA	NA
VE	Y	Y	Y

Comments: N/A

Laura Nelson
Signature of Site Project Manager

Laura Nelson
Printed Name

7/2/13
Date

CIS-007

DIVIDER

PAGE

Attachment 13 – CCP Waste Stream Characterization Checklist – Example Form

CCP Waste Stream Characterization Checklist

Site(s): ANL

Waste Stream Number: AERHDM Lot # (if applicable) 42

Waste Stream Description: Argonne Heterogeneous Debris

Acceptable Knowledge Information or other data points[a]	Characterization Method(s)[b]	Acceptable Knowledge Re-evaluation Required? Yes/No[c]?	Comments[d]
Physical waste form/description	AK, VE	NO	VE data sheets indicate consistency with Attachment 6 of CCP-TP-005 and section 5.0 of CCP-AK-ANLE-500
Waste material parameters weights	AK	NO	VE and RTR data sheets indicate consistency with Attachment 6 of CCP-TP-005 and Section 5.0 of CCP-AK-ANLE-500
Waste percent volume consistent with nondestructive examination or visual examination data and audio/video tapes or equivalent media	AK, VE	NO	VE data sheets indicate consistency with waste stream description in Section 5.0 of CCP-AK-ANLE-500
Summary category group assignment	AK, VE	NO	Assignment of Summary Category Group S5000 is consistent with VE data sheets
Waste matrix code assignment	AK, VE	NO	Assignment of Waste Matrix Code S5400 is consistent with VE data sheets
Absence of prohibited items	AK,VE	NO	VE confirmed the absence of prohibited items
Tentatively identified compounds[f]	HSG	NO	No TIC's were identified
EPA Hazardous Waste Number assignment[e]	AK, HSG	NO	HSG results did not conflict with EPA HWN assignments for waste stream
Toxicity characteristic code assignment	AK,HSG	NO	HSG results did not conflict with VOC EPA HWN assignments for the waste stream.
UCL_{90} > PRQL?	HSG	NO	Based on the UCL90 statistical evaluation, no compound in the target analyte list exceeded the PRQL.
VOCs from packaging materials or radiolysis present	AK,HSG	NO	No VOC's associated with packaging or radiolysis were identified by AK, CCP-TP-005, Attachment 5
State Hazardous Waste Number assignment	AK	NO	Illinois State HWN's are identical to EPA assignment
Radionuclides present	AK, DTC	NO	Radionuclides Present were determined according to CCP-AK-ANLE-501 and quantified using the DTC method.
Other radiological parameters: (specify)	AK, DTC	NO	The 14 radionuclides constituting greater than 97% of the hazard were calculated and reported, CCP-AK-ANLE-501

NTPC RECORDS ORIGINAL
DATE REC'D 4-17-13

Attachment 13 – CCP Waste Stream Characterization Checklist – Example Form (Continued)

CCP Waste Stream Characterization Checklist

Additional Comments:
VE BDR's: ANLRHVE13002, ANLRHVE13003
DTC/DG BDR's: ANLRHDTC13002, ANLRHDTC13003
HSG BDR's:ANLHSGS070001, ECL07038M, ECL07038G, ANLHSGS090001, ECL09014M, ECL09014G, ANLHSGS100001, ECL10012M, ECL10012G, ANLHSGS100002, ECL10014M, ECL10014G, ANLHSGS100003, ECL10033M, ECL10033G, ANHSG1201, ECL12014M, ANHSG1202, ECL12017M

a. Identified in the AK Summary Report or included in the in-process record documentation (e.g., BDR's)
b. Use the *Acceptable Knowledge and Waste Characterization Data Cross-Reference (Attachment 9)* to identify applicable testing, sampling, and analysis information to resolve the acceptable knowledge information, as applicable.
c. If "yes," AKE completes an *Acceptable Knowledge Re-evaluation Checklist.*
d. Identify the source of the waste characterization information (e.g., batch data report). Note if AK sufficiency scenarios 1, 2, or 3 are applicable.
e. Ensure that, if a toxicity characteristic contaminant is identified, it is not included as a listed waste, and if analytical data regarding the concentration are not available, the corresponding EPA Hazardous Waste Number is applied.
f. Tentatively Identified Compounds identified in the Headspace Gas Summary Report were identified on the Hazardous Constituent List, Attachment 5

Site Project Manager:

Laura Nelson — Laura Nelson — Date: 4-15-2013
Print — Sign

Acceptable Knowledge Expert:

Kevin J. Peters — [signature] — Date: 4/12/2013
Print — Sign

```
*********************
***   TX REPORT   ***
*********************

TRANSMISSION OK

TX/RX NO                4296
DESTINATION TEL #       913038432208
DESTINATION ID          DENVER
ST. TIME                04/17 07:44
TIME USE                00'17
PAGES SENT                1
RESULT                  OK
```


Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523, 575-234-7431, or 575-234-7095

Fax Number: 575-234-7033

[ ] Original Record
[ ] Fax Record
[X] Electronic Record
[ ] Copy

Attn:	Austin Peralta	From:	Laura Nelson
Ship to:	CCP Records	Site:	Denver
	4021 National Parks Highway	Company:	NWP
	MS:GSA:212	Telephone Number:	303-843-2268
	Carlsbad, NM 88220	Date Sent:	4/17/13
Telephone Number:	575-234-7523		

Document Number	Title/Description	Revision	Qty
~~Attachment 13 RH ANL Lot 42~~	Attachment 13, Characterization Checklist RH ANL AERHDM Lot 42	4/15/13	2
	AP 4-17-13		
	NA		

Comments

NA

(When the Record accepted line has been completed, the rest of the page below may be left blank.)

DIVIDER

PAGE

Nuclear Waste Partnership LLC

A URS-led partnership with B&W and AREVA

CP:13:01150
UFC:5900.00

INTER-OFFICE CORRESPONDENCE

DATE: April 17, 2013

FROM: L. M. Nelson LMNelson LOCATION: CCP Certification

TO: NTPC Records Custodian GSA-212 LOCATION: National TRU Program Certification

SUBJECT: TRANSMITTAL OF CHARACTERIZATION INFORMATION SUMMARY FOR REMOTE-HANDLED LOT 42 AERHDM AT THE ARGONNE NATIONAL LABORATORY

Please accept the attached Characterization Information Summary for the Remote-Handled Argonne National Laboratory Lot 42 AERHDM.

LMN:jmc

Attachment

cc: (without attachment)
I. S. Joo ED

NTPC RECORDS ORIGINAL
DATE REC'D 5-15-13

CHARACTERIZATION INFORMATION SUMMARY

WSPF # AERHDM

Lot 42

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CCP Headspace Gas UCL_{90} Evaluation Form..... 005

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Reconciliation with Data Quality Objectives..... 009

CIS-001

CCP Characterization Information Summary Cover Page

Waste Stream #	AERHDM	Lot #:	42
AK Expert Review:	Kevin Peters	Date:	4/12/2013
SPM Review:	Laura Nelson	Date:	4-15-2013

SPM signature certifies that through Acceptable Knowledge testing and/or analysis that the waste identified in this summary is not corrosive, ignitable, reactive, or incompatible with the TSDF.

A summary of the Acceptable Knowledge regarding this waste stream containing specific information about the corrosivity, reactivity, and ignitability of the waste stream is included as an attachment to the Waste Stream Profile Form. By reference, that information is included in this lot.

List of procedures used:

Radiography (RTR/NDE)

NA	NA	NA	NA

Headspace Gas Sampling and Analysis (HSG):

CCP-TP-093	Rev. 17	11/20/12	CCP Sampling of TRU Waste Containers
CCP-TP-093	Rev. 16	09/07/11	CCP Sampling of TRU Waste Containers
CCP-TP-093	Rev. 15	03/10/11	CCP Sampling of TRU Waste Containers
CCP-TP-093	Rev. 14	12/29/10	CCP Sampling of TRU Waste Containers
CCP-TP-093	Rev. 13	03/19/07	CCP Sampling of TRU Waste Containers
CCP-TP-106	Rev. 8	02/04/13	CCP Headspace Gas Sampling Batch Data Report Preparation
CCP-TP-106	Rev. 7	12/29/10	CCP Headspace Gas Sampling Batch Data Report Preparation
CCP-TP-106	Rev. 6	07/12/07	CCP Headspace Gas Sampling Batch Data Report Preparation
CCP-TP-106	Rev. 5	11/16/06	CCP Headspace Gas Sampling Batch Data Report Preparation
CCP-TP-173	Rev. 1	09/30/09	CCP Analysis of Gas Samples for VOCs by GC/FID
CCP-TP-173	Rev. 0	05/03/07	CCP Analysis of Gas Samples for VOCs by GC/FID
CCP-TP-175	Rev. 3	08/02/11	CCP Analysis of Gas Samples for VOCs by GC/MS
CCP-TP-175	Rev. 2	12/29/10	CCP Analysis of Gas Samples for VOCs by GC/MS
CCP-TP-175	Rev. 1	03/29/10	CCP Analysis of Gas Samples for VOCs by GC/MS
CCP-TP-175	Rev. 0	05/02/07	CCP Analysis of Gas Samples for VOCs by GC/MS

Visual Examination (VE):

CCP-TP-500	Rev. 11	04/21/11	CCP Remote-Handled Waste Visual Examination
CCP-TP-500	Rev. 10	12/29/10	CCP Remote-Handled Waste Visual Examination
CCP-TP-500	Rev. 9	06/30/10	CCP Remote-Handled Waste Visual Examination
CCP-TP-500	Rev. 8	07/24/08	CCP Remote-Handled Waste Visual Examination
CCP-TP-500	Rev. 7	02/27/08	CCP Remote-Handled Waste Visual Examination
CCP-TP-500	Rev. 6	10/25/07	CCP Remote-Handled Waste Visual Examination
CCP-TP-500	Rev. 5	06/01/07	CCP Remote-Handled Waste Visual Examination
CCP-TP-500	Rev. 4	11/16/06	CCP Remote-Handled Waste Visual Examination
CCP-TP-500	Rev. 3	10/12/06	CCP Remote-Handled Waste Visual Examination

Project Level Data Validation / DQO Reconciliation:

CCP-TP-001	Rev. 20	9/27/2012	CCP Project Level Data Validation and Verification
CCP-TP-001	Rev. 19	12/29/2010	CCP Project Level Data Validation and Verification
CCP-TP-001	Rev. 18	8/9/2010	CCP Project Level Data Validation and Verification
CCP-TP-001	Rev. 17	09/24/07	CCP Project Level Data Validation and Verification
CCP-TP-001	Rev. 16	04/26/07	CCP Project Level Data Validation and Verification
CCP-TP-001	Rev. 15	11/22/06	CCP Project Level Data Validation and Verification
CCP-TP-001	Rev. 14	11/16/06	CCP Project Level Data Validation and Verification
CCP-TP-001	Rev. 13	07/21/06	CCP Project Level Data Validation and Verification

CIS-002

CCP Characterization Information Summary Cover Page

CCP-TP-002	Rev. 25	02/11/13	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-002	Rev. 24	12/28/11	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-002	Rev. 23	12/29/10	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-002	Rev 22	06/30/10	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-002	Rev. 21	08/04/09	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-002	Rev. 20	8/1808	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-002	Rev. 19	12/22/06	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-002	Rev. 18	11/16/06	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-002	Rev. 17	10/10/06	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-003	Rev. 19	11/02/12	CCP Data Analysis for S3000, S4000, and S5000 Characterization
CCP-TP-003	Rev. 18	12/29/10	CCP Data Analysis for S3000, S4000, and S5000 Characterization
CCP-TP-003	Rev. 17	11/09/09	CCP Data Analysis for S3000, S4000, and S5000 Characterization
CCP-TP-003	Rev. 16	10/02/07	CCP Data Analysis for S3000, S4000, and S5000 Characterization
CCP-TP-003	Rev. 15	11/16/06	CCP Data Analysis for S3000, S4000, and S5000 Characterization
CCP-TP-003	Rev. 14	09/03/03	CCP Data Analysis for S3000, S4000, and S5000 Characterization
CCP-TP-005	Rev. 24	11/28/11	CCP Acceptable Knowledge Documentation
CCP-TP-005	Rev. 23	06/30/11	CCP Acceptable Knowledge Documentation
CCP-TP-005	Rev. 22	04/21/11	CCP Acceptable Knowledge Documentation
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CCP-TP-005	Rev. 20	11/01/10	CCP Acceptable Knowledge Documentation
CCP-TP-005	Rev. 19	07/06/10	CCP Acceptable Knowledge Documentation
CCP-TP-005	Rev. 18	11/16/06	CCP Acceptable Knowledge Documentation
CCP-TP-005	Rev. 17	06/05/06	CCP Acceptable Knowledge Documentation
CCP-TP-530	Rev. 10	04/25/11	RH TRU Waste Certification and WWIS Data Entry
CCP-TP-530	Rev. 9	12/11/09	RH TRU Waste Certification and WWIS Data Entry
CCP-TP-530	Rev. 8	09/09/09	RH TRU Waste Certification and WWIS Data Entry
CCP-TP-530	Rev. 7	07/11/08	RH TRU Waste Certification and WWIS Data Entry

WAP Certification:

CCP-PO-001	Rev. 20	06/16/11	CCP Transuranic Waste Characterization Quality Assurance Project Plan
CCP-PO-001	Rev. 19	12/29/10	CCP Transuranic Waste Characterization Quality Assurance Project Plan
CCP-PO-001	Rev. 18	06/30/10	CCP Transuranic Waste Characterization Quality Assurance Project Plan
CCP-PO-001	Rev. 17	06/23/09	CCP Transuranic Waste Characterization Quality Assurance Project Plan
CCP-PO-001	Rev. 16	10/31/07	CCP Transuranic Waste Characterization Quality Assurance Project Plan
CCP-PO-001	Rev. 15	08/10/07	CCP Transuranic Waste Characterization Quality Assurance Project Plan
CCP-PO-001	Rev. 14	03/28/07	CCP Transuranic Waste Characterization Quality Assurance Project Plan
CCP-PO-001	Rev. 13	11/16/06	CCP Transuranic Waste Characterization Quality Assurance Project Plan
CCP-PO-001	Rev. 12	03/22/06	CCP Transuranic Waste Characterization Quality Assurance Project Plan
CCP-PO-500	Rev. 5	2/11/2013	CCP/ANL RH-TRU Waste Interface Document
CCP-PO-500	Rev 4	10/11/2012	CCP/ANL RH-TRU Waste Interface Document
CCP-PO-500	Rev. 2	8/2/2011	CCP/ANL RH-TRU Waste Interface Document
CCP-PO-500	Rev. 1	11/16/06	CCP/ANL RH-TRU Waste Interface Document

WAC Certification:

CCP-PO-002	Rev. 26	7/14/2011	CCP Transuranic Waste Certification Plan
CCP-PO-002	Rev. 25	12/29/2010	CCP Transuranic Waste Certification Plan
CCP-PO-002	Rev. 24	6/30/2010	CCP Transuranic Waste Certification Plan
CCP-PO-002	Rev. 23	4/7/2010	CCP Transuranic Waste Certification Plan
CCP-PO-002	Rev. 22	1/12/2010	CCP Transuranic Waste Certification Plan
CCP-PO-002	Rev. 21	1/26/2009	CCP Transuranic Waste Certification Plan

CIS-003

CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

Waste Stream: # AERHDM

Lot # 42

Container ID Number	Historical Container ID	NDA BDR or Radiological Characterization BDR (CH only)	VE BDR	RTR BDR	Solids Sampling BDR	Solids Analytical BDR	Load Management/ Overpack Yes	Permit Required Headspace Gas BDR			
								Sample	Analysis		
1167	NA	ANLRHDTC13002	ANLRHVE13003	NA	NA	NA		NA	NA	NA	NA
1168	NA	ANLRHDTC13002	ANLRHVE13003	NA	NA	NA		NA	NA	NA	NA
1169	NA	ANLRHDTC13002	ANLRHVE13003	NA	NA	NA		NA	NA	NA	NA
1174	NA	ANLRHDTC13003	ANLRHVE13002	NA	NA	NA		NA	NA	NA	NA
1176	NA	ANLRHDTC13003	ANLRHVE13002	NA	NA	NA		NA	NA	NA	NA
1178	NA	ANLRHDTC13003	ANLRHVE13002	NA	NA	NA		NA	NA	NA	NA
1182	NA	ANLRHDTC13003	ANLRHVE13002	NA	NA	NA		NA	NA	NA	NA

Laura Nelson
Signature of Site Project Manager

Laura Nelson
Printed Name

4-15-13
Date

CIS-004

CCP Headspace Gas UCL_{90} Evaluation Form

WSPF #: AERHDM **Waste Stream Lot Number** 1 through 6

ANALYTE	Transform Data Used (No, Data-Log, SQRT, other)	# Samples above MDL (1)	# Samples	Maximum (ppmv)	Mean (ppmv)	SD (ppmv)	UCL_{90} (ppmv)	PRQL (ppmv)	Transformed PRQL (N/A or Value)	UCL_{90} > PRQL Yes	EPA Code
Benzene	LOG	15	56.00	-0.36	-2.89	0.90	-2.74	10	2.30		
Bromoform	LOG	0	56.00	-1.58	-4.06	0.65	-3.95	10	2.30		
Carbon tetrachloride	LOG	1	56.00	-1.09	-3.85	0.67	-3.73	10	2.30		
Chlorobenzene	LOG	0	56.00	-0.77	-3.58	0.70	-3.46	10	2.30		
Chloroform	LOG	9	56.00	1.03	-3.12	1.33	-2.89	10	2.30		
Cyclohexane [a]	LOG	5	56.00	-0.51	-3.02	0.72	-2.89	10	2.30		
1,1-Dichloroethane	LOG	0	56.00	-0.36	-3.11	0.70	-2.99	10	2.30		
1,2-Dichloroethane	LOG	0	56.00	-0.60	-3.28	0.68	-3.16	10	2.30		
1,1-Dichloroethylene	LOG	0	56.00	-0.36	-3.12	0.67	-3.01	10	2.30		
cis-1,2-Dichloroethylene	LOG	0	56.00	-0.51	-3.47	0.77	-3.33	10	2.30		
trans-1,2-Dichloroethylene	LOG	0	56.00	-0.43	-3.18	0.80	-3.04	10	2.30		
Ethyl benzene	LOG	15	56.00	1.67	-2.73	1.66	-2.44	10	2.30		
Ethyl ether	LOG	0	56.00	-0.11	-2.89	0.70	-2.77	10	2.30		
Methylene chloride	LOG	5	56.00	-0.51	-3.00	0.73	-2.87	10	2.30		
1,1,2,2-Tetrachloroethane	LOG	0	56.00	-1.45	-3.91	0.58	-3.81	10	2.30		
Tetrachloroethylene	LOG	8	56.00	2.77	-3.37	1.64	-3.08	10	2.30		
Toluene	LOG	38	56.00	4.38	-1.44	1.91	-1.11	10	2.30		
1,1,1-Trichloroethane	LOG	2	56.00	-0.98	-3.76	0.74	-3.63	10	2.30		
Trichloroethylene	LOG	4	56.00	0.59	-3.40	1.01	-3.22	10	2.30		
1,1,2-Trichloro-1,2,2-trifluoroethane	LOG	1	56.00	-0.80	-3.76	0.77	-3.63	10	2.30		
1,2,4-Trimethylbenzene[a]	LOG	15	56.00	1.13	-2.61	1.46	-2.36	10	2.30		
1,3,5-Trimethylbenzene[a]	LOG	14	56.00	0.00	-2.90	1.06	-2.71	10	2.30		
m,p-Xylene[b]	LOG	22	56.00	3.00	-2.18	2.25	-1.79	10	2.30		
o-Xylene	LOG	20	56.00	2.23	-2.48	1.92	-2.15	10	2.30		
Acetone	LOG	47	56.00	4.70	0.79	1.99	1.13	100	4.61		
Butanol	LOG	30	56.00	1.74	-1.75	1.39	-1.51	100	4.61		
Methanol	LOG	20	56.00	4.70	2.47	0.77	2.60	100	4.61		
Methyl ethyl ketone	log	29	56.00	2.94	-1.19	1.66	-0.90	100	4.61		
Methyl isobutyl ketone	LOG	12	56.00	0.10	-2.96	0.84	-2.81	100	4.61		
Chloromethane[c]	LOG	25	56.00	1.50	-1.90	1.40	-1.66	10	2.30		
Carbon Disulfide[c]	LOG	23	56.00	-0.01	-2.24	0.81	-2.10	10	2.30		
1,2-Dichloropropane[c]	LOG	0	56.00	-0.78	-3.55	0.74	-3.43	10	2.30		
Trichlorofluoromethane[c]	LOG	0	56.00	-0.60	-3.46	0.70	-3.34	10	2.30		

[a] These compounds are from the TRAMPAC and are flammable VOCs that do not appear in the QAPjP or the WIPP WAP. These are not part of the target analyte list, but samples may be analyzed for these compounds.

[b] These xylene isomers cannot be resolved by the analytical methods employed in the program. m-Xylene and p-Xylene will be reported as "Total m-p-Xylene."

CUS-085

CCP Headspace Gas UCL_{90} Evaluation Form

WSPF #: AERHDM **Waste Stream Lot Number** 1 through 6

ANALYTE	Transform Data Used (No, Data-Log, SQRT, other)	# Samples above MDL (1)	# Samples	Maximum (ppmv)	Mean (ppmv)	SD (ppmv)	UCL_{90} (ppmv)	PRQL (ppmv)	Transformed PRQL (N/A or Value)	UCL_{90} > PRQL Yes	EPA Code

[c] Compounds are reported as target analytes by the Idaho Laboratory and have been added to the evaluation accordingly

Comments:
(1) For analytes where there were no samples measured above the MDL value, 1/2 of the MDL value was used. (Per section B4 of the WAP, 1/2 of the MDL value is used in calculating the mean concentration.)

Laura Nelson
Signature of Site Project Manager

Laura Nelson
Printed Name

4-15-13
Date

CB 006

CCP Headspace Gas Summary Data

Waste Stream Number AERHDM Lot Number (s) 42

Tentatively Identified Compound	Maximum Observed Estimated Concentrations (ppmv)	# Samples Containing TIC	% Detected
None			

Data Supports EPA Hazardous Waste Numbers Assigned by AK? Yes ☑ No ☐

If no, describe the basis for assigning the EPA Hazardous Waste Codes:

SPM Signature Laura Nelson Date 4-15-13

CIS-007

CCP RTR/VE Summary of Prohibited Items and AK Confirmation

Waste Stream Number: AERHDM Lot(s)#: 42

Container Number	RTR Prohibited Items [a]	Visual Examination Prohibited Items [a]
See correlation of container ID numbers for list of remaining drum numbers in this Lot.	Radiography was not used for verification of prohibited items in this lot.	None of the containers in this lot had prohibited items identified in Visual Examination.

a. See Batch Data Reports
b. If AK has assigned U134 to this waste stream, then any liquids in these containers are prohibited items (not acceptable by the TSDF).

Justification for the selection of RTR and/or VE: VE was selected as the characterization method for this lot because the containers were newly generated and met all the Data Quality Objectives for NDE for the waste stream AERHDM.

Laura Nelson — Site Project Manager Signature
Laura Nelson — Printed Name
4-15-13 — Date

CIS-008

CCP Reconcilliation with Data Quality Objectives

WSF# AERHDM Lot # 42

Sampling Completeness

VE

Number of Valid Samples: 5 Number of Total Samples Analyzed: 5
Percent Complete: 100 (QAO is 100%)

RTR

Number of Valid Samples: NA Number of Total Samples Analyzed: NA
Percent Complete: NA (QAO is 100%)

HSG

Number of Valid Samples: 56 Number of Total Samples collected: 56
Percent Complete: 100 (QAO is ≥90%)

Total VOC

Number of Valid Samples: NA Number of Total Samples collected: NA
Percent Complete: NA (QAO is ≥90%)
Number of Valid Samples: NA Number of Total Samples analyzed: NA
Percent Complete: NA (QAO is ≥90%)

Total SVOC

Number of Valid Samples: NA Number of Total Samples collected: NA
Percent Complete: NA (QAO is ≥90%)
Number of Valid Samples: NA Number of Total Samples analyzed: NA
Percent Complete: NA (QAO is ≥90%)

Total Metals

Number of Valid Samples: NA Number of Total Samples collected: NA
Percent Complete: NA (QAO is ≥90%)
Number of Valid Samples: NA Number of Total Samples analyzed: NA
Percent Complete: NA (QAO is ≥90%)

CLS 009

CCP Reconcilliation with Data Quality Objectives

WSF# AERHDM Lot # 42

	Y/N/NA	Reconcilliation Parameter
1	Y	Waste Matrix Code.
2	Y	Waste Material Parameter Weights.
3	Y	The waste matrix code identified is consistent with the type of sampling and analysis used to characterize the waste.
4	Y	The TRU activity reported in the BDRs for each container demonstrates with a 95% probability that the container of waste contains TRU radioactive waste.
5	NA	AK Sufficiency. Is there an approved AK sufficiency Determination for this waste stream?
6	Y	Mean concentrations, UCL90 values for the mean concentration, standard deviations, and the number of samples collected for each VOC in the HSG of each container were calculated and compared with the program required quantitation limits, as reported in CCP TP 003, Attachment 3, and additional Environmental Protection Agency (EPA) Hazardous Waste Numbers were assigned as required. Samples were randomly collected (when appropriate).
7a	NA	Mean concentrations, UCL90 values for the mean concentration, standard deviations, and the number of samples collected for solids VOCs were calculated and compared with the program required quantitation limits and regulatory thresholds, as reported in the Characterization Information Summary, CCP-TP-003-Attachment 4, and additional EPA Hazardous Waste Numbers were assigned as required. Samples were randomly collected.
7b	NA	Mean concentrations, UCL90 values for the mean concentration, standard deviations, and the number of samples collected for solids SVOCs were calculated and compared with the program required quantitation limits and regulatory thresholds, as reported in the Characterization Information Summary, CCP TP 003 Attachment 5, and additional EPA Hazardous Waste Numbers were assigned as required. Samples were randomly collected.
7c	NA	Mean concentrations, (UCL90) values for the mean concentration, standard deviations, and the number of samples collected for total metals were calculated and compared with the program required quantitation limits and regulatory thresholds, as reported in the Characterization Information Summary, CCP TP 003 Attachment 6, and additional EPA Hazardous Waste Numbers were assigned as required. Samples were randomly collected.

C15-010

CCP Reconcilliation with Data Quality Objectives

WSF# AERHDM Lot # 42

8	Y	The data demonstrates whether the waste stream exhibits a toxicity characteristic under Title 40 Code of Federal Regulations (CFR), Part 261, Identification and Listing of Hazardous Waste, Subpart C, Characteristics of Hazardous Waste.
9	Y	Does the waste stream contain listed waste found in 20.4.1.200 NMAC incorporating 40 CFR Part 261, Subpart D, Lists of Hazardous Wastes.
10	Y	Waste stream can be classified as hazardous or nonhazardous at the 90-percent confidence level.
11	Y	Appropriate packaging configuration and Drum Age Criteria (DAC) is applied and documented in the headspace gas sampling documentation, and the drum age met prior to sampling.
12	Y	TICs were appropriately identified and reported in accordance with the requirements of Section C3-1 of the QAPjP.
13	Y	The PRQLs for headspace gas VOCs were met for all analyses as evidenced by the analytical batch data reports.
14		The overall completeness, comparability, and representativeness QAOs were met for each of the analytical and testing procedures as specified in CCP-PO-001 Sections C3-2 through C3-9 prior to submittal of a waste stream profile form for a waste steam or waste stream lot.

	Completeness	Comparability	Representativeness
Radiography	NA	NA	NA
VE	Y	Y	Y
Headspace Gas Analysis	Y	Y	Y
Solids Sampling	NA	NA	NA
Solids VOCs	NA	NA	NA
Solids SVOCs	NA	NA	NA
Solids Metals	NA	NA	NA

Comments: N/A

Laura Nelson
Signature of Site Project Manager

Laura Nelson
Printed Name

4-15-13
Date

CLS-011

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PAGE

Attachment 13 – CCP Waste Stream Characterization Checklist – Example Form

CCP Waste Stream Characterization Checklist

Site(s): ANL

Waste Stream Number: AERHDM Lot # (if applicable) 30

Waste Stream Description: Argonne Heterogeneous Debris Waste

Acceptable Knowledge Information or other data points[a]	Characterization Method(s)[b]	Acceptable Knowledge Re-evaluation Required? Yes/No[c]?	Comments[d]
Physical waste form/description	AK, VE	NO	VE data sheets indicate consistency with Attachment 6 of CCP-TP-005 and section 5.0 of CCP-AK-ANLE-500
Waste material parameters weights	AK	NO	VE and RTR data sheets indicate consistency with Attachment 6 of CCP-TP-005 and Section 5.0 of CCP-AK-ANLE-500
Waste percent volume consistent with nondestructive examination or visual examination data and audio/video tapes or equivalent media	AK, VE	NO	VE data sheets indicate sonsistency with waste stream description in Section 5.0 of CCP-AK-ANLE-500
Summary category group assignment	AK, VE	NO	Assignment of Summary Category Group S5000 is consistent with VE data sheets
Waste matrix code assignment	AK, VE	NO	Assignment of Waste Matrix Code S5400 is consistent with VE data sheets
Absence of prohibited items	AK,VE	NO	VE confirmed the absence of prohibited items
Tentatively identified compounds[f]	HSG	NO	No TIC's were identified
EPA Hazardous Waste Number assignment[e]	AK, HSG	NO	HSG results did not conflict with EPA HWN assignments for waste stream
Toxicity characteristic code assignment	AK,HSG	NO	HSG results did not conflict with VOC EPA HWN assignments for the waste stream.
UCL_{90} > PRQL?	HSG	NO	Based on the UCL90 statistical evaluation, no compound in the target analyte list exceeded the PRQL.
VOCs from packaging materials or radiolysis present	AK,HSG	NO	No VOC's associated with packaging or radiolysis were identified by AK, CCP-TP-005, Attachment 5
State Hazardous Waste Number assignment	AK	NO	Illinois State HWN's are identical to EPA assignment
Radionuclides present	AK, DTC	NO	Radionuclides Present were determined according to CCP-AK-ANLE-501 and quantified using the DTC method.
Other radiological parameters: (specify)	AK, DTC	NO	The 14 radionuclides constituting greater than 97% of the hazard were calculated and reported, CCP-AK-ANLE-501

CCP RECORDS ORIGINAL
DATE REC'D 3-26-12

Attachment 13 – CCP Waste Stream Characterization Checklist – Example Form (Continued)

CCP Waste Stream Characterization Checklist

Additional Comments:
VE BDR's: ANLRHVE11010
DTC/DG BDR's: CCP-AK-ANLE-501
HSG BDR's: ANLHSGS070001, ECL07038M, ECL07038G, ANLHSGS090001, ECL09014M, ECL09014G, ANLHSGS100001, ECL10012M, ECL10012G, ANLHSGS100002, ECL10014M, ECL10014G, ANLHSGS100003, ECL10033M, ECL10033G.

a. Identified in the AK Summary Report or included in the in-process record documentation (e.g., BDR's)
b. Use the *Acceptable Knowledge and Waste Characterization Data Cross-Reference (Attachment 9)* to identify applicable testing, sampling, and analysis information to resolve the acceptable knowledge information, as applicable.
c. If "yes," AKE completes an *Acceptable Knowledge Re-evaluation Checklist.*
d. Identify the source of the waste characterization information (e.g., batch data report). Note if AK sufficiency scenarios 1, 2, or 3 are applicable.
e. Ensure that, if a toxicity characteristic contaminant is identified, it is not included as a listed waste, and if analytical data regarding the concentration are not available, the corresponding EPA Hazardous Waste Number is applied.
f. Tentatively Identified Compounds identified in the Headspace Gas Summary Report were identified on the Hazardous Constituent List, Attachment 5

Site Project Manager:

LAURA NELSON — Laura Nelson — Date: 3/21/2012
Print — Sign

Acceptable Knowledge Expert:

Kevin J. Peters — [signature] — Date: 3/21/2012
Print — Sign

DIVIDER

PAGE

URS

Washington TRU Solutions LLC

CP:12:01138
UFC:5900.00

INTER-OFFICE CORRESPONDENCE

DATE: March 22, 2012

FROM: L. M. Nelson LMNelson LOCATION: Certification

TO: CCP Records Custodian GSA-212 LOCATION: Retrieval, Characterization and Transportation

SUBJECT: TRANSMITTAL OF CHARACTERIZATION INFORMATION SUMMARY FOR REMOTE-HANDLED LOT 30 AERHDM AT THE ARGONNE NATIONAL LABORATORY

Please accept the attached Characterization Information Summary for the Remote-Handled Argonne National Laboratory Lot 30 AERHDM.

LMN:yhs

Attachment

cc: (without attachment)

I. S. Quintana ED

CCP RECORDS ORIGINAL
DATE REC'D 4-2-12

CHARACTERIZATION INFORMATION SUMMARY

WSPF # AERHDM

Lot 30

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Reconciliation with Data Quality Objectives..... 009

CIS-001

CCP Characterization Information Summary Cover Page

Waste Stream #	AERHDM	Lot #:	30
AK Expert Review:	Kevin Peters	Date:	3/21/2012
SPM Review:	Laura Nelson	Date:	3/21/2012

SPM signature certifies that through Acceptable Knowledge testing and/or analysis that the waste identified in this summary is not corrosive, ignitable, reactive, or incompatible with the TSDF.

A summary of the Acceptable Knowledge regarding this waste stream containing specific information about the corrosivity, reactivity, and ignitability of the waste stream is included as an attachment to the Waste Stream Profile Form. By reference, that information is included in this lot.

List of procedures used:

Radiography (RTR/NDE)

NA	NA	NA	NA

Headspace Gas Sampling and Analysis (HSG):

CCP-TP-093	Rev. 16	09/07/11	CCP Sampling of TRU Waste Containers
CCP-TP-093	Rev. 15	03/10/11	CCP Sampling of TRU Waste Containers
CCP-TP-093	Rev. 14	12/29/10	CCP Sampling of TRU Waste Containers
CCP-TP-093	Rev. 13	03/19/07	CCP Sampling of TRU Waste Containers
CCP-TP-106	Rev. 7	12/29/10	CCP Headspace Gas Sampling Batch Data Report Preparation
CCP-TP-106	Rev. 6	07/12/07	CCP Headspace Gas Sampling Batch Data Report Preparation
CCP-TP-106	Rev. 5	11/16/06	CCP Headspace Gas Sampling Batch Data Report Preparation
CCP-TP-173	Rev. 1	09/30/09	CCP Analysis of Gas Samples for VOCs by GC/FID
CCP-TP-173	Rev. 0	05/03/07	CCP Analysis of Gas Samples for VOCs by GC/FID
CCP-TP-175	Rev. 3	08/02/11	CCP Analysis of Gas Samples for VOCs by GC/MS
CCP-TP-175	Rev. 2	12/29/10	CCP Analysis of Gas Samples for VOCs by GC/MS
CCP-TP-175	Rev. 1	03/29/10	CCP Analysis of Gas Samples for VOCs by GC/MS
CCP-TP-175	Rev. 0	05/02/07	CCP Analysis of Gas Samples for VOCs by GC/MS

Visual Examination (VE):

CCP-TP-500	Rev. 11	04/21/11	CCP Remote-Handled Waste Visual Examination
CCP-TP-500	Rev. 10	12/29/10	CCP Remote-Handled Waste Visual Examination
CCP-TP-500	Rev. 9	06/30/10	CCP Remote-Handled Waste Visual Examination
CCP-TP-500	Rev. 8	07/24/08	CCP Remote-Handled Waste Visual Examination
CCP-TP-500	Rev. 7	02/27/08	CCP Remote-Handled Waste Visual Examination
CCP-TP-500	Rev. 6	10/25/07	CCP Remote-Handled Waste Visual Examination
CCP-TP-500	Rev. 5	06/01/07	CCP Remote-Handled Waste Visual Examination
CCP-TP-500	Rev. 4	11/16/06	CCP Remote-Handled Waste Visual Examination
CCP-TP-500	Rev. 3	10/12/06	CCP Remote-Handled Waste Visual Examination

Project Level Data Validation / DQO Reconciliation:

CCP-TP-001	Rev. 19	12/29/2010	CCP Project Level Data Validation and Verification
CCP-TP-001	Rev. 18	8/9/2010	CCP Project Level Data Validation and Verification
CCP-TP-001	Rev. 17	09/24/07	CCP Project Level Data Validation and Verification
CCP-TP-001	Rev. 16	04/26/07	CCP Project Level Data Validation and Verification
CCP-TP-001	Rev. 15	11/22/06	CCP Project Level Data Validation and Verification
CCP-TP-001	Rev. 14	11/16/06	CCP Project Level Data Validation and Verification
CCP-TP-001	Rev. 13	07/21/06	CCP Project Level Data Validation and Verification
CCP-TP-002	Rev. 24	12/28/11	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-002	Rev. 23	12/29/10	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-002	Rev. 22	06/30/10	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-002	Rev. 21	08/04/09	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-002	Rev. 20	8/1808	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-002	Rev. 19	12/22/06	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-002	Rev. 18	11/16/06	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-002	Rev. 17	10/10/06	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-003	Rev. 18	12/29/10	CCP Data Analysis for S3000, S4000, and S5000 Characterization
CCP-TP-003	Rev. 17	11/09/09	CCP Data Analysis for S3000, S4000, and S5000 Characterization
CCP-TP-003	Rev. 16	10/02/07	CCP Data Analysis for S3000, S4000, and S5000 Characterization
CCP-TP-003	Rev. 15	11/16/06	CCP Data Analysis for S3000, S4000, and S5000 Characterization
CCP-TP-003	Rev. 14	09/03/03	CCP Data Analysis for S3000, S4000, and S5000 Characterization
CCP-TP-005	Rev. 24	11/28/11	CCP Acceptable Knowledge Documentation
CCP-TP-005	Rev. 23	06/30/11	CCP Acceptable Knowledge Documentation
CCP-TP-005	Rev. 22	04/21/11	CCP Acceptable Knowledge Documentation
CCP-TP-005	Rev. 21	12/29/10	CCP Acceptable Knowledge Documentation
CCP-TP-005	Rev. 20	11/01/10	CCP Acceptable Knowledge Documentation
CCP-TP-005	Rev. 19	07/06/10	CCP Acceptable Knowledge Documentation
CCP-TP-005	Rev. 18	11/16/06	CCP Acceptable Knowledge Documentation
CCP-TP-005	Rev. 17	06/05/06	CCP Acceptable Knowledge Documentation

CIS-002

CCP-TP-530	Rev. 10	04/25/11	RH TRU Waste Certification and WWIS Data Entry
CCP-TP-530	Rev. 9	12/11/09	RH TRU Waste Certification and WWIS Data Entry
CCP-TP-530	Rev. 8	09/09/09	RH TRU Waste Certification and WWIS Data Entry
CCP-TP-530	Rev. 7	07/11/08	RH TRU Waste Certification and WWIS Data Entry

WAP Certification:

CCP-PO-001	Rev. 20	06/16/11	CCP Transuranic Waste Characterization Quality Assurance Project Plan
CCP-PO-001	Rev. 19	12/29/10	CCP Transuranic Waste Characterization Quality Assurance Project Plan
CCP-PO-001	Rev. 18	06/30/10	CCP Transuranic Waste Characterization Quality Assurance Project Plan
CCP-PO-001	Rev. 17	06/23/09	CCP Transuranic Waste Characterization Quality Assurance Project Plan
CCP-PO-001	Rev. 16	10/31/07	CCP Transuranic Waste Characterization Quality Assurance Project Plan
CCP-PO-001	Rev. 15	08/10/07	CCP Transuranic Waste Characterization Quality Assurance Project Plan
CCP-PO-001	Rev. 14	03/28/07	CCP Transuranic Waste Characterization Quality Assurance Project Plan
CCP-PO-001	Rev. 13	11/16/06	CCP Transuranic Waste Characterization Quality Assurance Project Plan
CCP-PO-001	Rev. 12	03/22/06	CCP Transuranic Waste Characterization Quality Assurance Project Plan
CCP-PO-500	Rev. 2	8/2/2011	CCP/ANL RH-TRU Waste Interface Document
CCP-PO-500	Rev. 1	11/16/06	CCP/ANL RH-TRU Waste Interface Document

WAC Certification:

CCP-PO-002	Rev. 26	7/14/2011	CCP Transuranic Waste Certification Plan
CCP-PO-002	Rev. 25	12/29/2010	CCP Transuranic Waste Certification Plan
CCP-PO-002	Rev. 24	6/30/2010	CCP Transuranic Waste Certification Plan
CCP-PO-002	Rev. 23	4/7/2010	CCP Transuranic Waste Certification Plan
CCP-PO-002	Rev. 22	1/12/2010	CCP Transuranic Waste Certification Plan
CCP-PO-002	Rev. 21	1/26/2009	CCP Transuranic Waste Certification Plan

CIS-003

CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

Waste Stream: # AERHDM

Lot # 30

Container ID Number	Historical Container ID	NDA BDR or Radiological Characterization BDR (CH only)	VE BDR	RTR BDR	Solids Sampling BDR	Solids Analytical BDR	Load Management/ Overpack Yes	Permit Required Headspace Gas BDR			
								Sample	Analysis		
RW18875	NA	CCP-AK-ANLE-501	ANLRHVE11010	NA	NA	NA		NA	NA	NA	NA
RW18876	NA	CCP-AK-ANLE-501	ANLRHVE11010	NA	NA	NA		NA	NA	NA	NA
RW18877	NA	CCP-AK-ANLE-501	ANLRHVE11010	NA	NA	NA		NA	NA	NA	NA
RW18878	NA	CCP-AK-ANLE-501	ANLRHVE11010	NA	NA	NA		NA	NA	NA	NA
RW18879	NA	CCP-AK-ANLE-501	ANLRHVE11010	NA	NA	NA		NA	NA	NA	NA
RW18880	NA	CCP-AK-ANLE-501	ANLRHVE11010	NA	NA	NA		NA	NA	NA	NA
RW18881	NA	CCP-AK-ANLE-501	ANLRHVE11010	NA	NA	NA		ANLHSGS100002	ECL10014G	ECL10014M	NA
RW18904	NA	CCP-AK-ANLE-501	ANLRHVE11010	NA	NA	NA		NA	NA	NA	NA

* HSG lot 1 randomly selected for verifying the assignment of Hazardous Waste Numbers.

\# Container rejected in VE process and can not be certified for shipment to WIPP.

Laura Nelson
Signature of Site Project Manager

Laura Nelson
Printed Name

3/21/12
Date

CIS-004

CCP Headspace Gas UCL_{90} Evaluation Form

WSPF #: AERHDM **Waste Stream Lot Number** 1 through 30

ANALYTE	Transform Data Used (No, Data-Log, SQRT, other)	# Samples above MDL (1)	# Samples	Maximum (ppmv)	Mean (ppmv)	SD (ppmv)	UCL_{90} (ppmv)	PRQL (ppmv)	Transformed PRQL (N/A or Value)	UCL_{90} > PRQL Yes	EPA Code
Benzene	Log	12	39	-0.36	-2.74	1.02	-2.47	10	2.30		
Bromoform	Log	0	39	-1.58	-4.03	0.76	-3.83	10	2.30		
Carbon tetrachloride	Log	0	39	-1.09	-3.78	0.76	-3.58	10	2.30		
Chlorobenzene	Log	0	39	-0.77	-3.46	0.77	-3.25	10	2.30		
Chloroform	Log	9	39	1.03	-2.84	1.49	-2.43	10	2.30		
Cyclohexane [a]	Log	2	39	-0.51	-2.96	0.80	-2.74	10	2.30		
1,1-Dichloroethane	Log	0	39	-0.36	-2.92	0.73	-2.72	10	2.30		
1,2-Dichloroethane	Log	0	39	-0.60	-3.13	0.72	-2.93	10	2.30		
1,1-Dichloroethylene	Log	0	39	-0.36	-3.01	0.76	-2.80	10	2.30		
cis-1,2-Dichloroethylene	Log	0	39	-0.51	-3.34	0.83	-3.12	10	2.30		
trans-1,2-Dichloroethylene	Log	0	39	-0.43	-2.96	0.80	-2.74	10	2.30		
Ethyl benzene	Log	13	39	1.67	-2.36	1.70	-1.90	10	2.30		
Ethyl ether	Log	0	39	-0.11	-2.71	0.75	-2.51	10	2.30		
Methylene chloride	Log	3	39	-0.51	-3.01	0.80	-2.79	10	2.30		
1,1,2,2-Tetrachloroethane	Log	0	39	-1.45	-3.90	0.69	-3.71	10	2.30		
Tetrachloroethylene	Log	8	39	2.77	-2.98	1.82	-2.49	10	2.30		
Toluene	Log	27	39	4.38	-1.16	2.14	-0.58	10	2.30		
1,1,1-Trichloroethane	Log	1	39	-0.98	-3.80	0.85	-3.57	10	2.30		
Trichloroethylene	Log	4	39	0.59	-3.20	1.13	-2.89	10	2.30		
1,1,2-Trichloro-1,2,2-trifluoroethane	Log	1	39	-0.80	-3.66	0.89	-3.42	10	2.30		
1,2,4-Trimethylbenzene[a]	Log	14	38	1.13	-1.09	2.10	-0.17	10	2.30		
1,3,5-Trimethylbenzene[a]	Log	12	39	0.00	-2.63	1.15	-2.32	10	2.30		
m,p-Xylene[b]	Log	20	39	3.00	0.02	2.70	1.20	10	2.30		
o-Xylene	Log	19	39	2.23	-0.40	2.38	0.63	10	2.30		
Acetone	Log	30	39	4.70	0.62	2.11	1.19	100	4.61		
1-Butanol	Log	17	39	1.74	-1.56	1.57	-1.14	100	4.61		
Methanol	Log	3	39	4.23	2.23	0.49	2.36	100	4.61		
Methyl ethyl ketone	Log	19	39	2.30	-1.14	1.67	-0.69	100	4.61		
Methyl isobutyl ketone	Log	8	39	0.10	-2.89	0.93	-2.64	100	4.61		
Chloromethane[c]	Log	19	39	1.50	-1.80	1.62	-1.36	10	2.30		

CS-005

CCP Headspace Gas UCL_{90} Evaluation Form

WSPF #: AERHDM **Waste Stream Lot Number** 1 through 30

ANALYTE	Transform Data Used (No, Data-Log, SQRT, other)	# Samples above MDL (1)	# Samples	Maximum (ppmv)	Mean (ppmv)	SD (ppmv)	UCL_{90} (ppmv)	PRQL (ppmv)	Transformed PRQL (N/A or Value)	UCL_{90} > PRQL Yes	EPA Code
Carbon Disulfide[c]	Log	11	39	-0.36	-2.38	0.79	-2.17	10	2.30		
1,2-Dichloropropane[c]	Log	0	39	-0.78	-3.49	0.85	-3.26	10	2.30		
Trichlorofluoromethane[c]	Log	0	39	-0.60	-2.45	0.79	-2.01	10	2.30		

[a] These compounds are from the TRAMPAC and are flammable VOCs that do not appear in the QAPjP or the WIPP WAP. These are not part of the target analyte list, but samples may be analyzed for these compounds.
[b] These xylene isomers cannot be resolved by the analytical methods employed in the program. m-Xylene and p-Xylene will be reported as "Total m-p-Xylene."
[c] Compounds are reported as target analytes by the Idaho Laboratory and have been added to the evaluation accordingly.

Comments:

(1) For analytes where there were no samples measured above the MDL value, 1/2 of the MDL value was used. (Per section B4 of the WAP, 1/2 of the MDL value is used in calculating the mean concentration.)

Laura Nelson
Signature of Site Project Manager

Laura Nelson
Printed Name

3/21/12
Date

CIS 006

CCP Headspace Gas Summary Data

Waste Stream Number AERHDM Lot Number (s) 30

Tentatively Identified Compound	Maximum Observed Estimated Concentrations (ppmv)	# Samples Containing TIC	% Detected
None			

Data Supports EPA Hazardous Waste Numbers Assigned by AK? Yes ☑ No ☐

If no, describe the basis for assigning the EPA Hazardous Waste Codes:

SPM Signature Laura Nelson Date 3/21/12

CIS-007

CCP RTR/VE Summary of Prohibited Items and AK Confirmation

Waste Stream Number: AERHDM

Lot(s)#: 30

Container Number	RTR Prohibited Items [a]	Visual Examination Prohibited Items [a]
See correlation of container ID numbers for list of remaining drum numbers in this Lot.	Radiography was not used for verification of prohibited items in this lot.	None of the containers in this lot had prohibited items identified in Visual Examination.

a. See Batch Data Reports

b. If AK has assigned U134 to this waste stream, then any liquids in these containers are prohibited items (not acceptable by the TSDF).

Justification for the selection of RTR and/or VE: VE was selected as the characterization method for this lot because the containers were newly generated and met all the Data Quality Objectives for NDE for the waste.

Laura Nelson — Site Project Manager Signature

Laura Nelson — Printed Name

3/21/12 — Date

CIS-008

CCP Reconcilliation with Data Quality Objectives

WSF# AERHDM Lot # 30

Sampling Completeness

VE

Number of Valid Samples: 8 Number of Total Samples Analyzed: 8
Percent Complete: 100 (QAO is 100%)

RTR

Number of Valid Samples: NA Number of Total Samples Analyzed: NA
Percent Complete: NA (QAO is 100%)

HSG

Number of Valid Samples: 39 Number of Total Samples collected: 39
Percent Complete: 100 (QAO is ≥90%)

Total VOC

Number of Valid Samples: NA Number of Total Samples collected: NA
Percent Complete: NA (QAO is ≥90%)
Number of Valid Samples: NA Number of Total Samples analyzed: NA
Percent Complete: NA (QAO is ≥90%)

Total SVOC

Number of Valid Samples: NA Number of Total Samples collected: NA
Percent Complete: NA (QAO is ≥90%)
Number of Valid Samples: NA Number of Total Samples analyzed: NA
Percent Complete: NA (QAO is ≥90%)

Total Metals

Number of Valid Samples: NA Number of Total Samples collected: NA
Percent Complete: NA (QAO is ≥90%)
Number of Valid Samples: NA Number of Total Samples analyzed: NA
Percent Complete: NA (QAO is ≥90%)

C15-009

CCP Reconcilliation with Data Quality Objectives

WSF# AERHDM Lot # 30

	Y/N/NA	Reconcilliation Parameter
1	Y	Waste Matrix Code.
2	Y	Waste Material Parameter Weights.
3	Y	The waste matrix code identified is consistent with the type of sampling and analysis used to characterize the waste.
4	Y	The TRU activity reported in the BDRs for each container demonstrates with a 95% probability that the container of waste contains TRU radioactive waste.
5	NA	AK Sufficiency. Is there an approved AK sufficiency Determination for this waste stream?
6	Y	Mean concentrations, UCL90 values for the mean concentration, standard deviations, and the number of samples collected for each VOC in the HSG of each container were calculated and compared with the program required quantitation limits, as reported in CCP TP 003, Attachment 3, and additional Environmental Protection Agency (EPA) Hazardous Waste Numbers were assigned as required. Samples were randomly collected (when appropriate).
7a	NA	Mean concentrations, UCL90 values for the mean concentration, standard deviations, and the number of samples collected for solids VOCs were calculated and compared with the program required quantitation limits and regulatory thresholds, as reported in the Characterization Information Summary, CCP-TP-003-Attachment 4, and additional EPA Hazardous Waste Numbers were assigned as required. Samples were randomly collected.
7b	NA	Mean concentrations, UCL90 values for the mean concentration, standard deviations, and the number of samples collected for solids SVOCs were calculated and compared with the program required quantitation limits and regulatory thresholds, as reported in the Characterization Information Summary, CCP TP 003 Attachment 5, and additional EPA Hazardous Waste Numbers were assigned as required. Samples were randomly collected.
7c	NA	Mean concentrations, (UCL90) values for the mean concentration, standard deviations, and the number of samples collected for total metals were calculated and compared with the program required quantitation limits and regulatory thresholds, as reported in the Characterization Information Summary, CCP TP 003 Attachment 6, and additional EPA Hazardous Waste Numbers were assigned as required. Samples were randomly collected.

CIS-010

CCP Reconcilliation with Data Quality Objectives

WSF# AERHDM Lot # 30

8	Y	The data demonstrates whether the waste stream exhibits a toxicity characteristic under Title 40 Code of Federal Regulations (CFR), Part 261, Identification and Listing of Hazardous Waste, Subpart C, Characteristics of Hazardous Waste.
9	Y	Does the waste stream contain listed waste found in 20.4.1.200 NMAC incorporating 40 CFR Part 261, Subpart D, Lists of Hazardous Wastes.
10	Y	Waste stream can be classified as hazardous or nonhazardous at the 90-percent confidence level.
11	Y	Appropriate packaging configuration and Drum Age Criteria (DAC) is applied and documented in the headspace gas sampling documentation, and the drum age met prior to sampling.
12	Y	TICs were appropriately identified and reported in accordance with the requirements of Section C3-1 of the QAPjP.
13	Y	The PRQLs for headspace gas VOCs were met for all analyses as evidenced by the analytical batch data reports.
14		The overall completeness, comparability, and representativeness QAOs were met for each of the analytical and testing procedures as specified in CCP-PO-001 Sections C3-2 through C3-9 prior to submittal of a waste stream profile form for a waste steam or waste stream lot.

	Completeness	Comparability	Representativeness
Radiography	NA	NA	NA
VE	Y	Y	Y
Headspace Gas Analysis	Y	Y	Y
Solids Sampling	NA	NA	NA
Solids VOCs	NA	NA	NA
Solids SVOCs	NA	NA	NA
Solids Metals	NA	NA	NA

Comments: N/A

Laura Nelson
Signature of Site Project Manager

Laura Nelson
Printed Name

3/21/12
Date

CIS-011

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PAGE

Attachment 13 – CCP Waste Stream Characterization Checklist – Example Form

CCP Waste Stream Characterization Checklist

Site(s): ANL

Waste Stream Number: AERHDM Lot # (if applicable)24

Waste Stream Description: Argonne Heterogeneous Debris Waste

Acceptable Knowledge Information or other data points[a]	Characterization Method(s)[b]	Acceptable Knowledge Re-evaluation Required? Yes/No[c]?	Comments[d]
Physical waste form/description	AK, VE	NO	VE data sheets indicate consistency with Attachment 6 of CCP-TP-005 and section 5.0 of CCP-AK-ANLE-500
Waste material parameters weights	AK	NO	VE and RTR data sheets indicate consistency with Attachment 6 of CCP-TP-005 and Section 5.0 of CCP-AK-ANLE-500
Waste percent volume consistent with nondestructive examination or visual examination data and audio/video tapes or equivalent media	AK,VE	NO	VE data sheets indicate consistency with waste stream description in Section 5.0 of CCP-AK-ANLE-500
Summary category group assignment	AK, VE	NO	Assignment of Summary Category Group S5000 is consistent with VE data sheets
Waste matrix code assignment	AK, VE	NO	Assignment of Waste Matrix Code S5400 is consistent with VE data sheets
Absence of prohibited items	AK, VE	NO	VE confirmed the absence of prohibited items.
Tentatively identified compounds[f]	HSG	NO	No TIC's were identified
EPA Hazardous Waste Number assignment[e]	AK, HSG	NO	HSG results did not conflict with EPA HWN assignments for the waste stream
Toxicity characteristic code assignment	AK, HSG	NO	HSG results did not conflict with VOC EPA HWN assignments for waste stream
UCL_{90} > PRQL?	HSG	NO	Based on the UCL90 statistical evaluation, no compound in the target analyte list exceeded the PRQL.
VOCs from packaging materials or radiolysis present	AK, HSG	NO	No VOC's associated with packaging or radiolysis were identified by AK, CCP-TP-005, Attachment 5
State Hazardous Waste Number assignment	AK	NO	Illinois State HWN's are identical to EPA assignment.
Radionuclides present	AK, DTC	NO	Radionuclides present were determined according to CCP-AK-ANLE-501 and quantified using the DTC method

CCP RECORDS ORIGINAL
DATE REC'D 10/5/11

Acceptable Knowledge Information or other data points[a]	Characterization Method(s)[b]	Acceptable Knowledge Re-evaluation Required? Yes/No[c]?	Comments[d]
Other radiological parameters: (specify)	AK, DTC	NO	The 14 radionuclides constituting greater than 97% of the hazard were calculated and reported, CCP-AK-ANLE-501

Attachment 13 – CCP Waste Stream Characterization Checklist – Example Form (Continued)

CCP Waste Stream Characterization Checklist

Additional Comments:
VE Batch Data Reports: ANLRHVE11017
DTC/DG Batch Data Reports: ANLRHDTC11009
HSG Batch Data Reports: ANLHSGS070001, ECL07038M, ECL07038G, ANLHSGS090001, ECL0914M, ECL09014M, ANLHSG100001, ECL10012M, ECL10012G, ANLHSGS100002, ECL10014M, ECL10014G, ANLHSGS100003, ECL10033M, ECL10033G

a. Identified in the AK Summary Report or included in the in-process record documentation (e.g., BDR's)
b. Use the *Acceptable Knowledge and Waste Characterization Data Cross-Reference (Attachment 9)* to identify applicable testing, sampling, and analysis information to resolve the acceptable knowledge information, as applicable.
c. If "yes," AKE completes an *Acceptable Knowledge Re-evaluation Checklist.*
d. Identify the source of the waste characterization information (e.g., batch data report). Note if AK sufficiency scenarios 1, 2, or 3 are applicable.
e. Ensure that, if a toxicity characteristic contaminant is identified, it is not included as a listed waste, and if analytical data regarding the concentration are not available, the corresponding EPA Hazardous Waste Number is applied.
f. Tentatively Identified Compounds identified in the Headspace Gas Summary Report were identified on the Hazardous Constituent List, Attachment 5

Site Project Manager:

LAURA NELSON — Laura Nelson — Date: 10/6/2011
Print — Sign

Acceptable Knowledge Expert:

Kevin J. Peters — [signature] — Date: 10/6/2011
Print — Sign

DIVIDER

PAGE

URS

Washington TRU Solutions LLC

CP:11:01651
UFC:5900.00

INTER-OFFICE CORRESPONDENCE

DATE: October 11, 2011

FROM: L. M. Nelson LOCATION: Certification

TO: CCP Records Custodian GSA-212 LOCATION: Retrieval, Characterization and Transportation

SUBJECT: TRANSMITTAL OF CHARACTERIZATION INFORMATION SUMMARY FOR REMOTE-HANDLED LOT 24 AERHDM AT THE ARGONNE NATIONAL LABORATORY

Please accept the attached Characterization Information Summary for the Remote-Handled Argonne National Laboratory Lot 24 AERHDM.

LMN:yhs

Attachment

cc: (without attachment)

I. S. Quintana ED

CCP RECORDS ORIGINAL
DATE REC'D 10/13/11

CHARACTERIZATION INFORMATION SUMMARY

WSPF # AERHDM

Lot 24

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CIS-001

CCP Characterization Information Summary Cover Page

Waste Stream # AERHDM Lot #: 24

AK Expert Review: Kevin Peters Date: 10/6/2011

SPM Review: Laura Nelson Date: 10/6/2011

SPM signature certifies that through Acceptable Knowledge testing and/or analysis that the waste identified in this summary is not corrosive, ignitable, reactive, or incompatible with the TSDF.

A summary of the Acceptable Knowledge regarding this waste stream containing specific information about the corrosivity, reactivity, and ignitability of the waste stream is included as an attachment to the Waste Stream Profile Form. By reference, that information is included in this lot.

List of procedures used:

Radiography (RTR/NDE)

NA	NA	NA	NA

Headspace Gas Sampling and Analysis (HSG):

CCP-TP-093	Rev. 16	09/07/11	CCP Sampling of TRU Waste Containers
CCP-TP-093	Rev. 15	03/10/11	CCP Sampling of TRU Waste Containers
CCP-TP-093	Rev. 14	12/29/10	CCP Sampling of TRU Waste Containers
CCP-TP-093	Rev. 13	03/19/07	CCP Sampling of TRU Waste Containers
CCP-TP-106	Rev. 7	12/29/10	CCP Headspace Gas Sampling Batch Data Report Preparation
CCP-TP-106	Rev. 6	07/12/07	CCP Headspace Gas Sampling Batch Data Report Preparation
CCP-TP-106	Rev. 5	11/16/06	CCP Headspace Gas Sampling Batch Data Report Preparation
CCP-TP-173	Rev. 1	09/30/09	CCP Analysis of Gas Samples for VOCs by GC/FID
CCP-TP-173	Rev. 0	05/03/07	CCP Analysis of Gas Samples for VOCs by GC/FID
CCP-TP-175	Rev. 3	08/02/11	CCP Analysis of Gas Samples for VOCs by GC/MS
CCP-TP-175	Rev. 2	12/29/10	CCP Analysis of Gas Samples for VOCs by GC/MS
CCP-TP-175	Rev. 1	03/29/10	CCP Analysis of Gas Samples for VOCs by GC/MS
CCP-TP-175	Rev. 0	05/02/07	CCP Analysis of Gas Samples for VOCs by GC/MS

Visual Examination (VE):

CCP-TP-500	Rev. 11	04/21/11	CCP Remote-Handled Waste Visual Examination
CCP-TP-500	Rev. 10	12/29/10	CCP Remote-Handled Waste Visual Examination
CCP-TP-500	Rev. 9	06/30/10	CCP Remote-Handled Waste Visual Examination
CCP-TP-500	Rev. 8	07/24/08	CCP Remote-Handled Waste Visual Examination
CCP-TP-500	Rev. 7	02/27/08	CCP Remote-Handled Waste Visual Examination
CCP-TP-500	Rev. 6	10/25/07	CCP Remote-Handled Waste Visual Examination
CCP-TP-500	Rev. 5	06/01/07	CCP Remote-Handled Waste Visual Examination
CCP-TP-500	Rev. 4	11/16/06	CCP Remote-Handled Waste Visual Examination
CCP-TP-500	Rev. 3	10/12/06	CCP Remote-Handled Waste Visual Examination

Project Level Data Validation / DQO Reconciliation:

CCP-TP-001	Rev. 19	12/29/2010	CCP Project Level Data Validation and Verification
CCP-TP-001	Rev. 18	8/9/2010	CCP Project Level Data Validation and Verification
CCP-TP-001	Rev. 17	09/24/07	CCP Project Level Data Validation and Verification
CCP-TP-001	Rev. 16	04/26/07	CCP Project Level Data Validation and Verification
CCP-TP-001	Rev. 15	11/22/06	CCP Project Level Data Validation and Verification
CCP-TP-001	Rev. 14	11/16/06	CCP Project Level Data Validation and Verification
CCP-TP-001	Rev. 13	07/21/06	CCP Project Level Data Validation and Verification
CCP-TP-002	Rev. 23	12/29/10	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-002	Rev. 22	06/30/10	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-002	Rev. 21	08/04/09	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-002	Rev. 20	8/1808	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-002	Rev. 19	12/22/06	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-002	Rev. 18	11/16/06	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-002	Rev. 17	10/10/06	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-003	Rev. 18	12/29/10	CCP Data Analysis for S3000, S4000, and S5000 Characterization
CCP-TP-003	Rev. 17	11/09/09	CCP Data Analysis for S3000, S4000, and S5000 Characterization
CCP-TP-003	Rev. 16	10/02/07	CCP Data Analysis for S3000, S4000, and S5000 Characterization
CCP-TP-003	Rev. 15	11/16/06	CCP Data Analysis for S3000, S4000, and S5000 Characterization
CCP-TP-003	Rev. 14	09/03/03	CCP Data Analysis for S3000, S4000, and S5000 Characterization
CCP-TP-005	Rev. 23	06/30/11	CCP Acceptable Knowledge Documentation
CCP-TP-005	Rev. 22	04/21/11	CCP Acceptable Knowledge Documentation
CCP-TP-005	Rev. 21	12/29/10	CCP Acceptable Knowledge Documentation
CCP-TP-005	Rev. 20	11/01/10	CCP Acceptable Knowledge Documentation
CCP-TP-005	Rev. 19	07/06/10	CCP Acceptable Knowledge Documentation
CCP-TP-005	Rev. 18	11/16/06	CCP Acceptable Knowledge Documentation
CCP-TP-005	Rev. 17	06/05/06	CCP Acceptable Knowledge Documentation
CCP-TP-530	Rev. 10	04/25/11	RH TRU Waste Certification and WWIS Data Entry
CCP-TP-530	Rev. 9	12/11/09	RH TRU Waste Certification and WWIS Data Entry

CIS-002

CCP-TP-530	Rev. 8	09/09/09	RH TRU Waste Certification and WWIS Data Entry
CCP-TP-530	Rev. 7	07/11/08	RH TRU Waste Certification and WWIS Data Entry

WAP Certification:

CCP-PO-001	Rev. 20	06/16/11	CCP Transuranic Waste Characterization Quality Assurance Project Plan
CCP-PO-001	Rev. 19	12/29/10	CCP Transuranic Waste Characterization Quality Assurance Project Plan
CCP-PO-001	Rev. 18	06/30/10	CCP Transuranic Waste Characterization Quality Assurance Project Plan
CCP-PO-001	Rev. 17	06/23/09	CCP Transuranic Waste Characterization Quality Assurance Project Plan
CCP-PO-001	Rev. 16	10/31/07	CCP Transuranic Waste Characterization Quality Assurance Project Plan
CCP-PO-001	Rev. 15	08/10/07	CCP Transuranic Waste Characterization Quality Assurance Project Plan
CCP-PO-001	Rev. 14	03/28/07	CCP Transuranic Waste Characterization Quality Assurance Project Plan
CCP-PO-001	Rev. 13	11/16/06	CCP Transuranic Waste Characterization Quality Assurance Project Plan
CCP-PO-001	Rev. 12	03/22/06	CCP Transuranic Waste Characterization Quality Assurance Project Plan
CCP-PO-500	Rev. 1	11/16/06	CCP/ANL RH-TRU Waste Interface Document

WAC Certification:

CCP-PO-002	Rev. 26	7/14/2011	CCP Transuranic Waste Certification Plan
CCP-PO-002	Rev. 25	12/29/2010	CCP Transuranic Waste Certification Plan
CCP-PO-002	Rev. 24	6/30/2010	CCP Transuranic Waste Certification Plan
CCP-PO-002	Rev. 23	4/7/2010	CCP Transuranic Waste Certification Plan
CCP-PO-002	Rev. 22	1/12/2010	CCP Transuranic Waste Certification Plan
CCP-PO-002	Rev. 21	1/26/2009	CCP Transuranic Waste Certification Plan

CIS-003

CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

Waste Stream: # AERHDM

Lot # 24

Container ID Number	Historical Container ID	NDA BDR or Radiological Characterization BDR (CH only)	VE BDR	RTR BDR	Solids Sampling BDR	Solids Analytical BDR	Load Management/ Overpack Yes	Permit Required Headspace Gas BDR			
								Sample	Analysis		
RW48261	NA	NA	ANLRHVE11017	NA	NA	NA		NA	NA	NA	NA
RW48262	NA	NA	ANLRHVE11017	NA	NA	NA		NA	NA	NA	NA
RW48263	NA	NA	ANLRHVE11017	NA	NA	NA		NA	NA	NA	NA
RW48267	NA	NA	ANLRHVE11017	NA	NA	NA		NA	NA	NA	NA
RW48268	NA	NA	ANLRHVE11017	NA	NA	NA		NA	NA	NA	NA
RW49813	NA	NA	ANLRHVE11017	NA	NA	NA		NA	NA	NA	NA
RW49814	NA	NA	ANLRHVE11017	NA	NA	NA		NA	NA	NA	NA
RW49815	NA	NA	ANLRHVE11017	NA	NA	NA		NA	NA	NA	NA
RW49816	NA	NA	ANLRHVE11017	NA	NA	NA		NA	NA	NA	NA
RW49817	NA	NA	ANLRHVE11017	NA	NA	NA		NA	NA	NA	NA

* HSG lot 1 randomly selected for verifying the assignment of Hazardous Waste Numbers.

Container rejected in VE process and can not be certified for shipment to WIPP.

Laura Nelson
Signature of Site Project Manager

Laura Nelson
Printed Name

10/6/2011
Date

CIS-004

CCP Headspace Gas UCL_{90} Evaluation Form

WSPF #: AERHDM **Waste Stream Lot Number** 1 through 24

ANALYTE	Transform Data Used (No, Data-Log, SQRT, other)	# Samples above MDL (1)	# Samples	Maximum (ppmv)	Mean (ppmv)	SD (ppmv)	UCL_{90} (ppmv)	PRQL (ppmv)	Transformed PRQL (N/A or Value)	UCL_{90} > PRQL Yes	EPA Code
Benzene	Log	12	39	-0.36	-2.74	1.02	-2.47	10	2.30		
Bromoform	Log	0	39	-1.58	-4.03	0.76	-3.83	10	2.30		
Carbon tetrachloride	Log	0	39	-1.09	-3.78	0.76	-3.58	10	2.30		
Chlorobenzene	Log	0	39	-0.77	-3.46	0.77	-3.25	10	2.30		
Chloroform	Log	9	39	1.03	-2.84	1.49	-2.43	10	2.30		
Cyclohexane [a]	Log	2	39	-0.51	-2.96	0.80	-2.74	10	2.30		
1,1-Dichloroethane	Log	0	39	-0.36	-2.92	0.73	-2.72	10	2.30		
1,2-Dichloroethane	Log	0	39	-0.60	-3.13	0.72	-2.93	10	2.30		
1,1-Dichloroethylene	Log	0	39	-0.36	-3.01	0.76	-2.80	10	2.30		
cis-1,2-Dichloroethylene	Log	0	39	-0.51	-3.34	0.83	-3.12	10	2.30		
trans-1,2-Dichloroethylene	Log	0	39	-0.43	-2.96	0.80	-2.74	10	2.30		
Ethyl benzene	Log	13	39	1.67	-2.36	1.70	-1.90	10	2.30		
Ethyl ether	Log	0	39	-0.11	-2.71	0.75	-2.51	10	2.30		
Methylene chloride	Log	3	39	-0.51	-3.01	0.80	-2.79	10	2.30		
1,1,2,2-Tetrachloroethane	Log	0	39	-1.45	-3.90	0.69	-3.71	10	2.30		
Tetrachloroethylene	Log	8	39	2.77	-2.98	1.82	-2.49	10	2.30		
Toluene	Log	27	39	4.38	-1.16	2.14	-0.58	10	2.30		
1,1,1-Trichloroethane	Log	1	39	-0.98	-3.80	0.85	-3.57	10	2.30		
Trichloroethylene	Log	4	39	0.59	-3.20	1.13	-2.89	10	2.30		
1,1,2-Trichloro-1,2,2-trifluoroethane	Log	1	39	-0.80	-3.66	0.89	-3.42	10	2.30		
1,2,4-Trimethylbenzene [a]	Log	14	38	1.13	-1.09	2.10	-0.17	10	2.30		
1,3,5-Trimethylbenzene [a]	Log	12	39	0.00	-2.63	1.15	-2.32	10	2.30		
m,p-Xylene [b]	Log	20	39	3.00	0.02	2.70	1.20	10	2.30		
o-Xylene	Log	19	39	2.23	-0.40	2.38	0.63	10	2.30		
Acetone	Log	30	39	4.70	0.62	2.11	1.19	100	4.61		
1-Butanol	Log	17	39	1.74	-1.56	1.57	-1.14	100	4.61		
Methanol	Log	3	39	4.23	2.23	0.49	2.36	100	4.61		
Methyl ethyl ketone	Log	19	39	2.30	-1.14	1.67	-0.69	100	4.61		
Methyl isobutyl ketone	Log	8	39	0.10	-2.89	0.93	-2.64	100	4.61		
Chloromethane [c]	Log	19	39	1.50	-1.80	1.62	-1.36	10	2.30		

005-UIS

CCP Headspace Gas UCL_{90} Evaluation Form

WSPF #: AERHDM **Waste Stream Lot Number** 1 through 24

ANALYTE	Transform Data Used (No, Data-Log, SQRT, other)	# Samples above MDL (1)	# Samples	Maximum (ppmv)	Mean (ppmv)	SD (ppmv)	UCL_{90} (ppmv)	PRQL (ppmv)	Transformed PRQL (N/A or Value)	UCL_{90} > PRQL Yes	EPA Code
Carbon Disulfide[c]	Log	11	39	-0.36	-2.38	0.79	-2.17	10	2.30		
1,2-Dichloropropane[c]	Log	0	39	-0.78	-3.49	0.85	-3.26	10	2.30		
Trichlorofluoromethane[c]	Log	0	39	-0.60	-2.45	0.79	-2.01	10	2.30		

[a] These compounds are from the TRAMPAC and are flammable VOCs that do not appear in the QAPjP or the WIPP WAP. These are not part of the target analyte list, but samples may be analyzed for these compounds.

[b] These xylene isomers cannot be resolved by the analytical methods employed in the program. m-Xylene and p-Xylene will be reported as "Total m-p-Xylene."

[c] Compounds are reported as target analytes by the Idaho Laboratory and have been added to the evaluation accordingly.

Comments:

(1) For analytes where there were no samples measured above the MDL value, 1/2 of the MDL value was used. (Per section B4 of the WAP, 1/2 of the MDL value is used in calculating the mean concentration.)

Laura Nelson
Signature of Site Project Manager

Laura Nelson
Printed Name

10/6/2011
Date

CIS-006

CCP Headspace Gas Summary Data

Waste Stream Number AERHDM Lot Number (s) 24

Tentatively Identified Compound	Maximum Observed Estimated Concentrations (ppmv)	# Samples Containing TIC	% Detected
None			

Data Supports EPA Hazardous Waste Numbers Assigned by AK? Yes ☑ No ☐

If no, describe the basis for assigning the EPA Hazardous Waste Codes:

SPM Signature Laura Nelson Date 10/6/2011

CIS-007

CCP RTR/VE Summary of Prohibited Items and AK Confirmation

Waste Stream Number: AERHDM Lot(s)#: 24

Container Number	RTR Prohibited Items [a]	Visual Examination Prohibited Items [a]
See correlation of container ID numbers for list of remaining drum numbers in this Lot.	Radiography was not used for verification of prohibited items in this lot.	None of the containers in this lot had prohibited items identified in Visual Examination.

a. See Batch Data Reports

b. If AK has assigned U134 to this waste stream, then any liquids in these containers are prohibited items (not acceptable by the TSDF).

Justification for the selection of RTR and/or VE: VE was selected as the characterization method for this lot because the containers were newly generated and met all the Data Quality Objectives for NDE for the waste.

Laura Nelson — Site Project Manager Signature

Laura Nelson — Printed Name

10/6/2011 — Date

C15-008

CCP Reconcilliation with Data Quality Objectives

WSF# AERHDM Lot # 24

Sampling Completeness

VE

Number of Valid Samples: 10 Number of Total Samples Analyzed: 10
Percent Complete: 100 (QAO is 100%)

RTR

Number of Valid Samples: NA Number of Total Samples Analyzed: NA
Percent Complete: NA (QAO is 100%)

HSG

Number of Valid Samples: 39 Number of Total Samples collected: 39
Percent Complete: 100 (QAO is ≥90%)

Total VOC

Number of Valid Samples: NA Number of Total Samples collected: NA
Percent Complete: NA (QAO is ≥90%)
Number of Valid Samples: NA Number of Total Samples analyzed: NA
Percent Complete: NA (QAO is ≥90%)

Total SVOC

Number of Valid Samples: NA Number of Total Samples collected: NA
Percent Complete: NA (QAO is ≥90%)
Number of Valid Samples: NA Number of Total Samples analyzed: NA
Percent Complete: NA (QAO is ≥90%)

Total Metals

Number of Valid Samples: NA Number of Total Samples collected: NA
Percent Complete: NA (QAO is ≥90%)
Number of Valid Samples: NA Number of Total Samples analyzed: NA
Percent Complete: NA (QAO is ≥90%)

CIS-009

CCP Reconcilliation with Data Quality Objectives

WSF# AERHDM Lot # 24

	Y/N/NA	Reconcilliation Parameter
1	Y	Waste Matrix Code.
2	Y	Waste Material Parameter Weights.
3	Y	The waste matrix code identified is consistent with the type of sampling and analysis used to characterize the waste.
4	Y	The TRU activity reported in the BDRs for each container demonstrates with a 95% probability that the container of waste contains TRU radioactive waste.
5	NA	AK Sufficiency. Is there an approved AK sufficiency Determination for this waste stream?
6	Y	Mean concentrations, UCL90 values for the mean concentration, standard deviations, and the number of samples collected for each VOC in the HSG of each container were calculated and compared with the program required quantitation limits, as reported in CCP TP 003, Attachment 3, and additional Environmental Protection Agency (EPA) Hazardous Waste Numbers were assigned as required. Samples were randomly collected (when appropriate).
7a	NA	Mean concentrations, UCL90 values for the mean concentration, standard deviations, and the number of samples collected for solids VOCs were calculated and compared with the program required quantitation limits and regulatory thresholds, as reported in the Characterization Information Summary, CCP-TP-003-Attachment 4, and additional EPA Hazardous Waste Numbers were assigned as required. Samples were randomly collected.
7b	NA	Mean concentrations, UCL90 values for the mean concentration, standard deviations, and the number of samples collected for solids SVOCs were calculated and compared with the program required quantitation limits and regulatory thresholds, as reported in the Characterization Information Summary, CCP TP 003 Attachment 5, and additional EPA Hazardous Waste Numbers were assigned as required. Samples were randomly collected.
7c	NA	Mean concentrations, (UCL90) values for the mean concentration, standard deviations, and the number of samples collected for total metals were calculated and compared with the program required quantitation limits and regulatory thresholds, as reported in the Characterization Information Summary, CCP TP 003 Attachment 6, and additional EPA Hazardous Waste Numbers were assigned as required. Samples were randomly collected.

C15-010

CCP Reconcilliation with Data Quality Objectives

WSF# AERHDM Lot # 24

8	Y	The data demonstrates whether the waste stream exhibits a toxicity characteristic under Title 40 Code of Federal Regulations (CFR), Part 261, Identification and Listing of Hazardous Waste, Subpart C, Characteristics of Hazardous Waste.
9	Y	Does the waste stream contain listed waste found in 20.4.1.200 NMAC incorporating 40 CFR Part 261, Subpart D, Lists of Hazardous Wastes.
10	Y	Waste stream can be classified as hazardous or nonhazardous at the 90-percent confidence level.
11	Y	Appropriate packaging configuration and Drum Age Criteria (DAC) is applied and documented in the headspace gas sampling documentation, and the drum age met prior to sampling.
12	Y	TICs were appropriately identified and reported in accordance with the requirements of Section C3-1 of the QAPjP.
13	Y	The PRQLs for headspace gas VOCs were met for all analyses as evidenced by the analytical batch data reports.
14		The overall completeness, comparability, and representativeness QAOs were met for each of the analytical and testing procedures as specified in CCP-PO-001 Sections C3-2 through C3-9 prior to submittal of a waste stream profile form for a waste steam or waste stream lot.

	Completeness	Comparability	Representativeness
Radiography	NA	NA	NA
VE	Y	Y	Y
Headspace Gas Analysis	Y	Y	Y
Solids Sampling	NA	NA	NA
Solids VOCs	NA	NA	NA
Solids SVOCs	NA	NA	NA
Solids Metals	NA	NA	NA

Comments: N/A

Laura Nelson
Signature of Site Project Manager

Laura Nelson
Printed Name

10/6/2011
Date

CIS-DOE-10-2011
11

VE1

Attachment 3 – Visual Examination Site Project Manager Checklist

Batch Data Report No.: HNLRHVE 12011

1. Has all the data received an independent technical review as evidenced by a completed checklist (Attachment 2) and the appropriate ITR signature?		☐ NO	☑ YES
2. Are BDR contents complete and match the Visual Examination Batch Data Report Table of Contents?		☐ NO	☑ YES
3. Is the BDR complete (appropriately filled in forms for each container)?		☐ NO	☑ YES
4. Have the RH Quality Assurance Objectives (QAOs) for VE been met?			
Precision – reconciled discrepancies between operators		☐ NO	☑ YES
Accuracy – trained operators		☐ NO	☑ YES
Representativeness – description of container contents		☐ NO	☑ YES
Completeness – completed data form and/or recording		☐ NO	☑ YES
Comparability – proper training and adequate AK for unopened containers		☐ NO	☑ YES
5. Were NCRs generated included in the BDR?	☐ NO	☐ YES	☑ N/A

Comments

No NCR'S.

SPM:

Laura Nelson — Printed Name

Laura Nelson — Signature

11/28/12 — Date

CCP RECORDS ORIGINAL
DATE REC'D 11.29.12

Attachment 4 – Visual Examination Batch Data Report Cover Sheet

Batch Data Report No.: ANLRHVE 12011 Date: 10-12-12

	Waste Container ID Number:
1	1101
2	1099
3	1109
4	1136
5	1170
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	

PB 10-12-12

CCP RECORDS ORIGINAL
DATE REC'D 11.27.12

01

Attachment 5 – Visual Examination Batch Data Report Table of Contents

Batch Data Report No.: ANLRHVE12011 Date: 10-12-12

Item	Description	Page No.
1	Visual Examination Batch Data Report Cover Sheet (Attachment 4)	1
2	Visual Examination Batch Data Report Table of Contents (Attachment 5)	2
3	Visual Examination Data Forms (Attachment 1)	3
4	Visual Examination Independent Technical Reviewer Checklist (Attachment 2)	53
5	Copy of NCRs (N/A [If not applicable])	N/A

Attachment 1 – Visual Examination Data Form

Site ID: RHANI			
Examination Date: 2-22-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☒ N/A		Final Container ☐ N/A	
Container or Package ID Number:		Container or Package ID Number: 1101	
Container Type:		Container Type: 30 GALLON CONTAINER	
Waste Matrix Code:		Waste Matrix Code: S5400	
Waste Stream:		Waste Stream: AERHDM	
		Rigid Liner: ☒Y ☐N Type: 140 MIL	Rigid Liner Lid: ☐ Y ☒N
		Rigid Liner Vented or Hole Size: NA	
Percent Fill:	Percent Organic Waste:	Percent Fill: 85	Percent Organic Waste: 0
Layers of Confinement:	Closure Method:	Layers of Confinement: 1	Closure Method: HEAT SEALED FILTERED
Comments (e.g., filter information, NCRs): NA			

Waste Description:

BOTTOM CAN: 843

TOP CAN: 933

03

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1101

Prohibited Items	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH-72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:

Print Name	Signature	Date
ERIC BOYD	[signature]	2-22-12

Visual Examination Operator 2:

Print Name	Signature	Date
William H. Riley	[signature]	02-22-12

04

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 02-17-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		**Final Container** ☒ N/A	
Container or Package ID Number: 843		Container or Package ID Number:	
Container Type: 7-Gallon Container		Container Type:	
Waste Matrix Code: 35400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 85%	Percent Organic Waste: 0%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7-Gallon Container - (IM)
Shield Pot Centering Ring - (IM)
Shield Pot # 7206

05

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 843

Prohibited Items Criteria	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH-72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
William H. Riley — Print Name
Will. H. R — Signature
02-17-12 ~~02-17-11~~ — Date
02-17-12 WHR

Visual Examination Operator 2:
Pat Beallis — Print Name
Pat Beallis — Signature
02-17-12 — Date

04

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 9-16-11		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 7206		Container or Package ID Number	
Container Type: 1 GALLON CONTAINER		Container Type	
Waste Matrix Code: S5400		Waste Matrix Code	
Waste Stream: AERHDM		Waste Stream	
		Rigid Liner ☐Y ☐N Type	Rigid Liner Lid ☐Y ☐N
		Rigid Liner Vented or Hole Size	
Percent Fill: 85%	Percent Organic Waste: 0%	Percent Fill	Percent Organic Waste
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement	Closure Method
Comments (e.g. filter information, NCRs): NA			

Waste Description: VENTED 1 GALLON "3/4" INCH THICK LEAD LINED SHIELD POT (TM) (OM)

FUEL SPECIMEN 493A2 (OM)

FUEL SPECIMEN 493A4 (OM)

FUEL SPECIMEN 467B7 (OM)

FUEL SPECIMEN 493A3 (OM)

FUEL SPECIMEN 467B8 (OM)

FUEL SPECIMEN 493A6 (OM)

07

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 7206

	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: N/A

Visual Examination Operator 1: Pat Beallis Print Name	Pat Beallis Signature	9-16-11 Date
Visual Examination Operator 2: ERIC BOND Print Name	Eric Bond Signature	9-16-11 Date

08

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 02-17-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		**Final Container** ☒N/A	
Container or Package ID Number: 933		Container or Package ID Number:	
Container Type: 7-Gallon Container		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 85%	Percent Organic Waste: 0%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7-Gallon Container-(IM)
Shield Pot Centering Ring-(IM)
Shield Pot # 7202

09

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 933

	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
[illegible]			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
William H. Riley — Print Name
Will H. Ri — Signature
02-17-12 — Date

Visual Examination Operator 2:
Pat Beallis — Print Name
Pat Beallis — Signature
02-17-12 — Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 01-09-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒N/A	
Container or Package ID Number: 7202		Container or Package ID Number:	
Container Type: 1 Gallon Shield Pot		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 90	Percent Organic Waste: 0	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): VE completed on 01-10-12			

Waste Description: Vented 1 gallon 3/4" thick lead lined shield pot (om) (Im)
Fuel specimen 498 B 2 (om) Fuel specimen 574 B3 B3 (om)
Fuel specimen 498 B3 (om) Fuel specimen 574 B3 B1 (om)
Fuel specimen 190 C1 D (om) Fuel specimen 611 D 4 (om)
Fuel specimen 190 C1 E (om)
Fuel specimen 190 C1 B (om)
Fuel specimen 190 C1 C (om)
Fuel specimen 190 C1 A (om)
Fuel specimen 457 A 2 (om)
Fuel specimen 613 D 1 (om)
Fuel specimen 611 D 1 (om)
Fuel specimen 613 D 4 (om)
Fuel specimen 574 B3 B5 (om)
Fuel specimen 612 D 4 (om)
Fuel specimen 613 D 3 (om)
Fuel specimen 611 D 2 (om)

11

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 7207

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
Gary Redman — Print Name
Gary Redman — Signature
01-10-12 — Date

Visual Examination Operator 2:
ERIC EDWARDS — Print Name
Eric Edwards — Signature
1-10-12 — Date

12

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 02-27-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☒N/A		Final Container ☐ N/A	
Container or Package ID Number:		Container or Package ID Number: 1099	
Container Type:		Container Type: 30-Gallon Container	
Waste Matrix Code:		Waste Matrix Code: S5400	
Waste Stream:		Waste Stream: AERHDM	
		Rigid Liner: ☒Y ☐N Type: 140 mil	Rigid Liner Lid: ☐ Y ☒N
		Rigid Liner Vented or Hole Size: NA	
Percent Fill:	Percent Organic Waste:	Percent Fill: 85%	Percent Organic Waste: 0%
Layers of Confinement:	Closure Method:	Layers of Confinement: 1	Closure Method: Heat Sealed filtered
Comments (e.g., filter information, NCRs): VE Completed on 02-28-12			

Waste Description:

Bottom Can: 903

Top Can: 902

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1099

Prohibited Items	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
William H. Biley — Print Name
Will-H. Biley — Signature
02-28-12 — Date

Visual Examination Operator 2:
ERIC BOND — Print Name
Eric Bond — Signature
2-28-12 — Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 2-28-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒N/A	
Container or Package ID Number: 903		Container or Package ID Number:	
Container Type: 7 GALLON CONTAINER		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHAM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 85	Percent Organic Waste: 0%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7 GALLON CONTAINER (IM)

SHIELD POT CENTERING RING (IM)

SHIELD POT #7087

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 903

	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:

Print Name	Signature	Date
ERIC BAND	[signature]	2-20-12

Visual Examination Operator 2:

Print Name	Signature	Date
William H. Riley	[signature]	02-20-12

Attachment 1 – Visual Examination Data Form

Site ID and Location of Packaging Activity: RHANL-212			
Examination Date: 01-13-11	Batch Number: NA		
Procedure #: CCP-TP-500	Revision #: 10	Video Number: NA	
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A	Recording Start: NA	Recording Stop: NA	
Initial Container ☐ N/A	Final Container ☒N/A		
Container or Package ID Number: 7087	Container or Package ID Number:		
Container Type: 1-Gallon Shield Pot	Container Type:		
Waste Matrix Code: S5400	Waste Matrix Code:		
Waste Stream: AERHDM	Waste Stream:		
	Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N	
	Rigid Liner Vented or Hole Size:		
Percent Fill: 67-90%	Percent Fill:		
Layers of Confinement: 0 / Closure Method: NA	Layers of Confinement:	Closure Method:	
Comments (e.g., filter information, NCRs): VOLUME of ORGANIC WASTE: 0%			
Waste Description: Vented 1-Gallon 1-INCH thick Lead Lined Shield Pot - (OM)(IM) fuel Specimen - 579C1 - (OM) fuel Specimen - 579C7 - (OM) fuel Specimen - 579C9 - (OM) fuel Specimen - 579C8 - (OM) fuel Specimen - 579C4 - (OM) fuel Specimen - 579C3 - (OM) fuel Specimen - 579C6 - (OM) fuel Specimen - 579C2 - (OM) fuel Specimen - 579C10 - (OM) fuel Specimen - 579C5 - (OM) fuel Specimen - 579C11 - (OM)			
Primary Contents (check one)	☐ Concrete ☒ Steel ☐ Organic Material		

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 7087

[redacted]	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?		X	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
[redacted]			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
William H. Riley — Print Name
Will H. Ri — Signature
01-13-11 — Date

Visual Examination Operator 2:
ERIC BONS — Print Name
Eric Bons — Signature
01-13-11 — Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 2-20-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 902		Container or Package ID Number:	
Container Type: 7 GALLON CONTAINER		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 85%	Percent Organic Waste: 0%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7 GALLON CONTAINER (IM)
SHIELD POT CENTERING RING (IM)
SHIELD POT # 7109

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 902

	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
Bag/Liner Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:		
ERIC BOND	[signature]	2-20-12
Print Name	Signature	Date

Visual Examination Operator 2:		
William H. Riley	[signature]	02-20-12
Print Name	Signature	Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL	
Examination Date: 7-11-11	Batch Number: NA
Procedure #: CCP-TP-500	Revision #: 11 / Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A	Recording Start: NA / Recording Stop: NA
Initial Container ☐ N/A	Final Container ☒ N/A
Container or Package ID Number: 7109	Container or Package ID Number:
Container Type: 1 GALLON CONTAINER	Container Type:
Waste Matrix Code: S5400	Waste Matrix Code:
Waste Stream: AERHDM	Waste Stream:
	Rigid Liner ☐Y ☐N Type: / Rigid Liner Lid: ☐ Y ☐N
	Rigid Liner Vented or Hole Size:
Percent Fill: 85% / Percent Organic Waste: ~~10%~~ 0% 7-18-11	Percent Fill: / Percent Organic Waste:
Layers of Confinement: 0 / Closure Method: NA	Layers of Confinement: / Closure Method:
Comments (e.g., filter information, NCRs): VE COMPLETED ON 7-18-11	

Waste Description: VENTED 1 GALLON "3/4" THICK LEAD LINED SHIELD POT (OM) (IAN)

FUEL SPECIMEN 493B2 (OM)
FUEL SPECIMEN 493B3 (OM)
FUEL SPECIMEN 493B4 (OM)
FUEL SPECIMEN 493B5 (OM)
FUEL SPECIMEN 493B6 (OM)
FUEL SPECIMEN 502A3 (OM)
FUEL SPECIMEN 502A4 (OM)
FUEL SPECIMEN 502A5 (OM)
FUEL SPECIMEN 502A6 (OM)
FUEL SPECIMEN 502A7 (OM)

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 7109

Prohibited Item(s) Summary	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
ERIC BOND — Print Name
Eric Bond — Signature
7-18-11 — Date

Visual Examination Operator 2:
GLORIA RUPPERT — Print Name
Gloria Ruppert — Signature
7-18-11 — Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL	
Examination Date: 03-19-12	Batch Number: NA
Procedure #: CCP-TP-500	Revision #: 11 / Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A	Recording Start: NA / Recording Stop: NA
Initial Container ☒N/A	**Final Container** ☐ N/A
Container or Package ID Number:	Container or Package ID Number: 1109
Container Type:	Container Type: 30-Gallon Container
Waste Matrix Code:	Waste Matrix Code: S5400
Waste Stream:	Waste Stream: AERHDM
	Rigid Liner: ☒Y ☐N Type: 140 Mil / Rigid Liner Lid: ☐ Y ☒N
	Rigid Liner Vented or Hole Size: NA
Percent Fill: / Percent Organic Waste:	Percent Fill: 85% / Percent Organic Waste: 0%
Layers of Confinement: / Closure Method:	Layers of Confinement: 1 / Closure Method: Heat Sealed filtered
Comments (e.g., filter information, NCRs): NA	

Waste Description:

Bottom Can: 937

Top Can: 909

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1109

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e. waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1: William H. Riley Print Name	Signature	03-19-12 Date
Visual Examination Operator 2: ERIC BOND Print Name	Signature	3-19-12 Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 03-07-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		**Final Container** ☒N/A	
Container or Package ID Number: 937		Container or Package ID Number:	
Container Type: 7-Gallon Container		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 85%	Percent Organic Waste: 0%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7-Gallon Container-(IM)
Shield Pot Centering Ring-(IM)
Shield Pot # 7222

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 937

	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:

Print Name	Signature	Date
William H. Riley	Will-H-R	03-07-12

Visual Examination Operator 2:

Print Name	Signature	Date
ERIC BOND	[illegible]	3-7-12

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 9-28-11		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		**Final Container** ☒ N/A	
Container or Package ID Number: 7222		Container or Package ID Number:	
Container Type: 1 GALLON CONTAINER		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 40%	Percent Organic Waste: 0%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description: VENTED 1-GALLON "3/4" INCH THICK LEAD LINED SHIELD POT (OM) (IM)
FUEL SPECIMEN 354C4 (OM)
FUEL SPECIMEN 354C3 (OM)
FUEL SPECIMEN 354C5 (OM)
FUEL SPECIMEN 354C6 (OM)
FUEL SPECIMEN 354C2 (OM)

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 7222

Prohibited Items Summary	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, *whichever is greater in an internal container?*	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste *Matrix Code?*	☐	☒	
RH-TRU Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
William H. Riley — Print Name
Will H. Ri — Signature
09-28-11 — Date

Visual Examination Operator 2:
ERIC BOND — Print Name
Eric Bond — Signature
9-28-11 — Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 03-07-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		**Final Container** ☒N/A	
Container or Package ID Number: 909		Container or Package ID Number:	
Container Type: 7-Gallon Container		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 85%	Percent Organic Waste: 0%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7-Gallon Container-(IM)
Shield Pot Centering Ring-(IM)
Shield Pot #7065

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 909

	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
Prior Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1: William H. Riley Print Name	Signature	03-07-12 Date
Visual Examination Operator 2: ERIC BOND Print Name	Signature	3-7-12 Date

Attachment 1 – Visual Examination Data Form

Site ID and Location of Packaging Activity: RHANL-212			
Examination Date: 2-1-11	Batch Number: NA		
Procedure #: CCP-TP-500	Revision #: 10	Video Number: NA	
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A	Recording Start: NA	Recording Stop: NA	
Initial Container ☐ N/A	Final Container ☒ N/A		
Container or Package ID Number: 7065	Container or Package ID Number:		
Container Type: 1 GALLON SHIELD POT	Container Type:		
Waste Matrix Code: S5400	Waste Matrix Code:		
Waste Stream: AERHDM	Waste Stream:		
	Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N	
	Rigid Liner Vented or Hole Size:		
Percent Fill: 67-90%	Percent Fill:		
Layers of Confinement: 0 / Closure Method: NA	Layers of Confinement:	Closure Method:	
Comments (e.g., filter information, NCRs): VOLUME OF ORGANIC WASTE 0%			
Waste Description: VENTED 1 GALLON 1INCH THICK LEAD LINED SHIELD POT (OM) (IM) FUEL SPECIMEN 90B3 (OM) FUEL SPECIMEN 90B4 (OM) FUEL SPECIMEN 90B8 (OM) FUEL SPECIMEN 90B6 (OM) FUEL SPECIMEN 90B9 (OM) FUEL SPECIMEN 90B11 (OM)			
Primary Contents (check one)	☐ Concrete ☒ Steel ☐ Organic Material		

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 7065

Prohibited Item(s) Summary	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?		☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH-TRU Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1		
ERIC BOARD	Eric Board	2-1-11
Print Name	Signature	Date

Visual Examination Operator 2		
GLORIA RUPPERT	Gloria Ruppert	2-1-11
Print Name	Signature	Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL	
Examination Date: 05-21-12	Batch Number: NA
Procedure #: CCP-TP-500	Revision #: 11 / Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A	Recording Start: NA / Recording Stop: NA
Initial Container ☒N/A	**Final Container** ☐ N/A
Container or Package ID Number:	Container or Package ID Number: 1136
Container Type:	Container Type: 30-Gallon Container
Waste Matrix Code:	Waste Matrix Code: S5400
Waste Stream:	Waste Stream: AERHDM
	Rigid Liner: ☒Y ☐N Type: 140 MIL / Rigid Liner Lid: ☐Y ☒N
	Rigid Liner Vented or Hole Size: NA
Percent Fill: / Percent Organic Waste:	Percent Fill: 85% / Percent Organic Waste: 0%
Layers of Confinement: / Closure Method:	Layers of Confinement: 1 / Closure Method: Heat Sealed filtered
Comments (e.g., filter information, NCRs): NA	

Waste Description:

BOTTOM CAN: 1001
TOP CAN: 1009

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1136

	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
William H. Riley — Print Name
Will. H. R — Signature
05-21-12 — Date

Visual Examination Operator 2:
GLORIA RUPPERT — Print Name
Gloria Ruppert — Signature
5-21-12 — Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL	
Examination Date: 05-07-12	Batch Number: NA
Procedure #: CCP-TP-500	Revision #: 11 / Video Number NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A	Recording Start: NA / Recording Stop: NA
Initial Container ☐ N/A	Final Container ☒ N/A
Container or Package ID Number: 1001	Container or Package ID Number:
Container Type: 7-Gallon Container	Container Type:
Waste Matrix Code: S5400	Waste Matrix Code:
Waste Stream: AERHDM	Waste Stream:
	Rigid Liner: ☐Y ☐N Type: / Rigid Liner Lid: ☐Y ☐N
	Rigid Liner Vented or Hole Size:
Percent Fill: 85% / Percent Organic Waste: 0%	Percent Fill: / Percent Organic Waste:
Layers of Confinement: 0 / Closure Method: NA	Layers of Confinement: / Closure Method:
Comments (e.g., filter information, NCRs): NA	

Waste Description:

7-Gallon Container-(IM)
Shield Pot Centering Ring-(IM)
Shield Pot # 7252

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1001

Prohibited Items Summary	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1: William H. Riley Print Name	Signature	05-07-12 ~~05-12-12~~ WHR 05-07-12 Date
Visual Examination Operator 2: Pat Beallis Print Name	Signature	5-7-12 Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 04-27-12		Batch Number: N/A	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: N/A
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: N/A	Recording Stop: N/A
Initial Container ☐ N/A		Final Container ☒N/A	
Container or Package ID Number: 7252		Container or Package ID Number:	
Container Type: 1 Gallon Shield Pot		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 60	Percent Organic Waste: 0	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: N/A	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): Container closed 4/30/12			

Waste Description:
Vented 1 Gallon 3/4 inch Thick Lead Lined Shield Pot (IM)(OM)
Fuel specimen 467 A 2A (IM)(OM)
Fuel specimen 467 A 2B (IM)(OM)
Fuel specimen 467 A 3B (IM)(OM)
Fuel specimen 497C1 (IM)(OM)
Fuel specimen 497C2A (IM)(OM)
Fuel specimen 497C4 (IM)(OM)
Fuel specimen 497C2C (IM)(OM)

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 7252

Prohibited Item(s) Summary	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: N/A

Visual Examination Operator 1:		
F. Wesley Root	F. Wesley Root	4-30-12
Print Name	Signature	Date

Visual Examination Operator 2:		
Spencer Pattee	Spencer Pattee	4/30/12
Print Name	Signature	Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 05-07-12		Batch Number: NA	
Procedure # CCP TP-500		Revision #: 11	Video Number NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒N/A	
Container or Package ID Number: 1009		Container or Package ID Number:	
Container Type: 7-Gallon Container		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 85%	Percent Organic Waste: 0%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7-Gallon Container-(IM)
Shield Pot Centering Ring-(IM)
Shield Pot # 7195

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1009

Prohibited Item(s) Summary	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH T2B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
William H. Riley — Print Name
Will. H. Ri — Signature
05-07-12 — Date

Visual Examination Operator 2:
Pat Beallis — Print Name
Pat Beallis — Signature
5-7-12 — Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 3/16/12		Batch Number: N/A	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: N/A
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: N/A	Recording Stop: N/A
Initial Container ☐ N/A		**Final Container** ☒ N/A	
Container or Package ID Number: 7195		Container or Package ID Number:	
Container Type: 1 Gallon Shield Pot		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 60%	Percent Organic Waste: 0%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: WA WA 3-16-12	Closure Method: N/A	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): N/A			

Waste Description:

Vented 1 Gallon 3/4" Thick Lead Lined Shield Pot (OM)(IM)

Fuel Specimen 615C13 (OM) Fuel Specimen 608C7H (OM)

Fuel Specimen 615C6 (OM)

Fuel Specimen 608C1 (OM)

Fuel Specimen 615C9 (OM)

Fuel Specimen 615C14 (OM)

Fuel Specimen 615C5 (OM)

Fuel Specimen 615C1 (OM)

Fuel Specimen 612C6 (OM)

Fuel Specimen 612C11 (OM)

Fuel Specimen 608D7 (OM)

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 7195

Prohibited Items	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH-72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: N/A

Visual Examination Operator 1:
Spencer Pattee — Print Name
[signature] — Signature
3/16/12 — Date

Visual Examination Operator 2:
F. Wesley Root — Print Name
[signature] — Signature
3-16-12 — Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL	
Examination Date: 10-08-12	Batch Number: NA
Procedure #: CCP-TP-500	Revision #: 11 / Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A	Recording Start: NA / Recording Stop: NA
Initial Container ☒N/A	Final Container ☐ N/A
Container or Package ID Number:	Container or Package ID Number: 1170
Container Type:	Container Type: 30-Gallon Container
Waste Matrix Code:	Waste Matrix Code: S5400
Waste Stream:	Waste Stream: AERHUM
	Rigid Liner: ☒Y ☐N Type: 140 mil / Rigid Liner Lid: ☐ Y ☒N
	Rigid Liner Vented or Hole Size: NA
Percent Fill: / Percent Organic Waste:	Percent Fill: 85% / Percent Organic Waste: 0 %
Layers of Confinement: / Closure Method:	Layers of Confinement: 1 / Closure Method: Heat Sealed filtered
Comments (e.g., filter information, NCRs): NA	

Waste Description:

Bottom Can: 1015

Top Can: 1042

43
PB 10-17-12

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1170

Prohibited Item(s) Summary	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
William H. Riley — Print Name
[signature] — Signature
10-08-12 — Date

Visual Examination Operator 2:
Eric Ford — Print Name
[signature] — Signature
10-8-12 — Date

44
~~45~~
PB 10-17-12

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 6-5-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 1015		Container or Package ID Number:	
Container Type: 7 GALLON CONTAINER		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AEBHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 85	Percent Organic Waste: 0	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7 GALLON CONTAINER (IM)

SHIELD POT CENTERING RING (IM)

SHIELD POT #7174

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1015

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
ERIC BOND — Print Name
Eric Bond — Signature
6-5-12 — Date

Visual Examination Operator 2:
William H. Riley — Print Name
Will H. Riley — Signature
06-05-12 — Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 6-5-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 7174		Container or Package ID Number:	
Container Type: 1 GALLON SHIELD POT		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 0	Percent Organic Waste: 0	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NO WASTE WAS ADDED TO SHIELD POT			
Waste Description: VENTED 1 GALLON 1" ~~INCH LEAD LINED~~ EB 6-5-12 SHIELD POT (OM) (FM) INCH THICK LEAD LINED			

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 7174

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:

Print Name	Signature	Date
ERIC BOND	[signature]	6-5-12

Visual Examination Operator 2:

Print Name	Signature	Date
William H. Riley	[signature]	06-05-12

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 06-07-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒N/A	
Container or Package ID Number: 1042		Container or Package ID Number:	
Container Type: 7-Gallon Container		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 85%	Percent Organic Waste: 0%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7-Gallon Container-(IM)
Shield Pot Centering Ring-(IM)
Shield Pot # 7220

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1042

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
William H. Riley — Print Name
William H. Riley — Signature
06-07-12 — Date

Visual Examination Operator 2:
Eric Bond — Print Name
Eric Bond — Signature
6-7-12 — Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 09-26-11		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒N/A	
Container or Package ID Number: 7220		Container or Package ID Number:	
Container Type: 1-Gallon Container		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner ☐Y ☐N Type:	Rigid Liner Lid ☐Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 40%	Percent Organic Waste: 0%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description: Vented 1-Gallon 3/4-INCH thick lead Lined shield Pot - (OM) (IM)

Fuel Specimen - 074H4 - (OM)

Fuel Specimen - 074H2 - (OM)

Fuel Specimen - 074H3 - (OM)

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 7220

Prohibited Item(s) Summary	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments NA

Visual Examination Operator 1:
William H. Riley — Print Name
Will. H. Ri — Signature
09-26-11 — Date

Visual Examination Operator 2:
ERIC BOND — Print Name
Eric Bond — Signature
9-26-11 — Date

Attachment 2 – Visual Examination Independent Technical Reviewer Checklist

Batch Data Report No.: ANLRHVE12011

1. Were data generation and reduction conducted in a technically correct manner in accordance with the methods (procedure) used?	☐ NO	☒ YES	☐ N/A
2. Was the correct revision of the operating procedure used?	☐ NO	☒ YES	☐ N/A
3. Were all the transcription errors corrected?	☐ NO	☐ YES	☒ N/A
4. Are BDR contents complete and match the Visual Examination Batch Data report Table of Contents?	☐ NO	☒ YES	☐ N/A
5. Does the BDR include VE for no more than 20 containers?	☐ NO	☒ YES	☐ N/A
6. Is all data recorded signed and dated in reproducible ink?	☐ NO	☒ YES	☐ N/A
7. Is all raw data recorded clearly, legibly, and accurately?	☐ NO	☒ YES	☐ N/A
8. Are all changes to original data lined out, initialed and dated by the individual making the changes or an individual authorized to make the change?	☐ NO	☒ YES	☐ N/A
9. Is there an adequate written description of the contents?	☐ NO	☒ YES	☐ N/A
10. Were the recording equipment checks satisfactory?	☐ NO	☐ YES	☒ N/A
11. Has each container in this BDR been evaluated for the presence of prohibited wastes?	☐ NO	☒ YES	☐ N/A
12. Has the physical waste form in each container in this BDR been evaluated against the Waste Stream Description and the Waste Matrix Code?	☐ NO	☒ YES	☐ N/A
13. Have the RH Quality Assurance Objectives (QAOs) for VE been met?	☐ NO	☒ YES	☐ N/A
Precision – reconciled discrepancies between operators or between the operator and ITR.	☐	☒	☐
Accuracy – trained operators	☐	☒	☐
Representativeness – description of container contents	☐	☒	☐
Completeness – completed data form and/or recording	☐	☒	☐
Comparability – proper training and adequate AK source documents are available for unopened containers.	☐	☒	☐
14. Were NCRs generated included in the BDR?	☐ NO	☐ YES	☒ N/A
Comments: NA			

Independent Technical Reviewer:

Monterry Harris — Printed Name

Monterry Harris — Signature

10-15-12 — Date

DIVIDER PAGE ONLY

Not part of page count

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523 or 575-234-7431

Fax Number: 575-234-7033

[X] Original Record [ ] Copy
[ ] Fax Record
[ ] Electronic Record

Attn:	Sheri Punchios	From:	Wes Root
Ship to:	S. M. Stoller WIPP Rec. Mgmt. Govt.	Site:	ANL-E
	CCP Records	Company:	Nuclear Waste Partnership LLC
	4021 National Parks Hwy	Telephone Number:	630-252-8306
	Carlsbad, NM 88220	Date Sent:	11-26-12
Telephone Number:	575-234-7095		

Document Number	Title / Description	Record Date	Total Pages
ANLRHVE12011	Batch Data Report – Waste Container ID Numbers: 1101, 1099, 1109, 1136 and 1170.	10-12-12	53

Comments

None

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

Records Accepted [✓]	Linda Martin	Linda Martin	11.27.12
	Signature	Printed Name	Date
Records Rejected [ ]			
	Signature	Printed Name	Date

Reason for Rejection:

Re-submittal:

Signature	Printed Name	Date

```
*********************
***   TX REPORT   ***
*********************

TRANSMISSION OK

TX/RX NO                1935
DESTINATION TEL #       916302526706
DESTINATION ID          WES ROOT
ST. TIME                11/27 15:41
TIME USE                00'15
PAGES SENT                1
RESULT                  OK
```

Controlled Copy

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian. 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523 or 575-234-7431

Fax Number: 575-234-7033

[X] Original Record [ ] Copy
[ ] Fax Record
[ ] Electronic Record

Attn:	Sheri Punchios	From:	Wes Root
Ship to:	S. M. Stoller WIPP Rec. Mgmt. Govt.	Site:	ANL-E
	CCP Records	Company:	Nuclear Waste Partnership LLC
	4021 National Parks Hwy	Telephone Number:	630-252-8306
	Carlsbad, NM 88220	Date Sent:	11-26-12
Telephone Number:	575-234-7095		

Document Number	Title / Description	Record Date	Total Pages
ANLRHVE12011	Batch Data Report – Waste Container ID Numbers: 1101, 1099, 1109, 1136 and 1170.	10-12-12	53

Comments

None

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

Records Accepted [✓]	Linda Martin	Linda Martin	11-27-12
	Signature	Printed Name	Date
Records Rejected [ ]			
	Signature	Printed Name	Date

Reason for Rejection:

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523 or 575-234-7431

Fax Number: 575-234-7033

- [ ] Original Record
- [ ] Fax Record
- [x] Electronic Record
- [ ] Copy

Attn:	Linda Martin	From:	Laura Nelson
Ship to:	CCP Records	Site:	Denver
	4021 National Parks Hwy	Company:	WTS
	MS:GSA:212	Telephone Number:	303-843-2269
	Carlsbad, NM 88220	Date Sent:	11-28-12
Telephone Number:	575-234-7523		

Document Number	Title / Description	Record Date	Total Pages
ANLRHVE12011	SPM Checklist	11-28-12	1
	NA		

Comments

NA

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

Records Accepted [✓] Linda Martin — Linda Martin — 11-29-12
Signature — Printed Name — Date

Records Rejected [ ]
Signature — Printed Name — Date

Reason for Rejection:

Re-submittal:
Signature — Printed Name — Date

```
*********************
***   TX REPORT   ***
*********************

TRANSMISSION OK

TX/RX NO                1937
DESTINATION TEL #       913038432208
DESTINATION ID          DENVER
ST. TIME                11/29 07:20
TIME USE                00'18
PAGES SENT                1
RESULT                  OK
```

Controlled Copy

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523 or 575-234-7431

Fax Number: 575-234-7033

[ ] Original Record [ ] Copy
[ ] Fax Record
[x] Electronic Record

Attn:	Linda Martin	From:	Laura Nelson
Ship to:	CCP Records	Site:	Denver
	4021 National Parks Hwy	Company:	WTS
	MS:GSA:212	Telephone Number:	303-843-2269
	Carlsbad, NM 88220	Date Sent:	11-28-12
Telephone Number:	575-234-7523		

Document Number	Title / Description	Record Date	Total Pages
ANLRHVE12011	SPM Checklist	11-28-12	1
	NA		

Comments

NA

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

DIVIDER

PAGE

Attachment 3 – Visual Examination Site Project Manager Checklist

Batch Data Report No.: ANLRHVE12015

1. Has all the data received an independent technical review as evidenced by a completed checklist (Attachment 2) and the appropriate ITR signature?		☐ NO	☒ YES
2. Are BDR contents complete and match the Visual Examination Batch Data Report Table of Contents?		☐ NO	☒ YES
3. Is the BDR complete (appropriately filled in forms for each container)?		☐ NO	☒ YES
4. Have the RH Quality Assurance Objectives (QAOs) for VE been met?			
Precision – reconciled discrepancies between operators		☐ NO	☒ YES
Accuracy – trained operators		☐ NO	☒ YES
Representativeness – description of container contents		☐ NO	☒ YES
Completeness – completed data form and/or recording		☐ NO	☒ YES
Comparability – proper training and adequate AK for unopened containers		☐ NO	☒ YES
5. Were NCRs generated included in the BDR?	☐ NO	☐ YES	☒ N/A

Comments

NO NCR'S

SPM:

Laura Nelson
Printed Name

Laura Nelson
Signature

10-22-12
Date

CCP RECORDS ORIGINAL
DATE REC'D 10-22-12

Attachment 4 – Visual Examination Batch Data Report Cover Sheet

Batch Data Report No.: ANLRHVE12015 Date: 10-12-12

	Waste Container ID Number:
1	1137
2	1139
3	1140
4	1141
5	1155
6	1156
7	1160
8	1161
9	1162
10	1163
11	1164
12	
13	
14	
15	
16	
17	
18	
19	
20	

PB 10-12-12

CCP RECORDS ORIGINAL
DATE REC'D 10-22-12

01

Attachment 5 – Visual Examination Batch Data Report Table of Contents

Batch Data Report No.: ANLRHVE12015 Date: 10-12-12

Item	Description	Page No.
1	Visual Examination Batch Data Report Cover Sheet (Attachment 4)	01
2	Visual Examination Batch Data Report Table of Contents (Attachment 5)	02
3	Visual Examination Data Forms (Attachment 1)	03
4	Visual Examination Independent Technical Reviewer Checklist (Attachment 2)	113
5	Copy of NCRs (N/A [If not applicable])	N/A

Attachment 1 – Visual Examination Data Form

Site ID: RHANL	
Examination Date: 05-21-12	Batch Number: NA
Procedure #: CCP-TP-500	Revision #: 11 / Video Number NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A	Recording Start: NA / Recording Stop: NA
Initial Container ☒ N/A	Final Container ☐ N/A
Container or Package ID Number:	Container or Package ID Number: 1137
Container Type:	Container Type: 30-Gallon Container
Waste Matrix Code:	Waste Matrix Code: S5400
Waste Stream:	Waste Stream: AERHDM
	Rigid Liner: ☒Y ☐N Type: 140 Mil / Rigid Liner Lid: ☐ Y ☒N
	Rigid Liner Vented or Hole Size: NA
Percent Fill: / Percent Organic Waste:	Percent Fill: 85% / Percent Organic Waste: 0%
Layers of Confinement: / Closure Method:	Layers of Confinement: 1 / Closure Method: Heat Sealed filtered
Comments (e.g., filter information, NCRs): VE Completed on 05-22-12	

Waste Description:

BOTTOM CAN: 967

TOP CAN: 996

03

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1137

	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
William H. Riley — Print Name
Will H. Ri — Signature
05-22-12 — Date

Visual Examination Operator 2:
ERIC BOND — Print Name
Eric Bond — Signature
5-22-12 — Date

04

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 05-09-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒N/A	
Container or Package ID Number: 967		Container or Package ID Number:	
Container Type: 7-Gallon Container		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 85%	Percent Organic Waste: 0%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7-Gallon Container-(IM)
Shield Pot Centering Ring-(IM)
Shield Pot # 7259

05

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 967

	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1: William H. Riley Print Name	William H. Riley Signature	05-09-12 Date
Visual Examination Operator 2: F. Wesley Root Print Name	F. Wesley Root Signature	05-09-12 Date

06

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 4-4-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒N/A	
Container or Package ID Number: 7259		Container or Package ID Number:	
Container Type: 1 GALLON SHIELD POT		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHAM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 60%	Percent Organic Waste: 0%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description: VENTED 1 GALLON "3/4" INCH THICK LEAD LINED SHIELD POT (OM) (IM)

PIECES FROM LOOP (IM) (OM)

FUEL ELEMENT PIECES (OM)

CUT UP FUEL PIECES (OM) (IM)

07

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 7259

Prohibited Item(s) Summary	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
William H. Riley — Print Name
Will H. R[illegible] — Signature
04-04-12 — Date

Visual Examination Operator 2:
ERIC BOND — Print Name
[illegible] — Signature
4-4-12 — Date

08

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 05-07-12		Batch Number: NA	
Procedure # CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒N/A	
Container or Package ID Number: 996		Container or Package ID Number:	
Container Type: 7-Gallon Container		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 85%	Percent Organic Waste: 0%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7-Gallon Container-(IM)
Shield Pot Centering Ring-(IM)
Shield Pot # 7264

09

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 996

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
William H. Riley — Print Name
Will H. Riley — Signature
05-07-12 — Date

Visual Examination Operator 2:
Pat Beallis — Print Name
Pat Beallis — Signature
5-7-12 — Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 2-17-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 7264		Container or Package ID Number:	
Container Type: 1 GALLON SHIELD POT		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 20%	Percent Organic Waste: 0%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): VE COMPLETED ON 4-3-12			

Waste Description: VENTED 1 GALLON (3/4") INCH THICK LEAD LINED SHIELD POT (OM)(IM)

FUEL AND CLADDING PIECES (OM)(IM)

TMI GRAB SAMPLES (OM)(IM)

BUBBLE (IM)

11

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 7264

Prohibited Item(s) Summary	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
William H. Riley — Print Name
William H. Riley — Signature
04-03-12 — Date

Visual Examination Operator 2:
ERIC BORD — Print Name
Eric Bord — Signature
4-3-12 — Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 5-22-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☒ N/A		Final Container ☐ N/A	
Container or Package ID Number:		Container or Package ID Number: 1139	
Container Type:		Container Type: 30 GALLON CONTAINER	
Waste Matrix Code:		Waste Matrix Code: S5400	
Waste Stream:		Waste Stream: AERHDM	
		Rigid Liner: ☒Y ☐N Type: 140 MIL	Rigid Liner Lid: ☐Y ☒N
		Rigid Liner Vented or Hole Size:	
Percent Fill:	Percent Organic Waste:	Percent Fill: 85%	Percent Organic Waste: 0%
Layers of Confinement:	Closure Method:	Layers of Confinement: 1	Closure Method: HEAT SEALED FIBERBOARD
Comments (e.g., filter information, NCRs): NA			

Waste Description:

BOTTOM CAN: 979

TOP CAN: 982

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1139

	YES	NO	N/A
Prohibited Items			
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
Part 28 Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
ERIC BONN (Print Name) — Eric Bonn (Signature) — 5-22-12 (Date)

Visual Examination Operator 2:
William H. Bailey (Print Name) — Wm. H. Bailey (Signature) — 05-22-12 (Date)

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 05-11-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		**Final Container** ☒N/A	
Container or Package ID Number: 979		Container or Package ID Number:	
Container Type: 7-Gallon Container		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 85%	Percent Organic Waste: 0%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7-Gallon Container- (IM)
Shield Pot Centering Ring-(IM)
Shield Pot # 7249

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 979

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1: William H. Riley Print Name	Wil. H. Ri Signature	05-11-12 Date
Visual Examination Operator 2: GLORIA RUPPERT Print Name	Gloria Ruppert Signature	05-11-12 Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 05-04-12	Batch Number: NA		
Procedure #: CCP-TP-500	Revision #: 11	Video Number NA	
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A	Recording Start: NA	Recording Stop: NA	
Initial Container ☐ N/A	Final Container ☒ N/A		
Container or Package ID Number: 7249	Container or Package ID Number:		
Container Type: 1 GALLON SHIELD POT	Container Type:		
Waste Matrix Code: S5400	Waste Matrix Code:		
Waste Stream: AERHDM	Waste Stream:		
	Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N	
	Rigid Liner Vented or Hole Size:		
Percent Fill: 70	Percent Organic Waste: 0	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

VENTED 1 GALLON 3/4 INCH THICK
LEAD LINED SHIELD POT (cm) (Im)
LOOP SECTION (Im) (cm)
FUEL AND CLADDING (Im) (cm)

17

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 7249

Prohibited Item(s) Summary	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
GLORIA RUPPERT — Print Name
Gloria Ruppert — Signature
05-04-12 — Date

Visual Examination Operator 2:
William H. Riley — Print Name
William H. Riley — Signature
05-04-12 — Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 05-11-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒N/A	
Container or Package ID Number: 982		Container or Package ID Number:	
Container Type: 7-Gallon Container		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 85%	Percent Organic Waste: 0%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7-Gallon Container-(IM)
Shield Pot Centering Ring-(IM)
Shield Pot # 7200

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 982

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments N/A

Visual Examination Operator 1:
William H. Riley — Print Name
Will Riley — Signature
05-11-12 — Date

Visual Examination Operator 2:
GLORIA RUPPERT — Print Name
Gloria Ruppert — Signature
05-11-12 — Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 04-11-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒N/A	
Container or Package ID Number: 7200		Container or Package ID Number:	
Container Type: 1-Gallon Shield Pot		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐Y ☐N
WHR-04-11-12		Rigid Liner Vented or Hole Size:	
Percent Fill: 20%	Percent Organic Waste: ~~10%~~ 0%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): VE Completed on 04-12-12			

Waste Description: Vented 1-Gallon 3/4-inch thick lead lined Shield Pot - (OM) (IM)

Fuel and Cladding Rubble - (OM) (IM)

Ceramic Ring Section Materials - (OIM) (OM)

Reactor Sample Pieces - (OM)

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 7200

Prohibited Item(s) Summary	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
William H. Riley — Print Name
Will. H. Ri — Signature
04-12-12 — Date

Visual Examination Operator 2:
Gary Redman — Print Name
Gary Redman — Signature
04-12-12 — Date

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Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 05-24-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☒N/A		Final Container ☐ N/A	
Container or Package ID Number:		Container or Package ID Number: 1140	
Container Type:		Container Type: 30-Gallon Container	
Waste Matrix Code:		Waste Matrix Code: S9400	
Waste Stream:		Waste Stream: AERHDM	
		Rigid Liner: ☒Y ☐N Type: 140 Mil	Rigid Liner Lid: ☐ Y ☒N
		Rigid Liner Vented or Hole Size: NA	
Percent Fill:	Percent Organic Waste:	Percent Fill: 85%	Percent Organic Waste: 0%
Layers of Confinement:	Closure Method:	Layers of Confinement: 1	Closure Method: Heat Sealed filtered
Comments (e.g., filter information, NCRs): NA			

Waste Description:

Bottom Can: 963

Top Can: 958

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1140

Prohibited Items Screening	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste ddes **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH-TRU Items			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
William H. Riley — Print Name
William H. Riley — Signature
05-24-12 — Date

Visual Examination Operator 2:
GLORIA RUPPERT — Print Name
Gloria Ruppert — Signature
05-24-12 — Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 05-15-12		Batch Number: N/A	
Procedure #: CCP-TP-500		Revision #: 11	Video Number N/A
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start N/A	Recording Stop: N/A
Initial Container ☐ N/A		Final Container ☒N/A	
Container or Package ID Number: 963		Container or Package ID Number:	
Container Type: 7 gallon container		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 85%	Percent Organic Waste: 0%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: N/A	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): N/A			
Waste Description: 7 gallon container (IM) Shield Pot centering Ring (IM) Shield Pot # 7247			

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Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 963

Prohibited Item(s) Summary	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: N/A

Visual Examination Operator 1: F. Wesley Root Print Name	F. Wesley Root Signature	05-15-12 Date
Visual Examination Operator 2: Pat Beallis Print Name	Pat Beallis Signature	05-15-12 Date

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Attachment 1 – Visual Examination Data Form

Site ID:	RHANL		
Examination Date:	05-07-12	Batch Number:	NA
Procedure #:	CCP-TP-500	Revision #: 11	Video Number NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA

Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 7247		Container or Package ID Number:	
Container Type: 1 GALLON SHIELD POT		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 70	Percent Organic Waste: 0	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

VENTED 1 GALLON 3/4 INCH THICK
LEAD LINED SHIELD POT (OM) (IM)
LOOP SECTION (IM) (OM)
FUEL AND CLADDING (IM) (OM)

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Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 7247

Prohibited Items Summary	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH T2B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
GLORIA RUPPERT — Print Name
Gloria Ruppert — Signature
05-07-12 — Date

Visual Examination Operator 2:
ERIC BOND — Print Name
Eric Bond — Signature
5-7-12 — Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 05-11-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 958		Container or Package ID Number:	
Container Type: 7-Gallon Container		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 85%	Percent Organic Waste: 0%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7-Gallon Container-(IM)
Shield Pot Centering Ring-(IM)
Shield Pot # 7219

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 958

Prohibited Item(s) Summary	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
William H. Riley (Print Name) — William H. Riley (Signature) — 05-11-12 (Date)

Visual Examination Operator 2:
GLORIA RUPPERT (Print Name) — Gloria Ruppert (Signature) — 05-11-12 (Date)

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 05-04-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 7219		Container or Package ID Number:	
Container Type: 1 GALLON SHIELD POT		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 70	Percent Organic Waste: 0	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

VENTED 1 GALLON 3/4 INCH THICK
LEAD LINED SHIELD POT (cm)(Im)
LOOP SECTION (Im)(cm)
FUEL AND CLADDING (Im)(cm)

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 7219

Prohibited Items Summary	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH T2B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
GLORIA RUPPERT — Print Name
Gloria Ruppert — Signature
05-04-12 — Date

Visual Examination Operator 2:
William H. Riley — Print Name
William H. Riley — Signature
05-04-12 — Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 05-25-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☒N/A		Final Container ☐ N/A	
Container or Package ID Number:		Container or Package ID Number: 1141	
Container Type:		Container Type: 30-Gallon Container	
Waste Matrix Code:		Waste Matrix Code: S5400	
Waste Stream:		Waste Stream: AERHDM	
		Rigid Liner: ☒Y ☐N Type: 140 Mil	Rigid Liner Lid: ☐ Y ☒N
		Rigid Liner Vented or Hole Size: NA	
Percent Fill:	Percent Organic Waste:	Percent Fill: 85%	Percent Organic Waste: 0%
Layers of Confinement:	Closure Method:	Layers of Confinement: 1	Closure Method: Heat Sealed Filtered
Comments (e.g., filter information, NCRs): NA			

Waste Description:

BOTTOM CAN: 957

TOP CAN: 981

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1141

Prohibited Items Screening	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste ddes **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
Retrievability			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1: William H. Riley Print Name	Will. H. Ri Signature	05-25-12 Date
Visual Examination Operator 2: GLORIA RUPPERT Print Name	Gloria Ruppert Signature	05-25-12 Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 05-15-12		Batch Number: N/A	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: N/A
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: N/A	Recording Stop: N/A
Initial Container ☐ N/A		**Final Container** ☒N/A	
Container or Package ID Number: 957		Container or Package ID Number:	
Container Type: 7 gallon container		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 85%	Percent Organic Waste: 0%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: N/A	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): N/A			

Waste Description:

7 gallon Container (IM)
Shield Pot Centering Ring (IM)
Shield Pot # 7253

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 957

Prohibited Item(s) Summary	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: N/A

Visual Examination Operator 1:
Pat Beallis (Print Name) — Pat Beallis (Signature) — 05-15-12 (Date)

Visual Examination Operator 2:
F. Wesley Root (Print Name) — F. Wesley Root (Signature) — 05-15-12 (Date)

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Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 05-07-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 7253		Container or Package ID Number:	
Container Type: 1 GALLON SHIELD POT		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 90	Percent Organic Waste: 0	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

VENTED 1 GALLON 3/4 INCH THICK
LEAD LINED SHIELD POT (cm)(Im)
LOOP SECTION (Im)(cm)
FUEL AND CLADDING (Im) (cm)

37

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 7253

Prohibited Items Summary	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1: GLORIA RUPPERT Print Name	Gloria Ruppert Signature	05-07-12 Date
Visual Examination Operator 2: ERIC BOND Print Name	Eric Bond Signature	5-7-12 Date

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Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 05-15-12		Batch Number: N/A	
Procedure #: CCP-TP-500		Revision #: 11	Video Number N/A
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: N/A	Recording Stop: N/A
Initial Container ☐ N/A		**Final Container** ☒N/A	
Container or Package ID Number: 981		Container or Package ID Number:	
Container Type: 7 gallon container		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHD/M		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 85%	Percent Organic Waste: 0%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: N/A	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): N/A			

Waste Description: 7 gallon container (IM)
Shield Pot centering Ring (IM)
Shield Pot # 7251

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 981

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: N/A

Visual Examination Operator 1: Pat Beallis Print Name	Pat Beallis Signature	05-15-12 Date
Visual Examination Operator 2: F. Wesley Root Print Name	F. Wesley Root Signature	05-15-12 Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 05-07-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 7251		Container or Package ID Number:	
Container Type: 1 GALLON SHIELD POT		Container Type:	
Waste Matrix Code: S54C0		Waste Matrix Code:	
Waste Stream: AER HDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 80	Percent Organic Waste: 0	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 6	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

VENTED 1 GALLON 3/4 INCH THICK
LEAD LINED SHIELD POT (cm)(Im)
LOOP SECTION (Im) (cm)
FUEL AND CLADDING (Im)(cm)

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Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 7251

Prohibited Items Summary	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
GLORIA RUPPERT — Print Name
Gloria Ruppert — Signature
05-07-12 — Date

Visual Examination Operator 2:
ERIC BIRD — Print Name
Eric Bird — Signature
5-7-12 — Date

Attachment 1 – Visual Examination Data Form

Site ID: BHANL			
Examination Date: 09-17-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☒N/A		Final Container ☐ N/A	
Container or Package ID Number:		Container or Package ID Number: 1155	
Container Type:		Container Type: 30 Gallon Container	
Waste Matrix Code:		Waste Matrix Code: S5400	
Waste Stream:		Waste Stream: AERHDM	
		Rigid Liner: ☒Y ☐N Type: 140 MIL	Rigid Liner Lid: ☐ Y ☒N
		Rigid Liner Vented or Hole Size: NA	
Percent Fill:	Percent Organic Waste:	Percent Fill: 85%	Percent Organic Waste: 0%
Layers of Confinement:	Closure Method:	Layers of Confinement: 1	Closure Method: Heat Sealed filtered
Comments (e.g., filter information, NCRs): NA			

Waste Description:

BOTTOM CAN: 1037

TOP CAN: 1038

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1155

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
William H. Biley — Print Name
[signature] — Signature
09-12-12 — Date

Visual Examination Operator 2:
ERIC BOND — Print Name
[signature] — Signature
9-12-12 — Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 7-26-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 1037		Container or Package ID Number:	
Container Type: 7 GALLON CONTAINER		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 85 %	Percent Organic Waste: 0 %	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7 GALLON CONTAINER (IM)
SHIELD POT CENTERING RING (IM)

SHIELD POT # 7243

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1037

	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
[illegible] Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
ERIC BOND — Print Name
Eric Bond — Signature
7-26-12 — Date

Visual Examination Operator 2:
William H. Riley — Print Name
Will. H. R — Signature
07-26-12 — Date

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Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 6-27-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 7243		Container or Package ID Number:	
Container Type: 16 GALLON SHIELD POT		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 90%	Percent Organic Waste: 0%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description: VENTED "3/4" INCH THICK LEAD LINED SHIELD POT (OM)(IM)
FUEL AND CLADDING (OM)(IM)
PIECES

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Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 7243

Prohibited Item(s) Summary	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1: ERIC BOND — Print Name; Signature; 6-27-12 — Date

Visual Examination Operator 2: William H. Riley — Print Name; Signature; 06-27-12 — Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 7-26-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒N/A	
Container or Package ID Number: 1038		Container or Package ID Number:	
Container Type: 7 GALLON CONTAINER		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHAM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 85%	Percent Organic Waste: 0%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7 GALLON CONTAINER (IM)

SHIELD POT CENTERING RING (IM)

SHIELD POT #7234

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1038

	YES	NO	N/A
Prohibited Items Summary			
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH-TRU Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
ERIC BONS (Print Name) — Eric Bons (Signature) — 7-26-12 (Date)

Visual Examination Operator 2:
William H. Riley (Print Name) — William H. Riley (Signature) — 07-26-12 (Date)

Attachment 1 – Visual Examination Data Form

Site ID: BHANL			
Examination Date: 6-26-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 1234		Container or Package ID Number:	
Container Type: 1 GALLON SHIELD POT		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 60% Percent Organic Waste: 0%		Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description: VENTED "3/4" INCH THICK LEAD LINED SHIELD POT (IM) (OM)

FUEL AND CLADDING (IM) (OM)

PIECES

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Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 7234

Prohibited Item(s) Summary	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
ERIC BOND — Print Name
Eric Bond — Signature
6-26-12 — Date

Visual Examination Operator 2:
William H. Riley — Print Name
William H. Riley — Signature
06-26-12 — Date

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Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 09-18-12		Batch Number: NA	
Procedure # CCP-TP-500		Revision # 11	Video Number NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☒N/A		Final Container ☐ N/A	
Container or Package ID Number:		Container or Package ID Number: 1156	
Container Type:		Container Type: 30-Gallon Container	
Waste Matrix Code:		Waste Matrix Code: S5400	
Waste Stream:		Waste Stream: AERHDM	
		Rigid Liner: ☒Y ☐N Type: 140 MiL	Rigid Liner Lid: ☐ Y ☒N
		Rigid Liner Vented or Hole Size: NA	
Percent Fill:	Percent Organic Waste:	Percent Fill: 85%	Percent Organic Waste: 10%
Layers of Confinement:	Closure Method:	Layers of Confinement: 1	Closure Method: Heat Sealed filtered
Comments (e.g., filter information, NCRs): NA			

Waste Description:

BOTTOM CAN: 1049

TOP CAN: 1050

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1156

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1: William H. Riley Print Name	Signature	09-18-12 Date
Visual Examination Operator 2: ERIC BOND Print Name	Signature	9-18-12 Date

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Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 7-10-12	Batch Number: NA		
Procedure #: CCP-TP-500	Revision #: 11	Video Number: NA	
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A	Recording Start: NA	Recording Stop: NA	
Initial Container ☐ N/A	Final Container ☒ N/A		
Container or Package ID Number: 1044	Container or Package ID Number:		
Container Type: 7 GALLON CONTAINER	Container Type:		
Waste Matrix Code: S5400	Waste Matrix Code:		
Waste Stream: AERHAM	Waste Stream:		
	Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N	
	Rigid Liner Vented or Hole Size:		
Percent Fill: 85% / Percent Organic Waste: 0%	Percent Fill:	Percent Organic Waste:	
Layers of Confinement: 0 / Closure Method: NA	Layers of Confinement:	Closure Method:	
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7 GALLON CONTAINER (IM)

SHIELD POT CENTERING RING (IM)

SHIELD POT #7255

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Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1049

Prohibited Item(s) Summary	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:

Print Name	Signature	Date
ERIC BOND	Eric Bond	7-10-12

Visual Examination Operator 2:

Print Name	Signature	Date
William H. Riley	William H. Riley	07-10-12

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Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 5-9-12		Batch Number: N/A	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: N/A
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: N/A	Recording Stop: N/A
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 7255		Container or Package ID Number:	
Container Type: 1 gallon Shield Pot		Container Type:	
Waste Matrix Code: 35400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 80%	Percent Organic Waste: 0%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: N/A	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): N/A			

Waste Description: Vented 1 gallon 3/4 inch Thick Lead Lined Shield Pot (OM) (IM)

Loop Section (IM) (OM)

Fuel and Cladding Pieces (OM) (IM)

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Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 7255

	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: None

Visual Examination Operator 1: F. Wesley Root Print Name	F. Wesley Root Signature	05-09-12 Date
Visual Examination Operator 2: William H. Riley Print Name	William H. Riley Signature	05-09-12 Date

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Attachment 1 – Visual Examination Data Form

Site ID: RHANC			
Examination Date: 7-26-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 1050		Container or Package ID Number:	
Container Type: 7 GALLON CONTAINER		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHAM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 85%	Percent Organic Waste: 10%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7 GALLON CONTAINER (TM)

SHIELD POT CENTERING RING (TM)

SHIELD POT #7244

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Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1050

	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
[illegible] Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
ERIC BOND (Print Name) — [signature] (Signature) — 7-26-12 (Date)

Visual Examination Operator 2:
William H. Riley (Print Name) — [signature] (Signature) — 07-26-12 (Date)

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Attachment 1 – Visual Examination Data Form

Site ID: BHAWL			
Examination Date: 6-27-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 7244		Container or Package ID Number:	
Container Type: 1GALLON SHIELD POT		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: BERHAM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 90%	Percent Organic Waste: 10%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description: VENTED (3/4") INCH THICK LEAD LINED SHIELD POT (OM)(IM)

FUEL AND CLADDING (OM)(IM)
PIECES
MET MOUNT PIECE (OM)(IM)(P)

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Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 7244

Prohibited Item(s) Summary	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
ERIC BOND — Print Name
Eric Bond — Signature
6-27-12 — Date

Visual Examination Operator 2:
William H. Riley — Print Name
William H. Riley — Signature
06-27-12 — Date

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Attachment 1 – Visual Examination Data Form

Site ID: RHANL	
Examination Date: 09-27-12	Batch Number: NA
Procedure #: CCP-TP-500	Revision #: 11 / Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A	Recording Start: NA / Recording Stop: NA
Initial Container ☒N/A	Final Container ☐ N/A
Container or Package ID Number:	Container or Package ID Number: 1160
Container Type:	Container Type: 30 Gallon Container
Waste Matrix Code:	Waste Matrix Code: 95400
Waste Stream:	Waste Stream: AERHDM
	Rigid Liner: ☒Y ☐N Type: 140 MIL / Rigid Liner Lid: ☐ Y ☒N
	Rigid Liner Vented or Hole Size: NA
Percent Fill: / Percent Organic Waste:	Percent Fill: 85% / Percent Organic Waste: 0%
Layers of Confinement: / Closure Method:	Layers of Confinement: 1 / Closure Method: Heat Sealed filtered
Comments (e.g., filter information, NCRs): NA	

Waste Description:

Bottom Can: 938

Top Can: 954

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1160

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1: William H. Riley Print Name	William H. Riley Signature	09-27-12 Date
Visual Examination Operator 2: ERIC BOND Print Name	Eric Bond Signature	9-27-12 Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 9-5-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒N/A	
Container or Package ID Number: 938		Container or Package ID Number:	
Container Type: 7 GALLON CONTAINER		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHLM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 85	Percent Organic Waste: 0	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7 GALLON CONTAINER (TIM)
SHIELD POT CENTERING RING (TIM)
SHIELD POT # 7175

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 938

Prohibited Item(s) Summary	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1: William H. Riley Print Name	Signature	09-05-12 Date
Visual Examination Operator 2: ERIC BOND Print Name	Signature	9-5-12 Date

Attachment 1 – Visual Examination Data Form

Site ID: RHAWL			
Examination Date: 08-02-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒N/A	
Container or Package ID Number: 7175		Container or Package ID Number:	
Container Type: 1 Gallon Shield PoT		Container Type:	
Waste Matrix Code: S 5400		Waste Matrix Code:	
Waste Stream: AERH OM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 10	Percent Organic Waste: 0	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:
Vented 1gallon 1"Thick lead lined Shield PoT (Om) (Im)
Fuel and cladding pieces (Om) (Im)

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 7175

	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
[illegible] Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
Gary Redman (Print Name) — Gary Redman (Signature) — 08-02-12 (Date)

Visual Examination Operator 2:
GLORIA RUPPERT (Print Name) — Gloria Ruppert (Signature) — 08-02-12 (Date)

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 09-06-12		Batch Number: N/A	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: N/A
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: N/A	Recording Stop: N/A
Initial Container ☐ N/A		Final Container ☒N/A	
Container or Package ID Number: 954		Container or Package ID Number:	
Container Type: 7 gallon container		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 85%	Percent Organic Waste: 0%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: N/A	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): N/A			

Waste Description: 7 gallon container (IM)
Shield Pot Centering Ring (IM)
Shield Pot #7235

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 954

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: N/A

Visual Examination Operator 1: Pat Beallis Print Name	Pat Beallis Signature	09-06-12 Date
Visual Examination Operator 2: William H. Riley Print Name	Werner Signature	09-06-12 Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 08-02-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒N/A	
Container or Package ID Number: 7235		Container or Package ID Number:	
Container Type: 1 gallon Shield Pot		Container Type:	
Waste Matrix Code: S 5400		Waste Matrix Code:	
Waste Stream: AERHOM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 20	Percent Organic Waste: 0	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:
Vented 1 gallon 3/4" Thick lead lined Shield Pot (om)(Im)
Fuel and Cladding (om) (Im)
Pieces

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 7235

Prohibited Item(s) Summary	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: N/A

Visual Examination Operator 1:
Gary Redman — Print Name
Gary Redman — Signature
08-02-12 — Date

Visual Examination Operator 2:
GLORIA RUPPERT — Print Name
Gloria Ruppert — Signature
08-02-12 — Date

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Attachment 1 – Visual Examination Data Form

Site ID: RHANL	
Examination Date: 09-27-12	Batch Number: NA
Procedure #: CCP-TP-500	Revision #: 11 / Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A	Recording Start: NA / Recording Stop: NA
Initial Container ☒ N/A	Final Container ☐ N/A
Container or Package ID Number:	Container or Package ID Number: 1161
Container Type:	Container Type: 30-Gallon Container
Waste Matrix Code:	Waste Matrix Code: S5400
Waste Stream:	Waste Stream: AERHDM
	Rigid Liner: ☒Y ☐N Type: 140 MIL / Rigid Liner Lid: ☐Y ☒N
	Rigid Liner Vented or Hole Size: NA
Percent Fill: / Percent Organic Waste:	Percent Fill: 85% / Percent Organic Waste: 0%
Layers of Confinement: / Closure Method:	Layers of Confinement: 1 / Closure Method: Heat Sealed filtered
Comments (e.g., filter information, NCRs): VE completed on 09-28-12	

Waste Description:

Bottom Can: 1048

Top Can: 1044

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1161

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
William H. Riley — Print Name
Signature — Date: 09-28-12

Visual Examination Operator 2:
ERIC BAND — Print Name
Signature — Date: 9-28-12

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 9-5-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container	☐ N/A	Final Container	☒N/A
Container or Package ID Number: 1048		Container or Package ID Number:	
Container Type: 7 GALLON CONTAINER		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 85	Percent Organic Waste: 0	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7 GALLON CONTAINER (IM)

SHIELD POT CENTERING RING (IM)

SHIELD POT #7232

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1048

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
ERIC BOND (Print Name) — Eric Bond (Signature) — 9-5-12 (Date)

Visual Examination Operator 2:
William H. Riley (Print Name) — William H. Riley (Signature) — 09-05-12 (Date)

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 08-02-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 7232		Container or Package ID Number:	
Container Type: 1 Gallon Shield Pot		Container Type:	
Waste Matrix Code: S 5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 20	Percent Organic Waste: 0	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:
Vented 1 gallon 3/4" Thick lead lined Shield pot (om)(Im)
Fuel and Cladding pieces (om)(Im)

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 7232

Prohibited Item(s) Summary	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
Gary Redman (Print Name) — Gary Redman (Signature) — 08-02-12 (Date)

Visual Examination Operator 2:
GLORIA RUPPERT (Print Name) — Gloria Ruppert (Signature) — 08-02-12 (Date)

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 9-5-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒N/A	
Container or Package ID Number: 1044		Container or Package ID Number:	
Container Type: 7 GALLON CONTAINER		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: A E B H D M		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 85% Percent Organic Waste: 0%		Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7 GALLON CONTAINER (IM)

SHIELD POT CENTERING RING (IM)

SHIELD POT # 7239

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 10421

Prohibited Item(s) Summary	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
ERIK BOND — Print Name
Signature
9-5-12 — Date

Visual Examination Operator 2:
William H. Riley — Print Name
Signature
09-05-12 — Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 07-31-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒N/A	
Container or Package ID Number: 7239		Container or Package ID Number:	
Container Type: 1-Gallon Shield Pot		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 60%	Percent Organic Waste: 0%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

Vented 1-Gallon 3/4-Inch Thick Lead Lined Shield Pot - (OM) (IM)

FUEL AND CLADDING PIECES - (OM) (IM)

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 7239

Prohibited Items Summary	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste ddes **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
Bin Checklist			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:		
ERIC BOND	Eric Bond	7-31-12
Print Name	Signature	Date

Visual Examination Operator 2:		
William H. Riley	William H. Riley	07-31-12
Print Name	Signature	Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 10-1-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☒ N/A		Final Container ☐ N/A	
Container or Package ID Number:		Container or Package ID Number: 1162	
Container Type:		Container Type: 30 GALLON CONTAINER	
Waste Matrix Code:		Waste Matrix Code: S5400	
Waste Stream:		Waste Stream: AERHDM	
		Rigid Liner: ☒Y ☐N Type: 140 MIL	Rigid Liner Lid: ☐ Y ☒N
		Rigid Liner Vented or Hole Size: NA	
Percent Fill:	Percent Organic Waste:	Percent Fill: 85	Percent Organic Waste: 0%
Layers of Confinement:	Closure Method:	Layers of Confinement: 1	Closure Method: HEAT SEALED FILTERED
Comments (e.g., filter information, NCRs): NA			

Waste Description:

BOTTOM CAN: 953

TOP CAN: 1064

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1162

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
ERIC BONN — Print Name
[signature] — Signature
10-1-12 — Date

Visual Examination Operator 2:
William H. Biley — Print Name
[signature] — Signature
10-01-12 — Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 09-17-12		Batch Number: N/A	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: N/A
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: N/A	Recording Stop: N/A
Initial Container ☐ N/A		Final Container ☒N/A	
Container or Package ID Number: 953		Container or Package ID Number:	
Container Type: 7gallon Container		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 85% Percent Organic Waste: 0%		Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: N/A	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): N/A			

Waste Description:

7gallon container (IM)
Shield Pot Centering Ring (IM)
Shield Pot # 7236

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 953

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: N/A

Visual Examination Operator 1:		
Pat Beallis	Pat Beallis	09-17-12
Print Name	Signature	Date

Visual Examination Operator 2:		
Gary Redman	Gary Redman	09-17-12
Print Name	Signature	Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 7-30-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 7236		Container or Package ID Number:	
Container Type: 1 GALLON SHIELD POT		Container Type:	
Waste Matrix Code: S540C		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 20%	Percent Organic Waste: 0%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: C	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description: VENTED (3/4" INCH THICK LEAD LINED SHIELD POT (OM)(IM)

FUEL AND CLADDING (OM)(IM) PIECES

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Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 7236

	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 2B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NH

Visual Examination Operator 1:

Print Name	Signature	Date
ERIC BOND	Eric Bond	7-30-12

Visual Examination Operator 2:

Print Name	Signature	Date
William H. Riley	William H. Riley	07-30-12

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 09-18-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 1064		Container or Package ID Number:	
Container Type: 7-Gallon Container		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHIDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 85%	Percent Organic Waste: 0%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7-Gallon Container-(IM)
Shield Pot Centering Ring-(IM)
Shield Pot # 9241

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1064

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1: William H. Riley Print Name	Signature	09-18-12 Date
Visual Examination Operator 2: Eric Bond Print Name	Signature	9-18-12 Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 7-30-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container	EB 9-13-12 ☐ N/A	Final Container	☒N/A
Container or Package ID Number: ~~7241~~ 9241		Container or Package ID Number:	
Container Type: 1 GALLON SHIELD POT		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHAM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 60%	Percent Organic Waste: 0%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description: VENTED "3/4" INCH THICK LEAD LINED SHIELD POT (OM) (IM)

FUEL AND CLADDING (OM) (IM) PIECES

Attachment 1 – Visual Examination Data Form (continued)

EG 9-13-12 9241

Container or Package ID Number 7241

	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Check:			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1: William H. Riley	William H. Riley	09-13-12
Print Name: William H. Riley	Signature: William H. Riley	Date: 07-30-12
Visual Examination Operator 2: ERIC BOND	Eric Bond	7-30-12
Print Name: ERIC BOND	Signature: Eric Bond	Date: 9-13-12

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 10-1-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☒N/A		Final Container ☐ N/A	
Container or Package ID Number:		Container or Package ID Number: 1163	
Container Type:		Container Type: 30 GALLON CONTAINER	
Waste Matrix Code:		Waste Matrix Code: S5400	
Waste Stream:		Waste Stream: AERHDM	
		Rigid Liner: ☒Y ☐N Type: 40 MIL	Rigid Liner Lid: ☐ Y ☒N
		Rigid Liner Vented or Hole Size: NA	
Percent Fill:	Percent Organic Waste:	Percent Fill: 85	Percent Organic Waste: 0
Layers of Confinement:	Closure Method:	Layers of Confinement: 1	Closure Method: HEAT SEALED FILTERS
Comments (e.g., filter information, NCRs): NA			

Waste Description:

BOTTOM CAN: 1006

TOP CAN: 1032

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1163

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1: ERIC BOND — Print Name; Signature; 10-1-12 — Date

Visual Examination Operator 2: William H. Biley — Print Name; Signature; 10-01-12 — Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 09-06-12	Batch Number: N/A		
Procedure #: CCP-TP-500	Revision #: 11	Video Number: N/A	
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A	Recording Start: N/A	Recording Stop: N/A	
Initial Container ☐ N/A	Final Container ☒N/A		
Container or Package ID Number: 1006	Container or Package ID Number:		
Container Type: 7 gallon Container	Container Type:		
Waste Matrix Code: S5400	Waste Matrix Code:		
Waste Stream: AERHDM	Waste Stream:		
	Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N	
	Rigid Liner Vented or Hole Size:		
Percent Fill: 85% / Percent Organic Waste: 0%	Percent Fill:	Percent Organic Waste:	
Layers of Confinement: 0 / Closure Method: N/A	Layers of Confinement:	Closure Method:	
Comments (e.g., filter information, NCRs): N/A			

Waste Description: 7 gallon container (IM)
Shield ~~Shield~~ PD 9-6-12 Pot Centering Ring (IM)
Shield Pot ~~#~~ 7237

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Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1006

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: N/A

Visual Examination Operator 1:		
Pat Beallis	Pat Beallis	09-06-12
Print Name	Signature	Date

Visual Examination Operator 2:		
William H. Riley	Wm. H. Ri	09-06-12
Print Name	Signature	Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 07-31-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒N/A	
Container or Package ID Number: 7237		Container or Package ID Number:	
Container Type: 1-Gallon Shield Pot		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 20%	Percent Organic Waste: 0%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

Vented 1-Gallon 3/4-Inch Thick Lead Lined Shield Pot - (OM) (IM)

FUEL AND CLADDING PIECES - (OM) (IM)

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 7237

Prohibited Items Summary	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste ddes **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
Bag Inspection			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1: William H. Biley Print Name	Signature	07-31-12 Date
Visual Examination Operator 2: ERIC BOWN Print Name	Signature	7-31-12 Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANC			
Examination Date: 9-5-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒N/A	
Container or Package ID Number: 1032		Container or Package ID Number:	
Container Type: 7 GALLON CONTAINER		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHAM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 85	Percent Organic Waste: 0%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7 GALLON CONTAINER (IM)
SHIELD POT CENTERING RING (IM)
SHIELD POT #7238

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1032

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: N/A

Visual Examination Operator 1:
ERIC BORD — Print Name
Eric Bord — Signature
9-5-12 — Date

Visual Examination Operator 2:
William H. Riley — Print Name
William H. Riley — Signature
09-05-12 — Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 07-31-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 7238		Container or Package ID Number:	
Container Type: 1-Gallon Shield Pot		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 60%	Percent Organic Waste: 0%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

Vented 1-Gallon 3/4-Inch Thick Lead Lined Shield Pot - (OM) (IM)

FUEL AND CLADDING PIECES - (OM) (IM)

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 7238

Handled Items Only	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste ddes **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
Bagged Items Only			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
William H. Biley — Print Name
Will H. Biley — Signature
07-31-12 — Date

Visual Examination Operator 2:
ERIC BOND — Print Name
Eric Bond — Signature
7-31-12 — Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 10-2-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☒N/A		Final Container ☐ N/A	
Container or Package ID Number:		Container or Package ID Number: 1164	
Container Type:		Container Type: 30 GALLON CONTAINER	
Waste Matrix Code:		Waste Matrix Code: S5400	
Waste Stream:		Waste Stream: AERHDM	
		Rigid Liner: ☒Y ☐N Type: 140 MIL	Rigid Liner Lid: ☐ Y ☒N
		Rigid Liner Vented or Hole Size: NA	
Percent Fill:	Percent Organic Waste:	Percent Fill: 85%	Percent Organic Waste: 0%
Layers of Confinement:	Closure Method:	Layers of Confinement: 1	Closure Method: HEAT SEALED FIBERBOARD
Comments (e.g., filter information, NCRs): NA			

Waste Description:

BOTTOM CAN: 1035

TOP CAN: 925

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1164

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
ERIC BONDS (Print Name) — Eric Bond (Signature) — 10-2-12 (Date)

Visual Examination Operator 2:
William H. Riley (Print Name) — William H. Riley (Signature) — 10-02-12 (Date)

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 09-17-12		Batch Number: N/A	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: N/A
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: N/A	Recording Stop: N/A
Initial Container ☐ N/A		Final Container ☒N/A	
Container or Package ID Number: 1035		Container or Package ID Number:	
Container Type: 7gallon container		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 85%	Percent Organic Waste: 0%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: N/A	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): N/A			

Waste Description:

7gallon container (IM)
Shield Pot Centering Ring (IM)
Shield Pot #8243

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1035

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: N/A

Visual Examination Operator 1:
Pat Beallis — Print Name
Pat Beallis — Signature
09-17-12 — Date

Visual Examination Operator 2:
Gary Redman — Print Name
Gary Redman — Signature
09-17-12 — Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 08-02-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 8243		Container or Package ID Number:	
Container Type: 1 gallon Shield Pot		Container Type:	
Waste Matrix Code: S 5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 20	Percent Organic Waste: 0	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:
Vented 1 gallon 3/4" Thick lead lined Shield pot (om)(Im)
Fuel and cladding (om)(Im)
Pieces

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 8243

	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
Gary Redman — Print Name
Gary Redman — Signature
08-02-12 — Date

Visual Examination Operator 2:
GLORIA RUPPERT — Print Name
Gloria Ruppert — Signature
08-02-12 — Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 09-17-12		Batch Number: N/A	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: N/A
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: N/A	Recording Stop: N/A
Initial Container ☐ N/A		Final Container ☒N/A	
Container or Package ID Number: 925		Container or Package ID Number:	
Container Type: 7 gallon container		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 85%	Percent Organic Waste: 0%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: N/A	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): N/A			

Waste Description:

7 gallon container (IM)
shield pot centering ring (IM)
shield pot # 8242

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 925

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: N/A

Visual Examination Operator 1:		
Pat Beallis	Pat Beallis	09-17-12
Print Name	Signature	Date

Visual Examination Operator 2:		
Gary Redman	Gary Redman	09-17-12
Print Name	Signature	Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 08-02-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 8242		Container or Package ID Number:	
Container Type: 1gallon Shield Pot		Container Type:	
Waste Matrix Code: S 5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 40	Percent Organic Waste: 0	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:
Vented 1gallon 3/4" Thick lead lined shield Pot (Om) (Im)

Fuel and Cladding (Om) (Im) Pieces

111

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 8242

Prohibited Item(s) Summary	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
Gary Redman (Print Name) — Gary Redman (Signature) — 8-02-12 (Date)

Visual Examination Operator 2:
GLORIA RUPPERT (Print Name) — Gloria Ruppert (Signature) — 08-02-12 (Date)

Attachment 2 – Visual Examination Independent Technical Reviewer Checklist

Batch Data Report No.: ANLRHVE12015

1. Were data generation and reduction conducted in a technically correct manner in accordance with the methods (procedure) used?	☐ NO	☒ YES	☐ N/A
2. Was the correct revision of the operating procedure used?	☐ NO	☒ YES	☐ N/A
3. Were all the transcription errors corrected?	☐ NO	☐ YES	☒ N/A
4. Are BDR contents complete and match the Visual Examination Batch Data report Table of Contents?	☐ NO	☒ YES	☐ N/A
5. Does the BDR include VE for no more than 20 containers?	☐ NO	☒ YES	☐ N/A
6. Is all data recorded signed and dated in reproducible ink?	☐ NO	☒ YES	☐ N/A
7. Is all raw data recorded clearly, legibly, and accurately?	☐ NO	☒ YES	☐ N/A
8. Are all changes to original data lined out, initialed and dated by the individual making the changes or an individual authorized to make the change?	☐ NO	☒ YES	☐ N/A
9. Is there an adequate written description of the contents?	☐ NO	☒ YES	☐ N/A
10. Were the recording equipment checks satisfactory?	☐ NO	☐ YES	☒ N/A
11. Has each container in this BDR been evaluated for the presence of prohibited wastes?	☐ NO	☒ YES	☐ N/A
12. Has the physical waste form in each container in this BDR been evaluated against the Waste Stream Description and the Waste Matrix Code?	☐ NO	☒ YES	☐ N/A
13. Have the RH Quality Assurance Objectives (QAOs) for VE been met?	☐ NO	☒ YES	☐ N/A
Precision – reconciled discrepancies between operators or between the operator and ITR.	☐	☒	☐
Accuracy – trained operators	☐	☒	☐
Representativeness – description of container contents	☐	☒	☐
Completeness – completed data form and/or recording	☐	☒	☐
Comparability – proper training and adequate AK source documents are available for unopened containers.	☐	☒	☐
14. Were NCRs generated included in the BDR?	☐ NO	☐ YES	☒ N/A

Comments: NA

Independent Technical Reviewer:

Monterry Harris — Printed Name

Monterry Harris — Signature

10-15-12 — Date

DIVIDER PAGE ONLY

Not part of page count

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523 or 575-234-7431

Fax Number: 575-234-7033

[X] Original Record [ ] Copy
[ ] Fax Record
[ ] Electronic Record

Attn:	Sheri Punchios	From:	Wes Root
Ship to:	S. M. Stoller WIPP Rec. Mgmt. Govt.	Site:	ANL-E
	CCP Records	Company:	Nuclear Waste Partnership LLC
	4021 National Parks Hwy	Telephone Number:	630-252-8306
	Carlsbad, NM 88220	Date Sent:	10-18-12
Telephone Number:	575-234-7095		

Document Number	Title / Description	Record Date	Total Pages
ANLRHVE12015	Batch Data Report – Waste Container ID Numbers: 1137, 1139, 1140, 1141, 1155, 1156, 1160, 1161, 1162, 1163 and 1164.	10-12-12	113

Comments

None

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

Records Accepted [✓] Linda Martin — Linda Martin — 10.22.12
Signature — Printed Name — Date

Records Rejected [ ] _____ — _____ — _____
Signature — Printed Name — Date

Reason for Rejection:

Re-submittal: _____ — _____ — _____
Signature — Printed Name — Date

```
**********************
***   TX REPORT   ***
**********************

TRANSMISSION OK

TX/RX NO                0876
DESTINATION TEL #       916302526706
DESTINATION ID          WES ROOT
ST. TIME                10/22 09:46
TIME USE                00'16
PAGES SENT                1
RESULT                  OK
```


Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523 or 575-234-7431

Fax Number: 575-234-7033

[X] Original Record [ ] Copy
[ ] Fax Record
[ ] Electronic Record

Attn:	Sheri Punchios	From:	Wes Root
Ship to:	S. M. Stoller WIPP Rec. Mgmt. Govt.	Site:	ANL-E
	CCP Records	Company:	Nuclear Waste Partnership LLC
	4021 National Parks Hwy	Telephone Number:	630-252-8306
	Carlsbad, NM 88220	Date Sent:	10-18-12
Telephone Number:	575-234-7095		

Document Number	Title / Description	Record Date	Total Pages
ANLRHVE12015	Batch Data Report – Waste Container ID Numbers: 1137, 1139, 1140, 1141, 1155, 1156, 1160, 1161, 1162, 1163 and 1164.	10-12-12	113

Comments

None

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

Records Accepted [✓]	Linda Martin (signature)	Linda Martin	10.22.12
	Signature	Printed Name	Date
Records Rejected [ ]			
	Signature	Printed Name	Date

Reason for Rejection:

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523 or 575-234-7431

Fax Number: 575-234-7033

[ ] Original Record [ ] Copy
[ ] Fax Record
[x] Electronic Record

Attn:	Sheri Punchios /Linda Martin	From:	Laura Nelson
Ship to:	CCP Records	Site:	Denver
	4021 National Parks Hwy	Company:	WTS
	MS:GSA:212	Telephone Number:	303-843-2269
	Carlsbad, NM 88220	Date Sent:	10-22-12
Telephone Number:	575-234-7523		

Document Number	Title / Description	Record Date	Total Pages
ANLRHVE12015	SPM Checklist	10-22-12	1
	NA		

Comments

NA

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

Records Accepted [✓] Linda Martin — Signature: Linda Martin; Printed Name: Linda Martin; Date: 10.22.12

Records Rejected [ ] Signature ____ Printed Name ____ Date ____

Reason for Rejection:

Re-submittal: Signature ____ Printed Name ____ Date ____

```
*********************
***   TX REPORT   ***
*********************

TRANSMISSION OK

TX/RX NO                0885
DESTINATION TEL #       913038432208
DESTINATION ID          DENVER
ST. TIME                10/22 14:08
TIME USE                00'16
PAGES SENT                1
RESULT                  OK
```


Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523 or 575-234-7431

Fax Number: 575-234-7033

[ ] Original Record [ ] Copy
[ ] Fax Record
[x] Electronic Record

Attn:	Sheri Punchloe /Linda Martin	From:	Laura Nelson
Ship to:	CCP Records	Site:	Denver
	4021 National Parks Hwy	Company:	WTS
	MS:GSA:212	Telephone Number:	303-843-2269
	Carlsbad, NM 88220	Date Sent:	10-22-12
Telephone Number:	575-234-7523		

Document Number	Title / Description	Record Date	Total Pages
ANLRHVE12015	SPM Checklist	10-22-12	1
	NA		

Comments:

NA

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

DIVIDER

PAGE

Attachment 3 – Visual Examination Site Project Manager Checklist

Batch Data Report No.: ANLRHVE120110

1. Has all the data received an independent technical review as evidenced by a completed checklist (Attachment 2) and the appropriate ITR signature?		☐ NO	☑ YES
2. Are BDR contents complete and match the Visual Examination Batch Data Report Table of Contents?		☐ NO	☑ YES
3. Is the BDR complete (appropriately filled in forms for each container)?		☐ NO	☑ YES
4. Have the RH Quality Assurance Objectives (QAOs) for VE been met?			
Precision – reconciled discrepancies between operators		☐ NO	☑ YES
Accuracy – trained operators		☐ NO	☑ YES
Representativeness – description of container contents		☐ NO	☑ YES
Completeness – completed data form and/or recording		☐ NO	☑ YES
Comparability – proper training and adequate AK for unopened containers		☐ NO	☑ YES
5. Were NCRs generated included in the BDR?	☐ NO	☐ YES	☑ N/A

Comments

No NCR's.

SPM:

LAURA NELSON — Laura Nelson — 8/27/12

Printed Name — Signature — Date

CCP RECORDS ORIGINAL
DATE REC'D 8.29.12

Attachment 4 – Visual Examination Batch Data Report Cover Sheet

Batch Data Report No.: ANL RHVE 12016 Date: 08-23-12

	Waste Container ID Number:
1	1138
2	1147
3	1149
4	
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15	
16	
17	
18	
19	
20	

CP 08-23-12

CCP RECORDS ORIGINAL
DATE REC'D 8/27/12 01

Attachment 5 – Visual Examination Batch Data Report Table of Contents

Batch Data Report No.: ANLRHVE12016 Date: 08-23-12

Item	Description	Page No.
1	Visual Examination Batch Data Report Cover Sheet (Attachment 4)	1
2	Visual Examination Batch Data Report Table of Contents (Attachment 5)	2
3	Visual Examination Data Forms (Attachment 1)	3
4	Visual Examination Independent Technical Reviewer Checklist (Attachment 2)	21
5	Copy of NCRs (N/A [If not applicable])	NA

02

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 8-8-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☒ N/A		Final Container ☐ N/A	
Container or Package ID Number:		Container or Package ID Number: 1138	
Container Type:		Container Type: 30 GALLON CONTAINER	
Waste Matrix Code:		Waste Matrix Code: S5400	
Waste Stream:		Waste Stream: AERHDM	
		Rigid Liner: ☒Y ☐N Type: 140 MIL	Rigid Liner Lid: ☐Y ☒N
		Rigid Liner Vented or Hole Size: NA	
Percent Fill:	Percent Organic Waste:	Percent Fill: 85%	Percent Organic Waste: 40%
Layers of Confinement:	Closure Method:	Layers of Confinement: 1	Closure Method: HEAT SEALED FILTERED
Comments (e.g., filter information, NCRs): NA			

Waste Description:

Bottom CAN : 1067

TOP CAN : 1046

03

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1138

	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: N.A

Visual Examination Operator 1:
GLORIA RUPPERT — Print Name
Gloria Ruppert — Signature
8-8-12 — Date

Visual Examination Operator 2:
ERIC BOWD — Print Name
[signature] — Signature
8-8-12 — Date

04

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 07-18-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 1067		Container or Package ID Number:	
Container Type: 7-Gallon Container		Container Type:	
Waste Matrix Code: S540D		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 90%	Percent Organic Waste: 40%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7-Gallon Container-(IM)
Saw blade-(IM)
Dry Rags-(C)
Plastic Wheels-(P)
Metal hardware-(IM)(AM)
WIRE-(P)(OM)
~~Empty Mat~~ WHR 07-18-12
Empty Metal tubes-(IM)
Plastic Pieces-(P)
Rubber band-(R)
Wood handle-(C)
Metal Cable-(IM)
Table Sweepings-(IM)(AM)(OM)(OIM)(P)(R)(C)

05

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1067

Prohibited Items Summary	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH-TRU Bags			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
William H. Riley — Print Name
Will H. Ry — Signature
07-18-12 — Date

Visual Examination Operator 2:
[illegible] — Print Name
[illegible] — Signature
7-18-12 — Date

04

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 6-26-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒N/A	
Container or Package ID Number: 1046		Container or Package ID Number:	
Container Type: 7 GALLON CONTAINER		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHAM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 90%	Percent Organic Waste: 30%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7 GALLON CONTAINER (IM)
LAMPSTAND BASE (IM)(OM)(P)(R)
DRY RAGS (C) EMPTY TUBES (IM)
OPEN BOTTLES (P) PAPER (C)
PIECES OF WOOD (C) MET MOUNT FRAGMENTS (P)(IM)
CUTUP ALUMINUM LABWARE (AM)
PLASTIC LABWARE (P)

07

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1046

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
ERIC BONA — Print Name
Eric Bona — Signature
6-26-12 — Date

Visual Examination Operator 2:
William H. Riley — Print Name
Will H. Ry — Signature
06-26-12 — Date

08

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 8-8-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☒ N/A		Final Container ☐ N/A	
Container or Package ID Number:		Container or Package ID Number: 1147	
Container Type:		Container Type: 30 GALLON CONTAINER	
Waste Matrix Code:		Waste Matrix Code: S5400	
Waste Stream:		Waste Stream: AERHDM	
		Rigid Liner: ☒Y ☐N Type: 140 MIL	Rigid Liner Lid: ☐Y ☒N
		Rigid Liner Vented or Hole Size: NA	
Percent Fill:	Percent Organic Waste:	Percent Fill: 85%	Percent Organic Waste: 10%
Layers of Confinement:	Closure Method:	Layers of Confinement: 1	Closure Method: HEAT SEALED FILTERED
Comments (e.g., filter information, NCRs): NA			

Waste Description:

Bottom CAN: 1047

TOP CAN: 1043

09

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1147

	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1: GLORIA RUPPERT Print Name	Gloria Ruppert Signature	8-8-12 Date
Visual Examination Operator 2: ERIC BOND Print Name	[illegible] Signature	8-8-12 Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 07-18-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒N/A	
Container or Package ID Number: 1047		Container or Package ID Number:	
Container Type: 7-Gallon Container		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 90%	Percent Organic Waste: 10%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description: 7- Gallon Container - (IM)

Electrical Motor - (IM)(OM)(R)
Labware - (IM)(AM)
Wheel - (R)
Empty Plastic bags - (P)
Tape - (C)
Dry Rags - (C)
broken Glass - (OIM)
Plastic tubing - (P)
Saw blade - (IM)

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1047

Prohibited Item(s) Summary	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
[illegible]			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
William H. Riley — Print Name
Will. H. Riley — Signature
07-18-12 — Date

Visual Examination Operator 2:
ERIC BOND — Print Name
[signature] — Signature
7-18-12 — Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL	
Examination Date: 07-18-12	Batch Number: NA
Procedure #: CCP-TP-500	Revision #: 11 / Video Number NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A	Recording Start: NA / Recording Stop: NA
Initial Container ☐ N/A	Final Container ☒N/A
Container or Package ID Number: 1043	Container or Package ID Number:
Container Type: 7-Gallon Container	Container Type:
Waste Matrix Code: S5400	Waste Matrix Code:
Waste Stream: AERHDM	Waste Stream:
	Rigid Liner: ☐Y ☐N Type: / Rigid Liner Lid: ☐ Y ☐N
	Rigid Liner Vented or Hole Size:
Percent Fill: 90 % / Percent Organic Waste: 10 %	Percent Fill: / Percent Organic Waste:
Layers of Confinement: 0 / Closure Method: NA	Layers of Confinement: / Closure Method:
Comments (e.g., filter information, NCRs): NA	

Waste Description: 7-Gallon Container-(IM)

Metal Hardware-(IM)(AM)
Metal Cable-(IM)
Dry Rags-(C)
Saw blade-(IM)

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1043

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1: William H. Biley Print Name	Will. H. Bi Signature	07-18-12 Date
Visual Examination Operator 2: ERIC BOND Print Name	Signature	7-18-12 Date

14

Attachment 1 – Visual Examination Data Form

Site ID: RHANL	
Examination Date: 08-09-12	Batch Number: NA
Procedure #: CCP-TP-500	Revision #: 11 / Video Number NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A	Recording Start: NA / Recording Stop: NA
Initial Container ☒N/A	Final Container ☐ N/A
Container or Package ID Number:	Container or Package ID Number: 1149
Container Type:	Container Type: 30-Gallon Container
Waste Matrix Code:	Waste Matrix Code: S5400
Waste Stream:	Waste Stream: AERHDM
	Rigid Liner: ☒Y ☐N Type: 140 MiL / Rigid Liner Lid: ☐ Y ☒N
	Rigid Liner Vented or Hole Size: NA
Percent Fill: / Percent Organic Waste:	Percent Fill: 85% / Percent Organic Waste: ~~40%~~ 30% WHR-8-9-12
Layers of Confinement: / Closure Method:	Layers of Confinement: 1 / Closure Method: Heat Sealed filtered
Comments (e.g., filter information, NCRs): NA	

Waste Description:

Bottom Can: 1068

Top Can: 1036

15

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1149

	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
William H. Biley — Print Name
William H. Biley — Signature
08-09-12 — Date

Visual Examination Operator 2:
Eric Bonds — Print Name
Eric Bonds — Signature
8-9-12 — Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 07-18-12	Batch Number: NA		
Procedure #: CCP-TP-500	Revision #: 11	Video Number NA	
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A	Recording Start: NA	Recording Stop: NA	
Initial Container ☐ N/A	Final Container ☒N/A		
Container or Package ID Number: 1068	Container or Package ID Number:		
Container Type: 7-Gallon Container	Container Type:		
Waste Matrix Code: S5400	Waste Matrix Code:		
Waste Stream: AERHDM	Waste Stream:		
	Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N	
	Rigid Liner Vented or Hole Size:		
Percent Fill: 90%	Percent Organic Waste: 40%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7-Gallon Container - (IM)
Metal Pieces - (IM) (AM)
Sponge - (C)
Wood - (C)
Rubber - (R)
Electrical Cord - (OM) (IM) (R)
Dry Rags - (C)
tape - (C)
Broken Glass - (OIM)
Paper - (C)

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1068

Prohibited Items Summary	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH-72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1: William H. Biley Print Name	Signature	07-18-12 Date
Visual Examination Operator 2: ERIC BOND Print Name	Signature	7-18-12 Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 07-18-12	Batch Number: NA		
Procedure #: CCP-TP-500	Revision #: 11	Video Number: NA	
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A	Recording Start: NA	Recording Stop: NA	
Initial Container ☐ N/A	Final Container ☒N/A		
Container or Package ID Number: 1036	Container or Package ID Number:		
Container Type: 7-Gallon Container	Container Type:		
Waste Matrix Code: S5400	Waste Matrix Code:		
Waste Stream: AERHDM	Waste Stream:		
	Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N	
	Rigid Liner Vented or Hole Size:		
Percent Fill: 90% / Percent Organic Waste: 10%	Percent Fill:	Percent Organic Waste:	
Layers of Confinement: 0 / Closure Method: NA	Layers of Confinement:	Closure Method:	
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7-Gallon Container-(IM)

Metal Hardware-(IM)
Metal Pieces-(IM)(AM)
Dry Rags-(C)
Saw blades-(IM)
Wheel-(R)

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1036

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
William H. Biley — Print Name
Wil. H. B. — Signature
07-18-12 — Date

Visual Examination Operator 2:
ERIC BOWS — Print Name
Eric Bows — Signature
7-18-12 — Date

20

Attachment 2 – Visual Examination Independent Technical Reviewer Checklist

Batch Data Report No.: ANLRHVE12016

1. Were data generation and reduction conducted in a technically correct manner in accordance with the methods (procedure) used?	☐ NO	☒ YES	☐ N/A
2. Was the correct revision of the operating procedure used?	☐ NO	☒ YES	☐ N/A
3. Were all the transcription errors corrected?	☐ NO	☐ YES	☒ N/A
4. Are BDR contents complete and match the Visual Examination Batch Data report Table of Contents?	☐ NO	☒ YES	☐ N/A
5. Does the BDR include VE for no more than 20 containers?	☐ NO	☒ YES	☐ N/A
6. Is all data recorded signed and dated in reproducible ink?	☐ NO	☒ YES	☐ N/A
7. Is all raw data recorded clearly, legibly, and accurately?	☐ NO	☒ YES	☐ N/A
8. Are all changes to original data lined out, initialed and dated by the individual making the changes or an individual authorized to make the change?	☐ NO	☒ YES	☐ N/A
9. Is there an adequate written description of the contents?	☐ NO	☒ YES	☐ N/A
10. Were the recording equipment checks satisfactory?	☐ NO	☐ YES	☒ N/A
11. Has each container in this BDR been evaluated for the presence of prohibited wastes?	☐ NO	☒ YES	☐ N/A
12. Has the physical waste form in each container in this BDR been evaluated against the Waste Stream Description and the Waste Matrix Code?	☐ NO	☒ YES	☐ N/A
13. Have the RH Quality Assurance Objectives (QAOs) for VE been met?	☐ NO	☒ YES	☐ N/A
Precision – reconciled discrepancies between operators or between the operator and ITR.	☐	☒	☐
Accuracy – trained operators	☐	☒	☐
Representativeness – description of container contents	☐	☒	☐
Completeness – completed data form and/or recording	☐	☒	☐
Comparability – proper training and adequate AK source documents are available for unopened containers.	☐	☒	☐
14. Were NCRs generated included in the BDR?	☐ NO	☐ YES	☒ N/A
Comments: N/A			

Independent Technical Reviewer:

Spencer Pattee — Printed Name

Signature

8-24-12 — Date

DIVIDER PAGE ONLY

Not part of page count

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523 or 575-234-7431

Fax Number: 575-234-7033

[X] Original Record
[ ] Fax Record
[ ] Electronic Record
[ ] Copy

Attn:	Sheri Punchios	From:	Wes Root
Ship to:	S. M. Stoller WIPP Rec. Mgmt. Govt.	Site:	ANL-E
	CCP Records	Company:	Washington TRU Solutions
	4021 National Parks Hwy	Telephone Number:	630-252-8306
	Carlsbad, NM 88220	Date Sent:	8-24-12
Telephone Number:	575-234-7095		

Document Number	Title / Description	Record Date	Total Pages
ANLRHVE12016	Batch Data Report – Waste Container ID Numbers: 1138, 1147, and 1149.	08-23-12	21

Comments

None

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

	Signature	Printed Name	Date
Records Accepted [X]	Tami Parker	TAMI PARKER	8/27/12
Records Rejected [ ]			

Reason for Rejection:

Re-submittal:

Signature	Printed Name	Date

****
*** TX REPORT ***
****

TRANSMISSION OK

TX/RX NO	3866
DESTINATION TEL #	916302526706
DESTINATION ID	WES ROOT
ST. TIME	08/27 14:59
TIME USE	00'16
PAGES SENT	1
RESULT	OK

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523 or 575-234-7431

Fax Number: 575-234-7033

[X] Original Record [ ] Copy
[ ] Fax Record
[ ] Electronic Record

Attn:	Sheri Punchios	From:	Wes Root
Ship to:	S. M. Stoller WIPP Rec. Mgmt. Govt.	Site:	ANL-E
	CCP Records	Company:	Washington TRU Solutions
	4021 National Parks Hwy	Telephone Number:	630-252-8306
	Carlsbad, NM 88220	Date Sent:	8-24-12
Telephone Number:	575-234-7095		

Document Number	Title / Description	Record Date	Total Pages
ANLRHVE12016	Batch Data Report – Waste Container ID Numbers: 1138, 1147, and 1149.	08-23-12	21

Comments

None

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

Records Accepted [X]	Tami Parker	TAMI PARKER	8/27/12
	Signature	Printed Name	Date
Records Rejected [ ]			
	Signature	Printed Name	Date

Reason for Rejection:

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523 or 575-234-7431

Fax Number: 575-234-7033

- [ ] Original Record
- [ ] Fax Record
- [x] Electronic Record
- [ ] Copy

Attn:	Sheri Punchios/Tami Parker	From:	Laura Nelson
Ship to:	CCP Records	Site:	Denver
	4021 National Parks Hwy	Company:	WTS
	MS:GSA:212	Telephone Number:	303-843-2269
	Carlsbad, NM 88220	Date Sent:	8/27/2012
Telephone Number:	575-234-7523		

Document Number	Title / Description	Record Date	Total Pages
ANLRHVE12016	SPM Checklist	8/27/2012	1

Comments

NA

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

Records Accepted [✓] Linda Martin — Signature — Printed Name — 8.29.12 Date

Records Rejected [ ] Signature — Printed Name — Date

Reason for Rejection:

Re-submittal: Signature — Printed Name — Date

```
**********************
***   TX REPORT   ***
**********************

TRANSMISSION OK

TX/RX NO                3926
DESTINATION TEL #       913038432208
DESTINATION ID          DENVER
ST. TIME                08/29 07:10
TIME USE                00'14
PAGES SENT                1
RESULT                  OK
```


Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523 or 575-234-7431

Fax Number: 575-234-7033

[ ] Original Record [ ] Copy
[ ] Fax Record
[x] Electronic Record

Attn:	Sheri Punchios/Tami Parker	From:	Laura Nelson
Ship to:	CCP Records	Site:	Denver
	4021 National Parks Hwy	Company:	WTS
	MS:GSA:212	Telephone Number:	303-843-2289
	Carlsbad, NM 88220	Date Sent:	8/27/2012
Telephone Number:	575-234-7523		

Document Number	Title / Description	Record Date	Total Pages
ANLRHVE12016	SPM Checklist	8/27/2012	1

Comments

NA

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

DIVIDER

PAGE

Attachment 3 – Visual Examination Site Project Manager Checklist

Batch Data Report No.: ANLRHVE12017

1.	Has all the data received an independent technical review as evidenced by a completed checklist (Attachment 2) and the appropriate ITR signature?	☐ NO	☑ YES
2.	Are BDR contents complete and match the Visual Examination Batch Data Report Table of Contents?	☐ NO	☑ YES
3.	Is the BDR complete (appropriately filled in forms for each container)?	☐ NO	☑ YES
4.	Have the RH Quality Assurance Objectives (QAOs) for VE been met?		
	Precision – reconciled discrepancies between operators	☐ NO	☑ YES
	Accuracy – trained operators	☐ NO	☑ YES
	Representativeness – description of container contents	☐ NO	☑ YES
	Completeness – completed data form and/or recording	☐ NO	☑ YES
	Comparability – proper training and adequate AK for unopened containers	☐ NO	☑ YES
5.	Were NCRs generated included in the BDR? ☐ NO	☐ YES	☑ N/A

Comments

No NCR's.

SPM:

Laura Nelson
Printed Name

Laura Nelson
Signature

11/28/12
Date

CCP RECORDS ORIGINAL
DATE REC'D 11.29.12

Attachment 4 – Visual Examination Batch Data Report Cover Sheet

Batch Data Report No.: ANLRHVE12017 Date: 10-18-12

	Waste Container ID Number:
1	1157
2	1158
3	1159
4	
5	
6	
7	
8	
9	PB 10-18-12
10	
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	

CCP RECORDS ORIGINAL
DATE REC'D 11.27.12 01

Attachment 5 – Visual Examination Batch Data Report Table of Contents

Batch Data Report No.: ANLRHVE12017 Date: 10-18-12

Item	Description	Page No.
1	Visual Examination Batch Data Report Cover Sheet (Attachment 4)	01
2	Visual Examination Batch Data Report Table of Contents (Attachment 5)	02
3	Visual Examination Data Forms (Attachment 1)	03
4	Visual Examination Independent Technical Reviewer Checklist (Attachment 2)	21
5	Copy of NCRs (N/A [If not applicable])	N/A

Attachment 1 – Visual Examination Data Form

Site ID: RHANC			
Examination Date: 9-26-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☒ N/A		Final Container ☐ N/A	
Container or Package ID Number:		Container or Package ID Number: 1157	
Container Type:		Container Type: 30 GALLON CONTAINER	
Waste Matrix Code:		Waste Matrix Code: S5400	
Waste Stream:		Waste Stream: AERHDM	
		Rigid Liner: ☒Y ☐N Type: 140 MIL	Rigid Liner Lid: ☐Y ☒N
		Rigid Liner Vented or Hole Size: NA	
Percent Fill:	Percent Organic Waste:	Percent Fill: 85%	Percent Organic Waste: 30%
Layers of Confinement:	Closure Method:	Layers of Confinement: 1	Closure Method: HEAT SEALED ALTRAD
Comments (e.g., filter information, NCRs): NA			

Waste Description:

BOTTOM CAN: 1040

TOP CAN: 3041

03

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1157

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:

Print Name	Signature	Date
Bill Bond	[signature]	9-26-12

Visual Examination Operator 2:

Print Name	Signature	Date
William H. Riley	[signature]	09-26-12

04

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 8-16-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒N/A	
Container or Package ID Number: 1040		Container or Package ID Number:	
Container Type: 7 Gallon Container		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 90	Percent Organic Waste: 30	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description: 7 Gallon Container (IM)

Punctured aerosol can (IM)(P)
Plastic Pouch Material (P)
Cloth Tape (C)
Manipulator tape (IM)
Oil Dry ~~(OIM)~~ Sorbent (OIM) [illegible] 8/16/12
Plastic bags (P)
Steel pieces (IM)
Screw drivers (IM)(P)
O-Rings (R)
Tape (R)(C)
Gasket Material (R)
Alluminum tubes (AM)
Cardboard (C)
Electrical wire (OM) (R)
Paper (C)
Metmount fragments (IM)
Plastic caps (P)
Glass (OIM)
floor sweepings (IM)(AM)(OIM)(P)(OM)
Cut off saw blade (IM) (OIM)
Dry Rags (C)
C-clamp (IM)
Saws all blade (IM)

05

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1040

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
Monty Harris — Print Name
Monty Harris — Signature
8-16-12 — Date

Visual Examination Operator 2:
GLORIA RUPPERT — Print Name
Gloria Ruppert — Signature
8-16-12 — Date

06

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 8-16-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 4/26/12 MR. 1041 3041		Container or Package ID Number:	
Container Type: 7 Gallon Container		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 90	Percent Organic Waste: 40	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs):			

Waste Description: 7 Gallon Container (IM)

Dry Rags (C)
Carbon Steel Vise (IM)(P)
Plastic pieces (P)
Carbon steel Crimper (IM)(P)
Nylon strap (P)
Aluminum strap handle (AM)
Aluminum tubes (AM)
Steel clamp (IM)

07

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number ~~1041~~ 3041 m.H 9/26/12

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:

Print Name	Signature	Date
Monty Harris	Monterry Harris	8-16-12
Monty Harris	Monterry Harris	9-26-12

Visual Examination Operator 2:

Print Name	Signature	Date
GLORIA RUPPERT	Gloria Ruppert	8-16-12
GLORIA RUPPERT	Gloria Ruppert	9-26-12

08

Attachment 1 – Visual Examination Data Form

Site ID: BHANL			
Examination Date: 09-27-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☒N/A		Final Container ☐ N/A	
Container or Package ID Number:		Container or Package ID Number: 1158	
Container Type:		Container Type: 30 Gallon Container	
Waste Matrix Code:		Waste Matrix Code: S5400	
Waste Stream:		Waste Stream: AERHDM	
		Rigid Liner: ☒Y ☐N Type: 140 MIL	Rigid Liner Lid: ☐ Y ☒N
		Rigid Liner Vented or Hole Size: NA	
Percent Fill:	Percent Organic Waste:	Percent Fill: 85%	Percent Organic Waste: 10%
Layers of Confinement:	Closure Method:	Layers of Confinement: 1	Closure Method: Heat SEALED FILTERED
Comments (e.g., filter information, NCRs): NA			

Waste Description:

Bottom Can: 1065

Top Can: 1034

09

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1158

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1: William H. Riley Print Name	Wm. H. Riley Signature	09-27-12 Date
Visual Examination Operator 2: ERIC BOND Print Name	Eric Bond Signature	9-27-12 Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 6-8-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒N/A	
Container or Package ID Number: 1065		Container or Package ID Number:	
Container Type: 7 GALLON CONTAINER		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 70%	Percent Organic Waste: 10%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7 GALLON CONTAINER (IM) METAL CLIPS (IM)
DRY RAGS (C)
METAL CAN CRUSHER (IM) (AM)
PLASTIC WHEELS (P)
DOOR STOPPER (R)
EMPTY PIPES (IM)
PAPER (C)

11

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1065

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
ERIC BONDS — Print Name
Eric Bonds — Signature
6-8-12 — Date

Visual Examination Operator 2:
William H. Riley — Print Name
William H. Riley — Signature
06-08-12 — Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 8-16-12		Batch Number: NA	
Procedure #: CCP-TP500		Revision #: 11	Video Number NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒N/A	
Container or Package ID Number: 1034		Container or Package ID Number:	
Container Type: 7 Gallon Container		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 90	Percent Organic Waste: 20	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description: 7 Gallon Container (IM)

Hammers (IM)(P)(R)
Grinder (IM)(OM)(R)(P)
Wire cutters (IM)(P)
Plastic bags (P)
Drill bits (IM)
Allen wrenches (IM)
Ratchets (IM)
Mirror (OIM)
Alluminum pieces (AM)
Screw drivers (IM)(P)
Metal pieces (IM)
Wrenches (IM)
Electrical tape (R)(C)
Tweezer (IM)
C-clamps (AM)(IM)
Tape Measures (IM)(AM)(P)
Pipe cutter (IM)
Wire brush (P)(IM)
Razor knives (IM)(P)
Saws All blades (IM)
Socket (IM)
Solder (IM)(OM)(P)
Wood Ruler (C)(AM)
Dry Rags (C)
Plastic pieces (P)

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1034

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
Monty Harris — Print Name
Monterry Harris — Signature
8-16-12 — Date

Visual Examination Operator 2:
GLORIA RUPPERT — Print Name
Gloria Ruppert — Signature
8-16-12 — Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL	
Examination Date: 09-28-12	Batch Number: NA
Procedure #: CCP-TP-500	Revision #: 11 / Video Number NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A	Recording Start: NA / Recording Stop: NA
Initial Container ☒N/A	Final Container ☐ N/A
Container or Package ID Number:	Container or Package ID Number: 1159
Container Type:	Container Type: 30-Gallon Container
Waste Matrix Code:	Waste Matrix Code: S5400
Waste Stream:	Waste Stream: AERHDM
	Rigid Liner: ☒Y ☐N Type: 140 MiL / Rigid Liner Lid: ☐ Y ☒N
	Rigid Liner Vented or Hole Size: NA
Percent Fill: / Percent Organic Waste:	Percent Fill: 85% / Percent Organic Waste: 60%
Layers of Confinement: / Closure Method:	Layers of Confinement: 1 / Closure Method: Heat Sealed Filtered
Comments (e.g., filter information, NCRs): NA	

Waste Description:

Bottom Can: 1072

Top Can: 1059

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1159

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the *outermost container at the time of RTR or VE?*	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:		
William H. Riley	William H. Riley	09-28-12
Print Name	Signature	Date

Visual Examination Operator 2:		
ERIC BOND	Eric Bond	9-28-12
Print Name	Signature	Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 6-8-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 1072		Container or Package ID Number:	
Container Type: 7 GALLON Container		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHOM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 90	Percent Organic Waste: 30	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7 GALLON Container (IM)

Dry Rag (C)
Dry Mop head (C)(P)(IM)
Cutup pieces of metal (Im)
Plastic wheel (P)
Metal tubing pieces (IM)
Metal hose clamps (IM)
Aluminum bracket (AM)
Electrical wire (R)(Om)
Steel Rods (IM)
Plastic tubing (P)
Metal hardware (IM)
Electrical cord with Jones plug (Om)(R)(Im)
Metmount fragment (Im)(P)
Paper (C)
Plastic pieces (P)
Brass fitting (Om)

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1072

Prohibited Item(s) Summary	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☑	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☑	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☑	
Does the container have observable liquid containing PCBs?	☐	☑	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☑	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☑	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☑	
Is there an indication of wastes containing explosives or compressed gases?	☐	☑	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☑	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☑	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☑	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☑	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☑	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☑	
Is the waste consistent with the TRUCON Code?	☑	☐	

Comments: NA

Visual Examination Operator 1:
William H. Riley — Print Name
Will. H. Ri — Signature
06-08-12 — Date

Visual Examination Operator 2:
Monterry Harris — Print Name
Monterry Harris — Signature
6-8-12 — Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 6-26-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 1059		Container or Package ID Number:	
Container Type: 7 GALLON CONTAINER		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHAM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 90%	Percent Organic Waste: 80%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7 GALLON CONTAINER (IM) TAPE (C)
GLOVEBOX GLOVES (R) PAPER (C)
METAL LABWARE (IM)(AM) EMPTY TUBES (IM)
DRY RAGS (C) WET MOUNT FRAGMENTS (P)(IM)
PLASTIC LABWARE (P)
O-RINGS (R)
WOOD PIECES (C)

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1059

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:		
ERIC BOND	Eric Bond	6-26-12
Print Name	Signature	Date

Visual Examination Operator 2:		
William H. Riley	William H. Riley	06-26-12
Print Name	Signature	Date

Attachment 2 – Visual Examination Independent Technical Reviewer Checklist

Batch Data Report No.: ANLRHVE12017

1. Were data generation and reduction conducted in a technically correct manner in accordance with the methods (procedure) used?	☐ NO	☒ YES	☐ N/A
2. Was the correct revision of the operating procedure used?	☐ NO	☒ YES	☐ N/A
3. Were all the transcription errors corrected?	☐ NO	☐ YES	☒ N/A
4. Are BDR contents complete and match the Visual Examination Batch Data report Table of Contents?	☐ NO	☒ YES	☐ N/A
5. Does the BDR include VE for no more than 20 containers?	☐ NO	☒ YES	☐ N/A
6. Is all data recorded signed and dated in reproducible ink?	☐ NO	☒ YES	☐ N/A
7. Is all raw data recorded clearly, legibly, and accurately?	☐ NO	☒ YES	☐ N/A
8. Are all changes to original data lined out, initialed and dated by the individual making the changes or an individual authorized to make the change?	☐ NO	☒ YES	☐ N/A
9. Is there an adequate written description of the contents?	☐ NO	☒ YES	☐ N/A
10. Were the recording equipment checks satisfactory?	☐ NO	☐ YES	☒ N/A
11. Has each container in this BDR been evaluated for the presence of prohibited wastes?	☐ NO	☒ YES	☐ N/A
12. Has the physical waste form in each container in this BDR been evaluated against the Waste Stream Description and the Waste Matrix Code?	☐ NO	☒ YES	☐ N/A
13. Have the RH Quality Assurance Objectives (QAOs) for VE been met?	☐ NO	☒ YES	☐ N/A
Precision – reconciled discrepancies between operators or between the operator and ITR.	☐	☒	☐
Accuracy – trained operators	☐	☒	☐
Representativeness – description of container contents	☐	☒	☐
Completeness – completed data form and/or recording	☐	☒	☐
Comparability – proper training and adequate AK source documents are available for unopened containers.	☐	☒	☐
14. Were NCRs generated included in the BDR?	☐ NO	☐ YES	☒ N/A

Comments: NA

Independent Technical Reviewer:

Gary Redman — Printed Name

Gary Redman — Signature

11-16-12 — Date

DIVIDER PAGE ONLY

Not part of page count

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523 or 575-234-7431

Fax Number: 575-234-7033

[X] Original Record
[ ] Fax Record
[ ] Electronic Record
[ ] Copy

Attn:	Sheri Punchios	From:	Wes Root
Ship to:	S. M. Stoller WIPP Rec. Mgmt. Govt.	Site:	ANL-E
	CCP Records	Company:	Nuclear Waste Partnership LLC
	4021 National Parks Hwy	Telephone Number:	630-252-8306
	Carlsbad, NM 88220	Date Sent:	11-26-12
Telephone Number:	575-234-7095		

Document Number	Title / Description	Record Date	Total Pages
ANLRHVE12017	Batch Data Report – Waste Container ID Numbers: 1157, 1158, and 1159.	10-18-12	21

Comments

None

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

	Signature	Printed Name	Date
Records Accepted [✓]	Linda Martin	Linda Martin	11.27.12
Records Rejected [ ]			

Reason for Rejection:

Re-submittal:

Signature	Printed Name	Date

```
*********************
***   TX REPORT   ***
*********************

TRANSMISSION OK

TX/RX NO                1936
DESTINATION TEL #       916302526706
DESTINATION ID          WES ROOT
ST. TIME                11/27 15:42
TIME USE                00'17
PAGES SENT                1
RESULT                  OK
```

Controlled Copy

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523 or 575-234-7431

Fax Number: 575-234-7033

[X] Original Record [ ] Copy
[ ] Fax Record
[ ] Electronic Record

Attn:	Sheri Punchios	From:	Wes Root
Ship to:	S. M. Stoller WIPP Rec. Mgmt. Govt.	Site:	ANL-E
	CCP Records	Company:	Nuclear Waste Partnership LLC
	4021 National Parks Hwy	Telephone Number:	630-252-8306
	Carlsbad, NM 88220	Date Sent:	11-26-12
Telephone Number:	575-234-7095		

Document Number	Title / Description	Record Date	Total Pages
ANLRHVE12017	Batch Data Report – Waste Container ID Numbers: 1157, 1158, and 1159.	10-18-12	21

Comments

None

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

Records Accepted [✓]	Linda Martin (Signature)	Linda Martin (Printed Name)	11.27.12 (Date)
Records Rejected [ ]	(Signature)	(Printed Name)	(Date)

Reason for Rejection:

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523 or 575-234-7431

Fax Number: 575-234-7033

- [ ] Original Record
- [ ] Fax Record
- [x] Electronic Record
- [ ] Copy

Attn:	Linda Martin	From:	Laura Nelson
Ship to:	CCP Records	Site:	Denver
	4021 National Parks Hwy	Company:	WTS
	MS:GSA:212	Telephone Number:	303-843-2269
	Carlsbad, NM 88220	Date Sent:	11-28-12
Telephone Number:	575-234-7523		

Document Number	Title / Description	Record Date	Total Pages
ANLRHVE12017	SPM Checklist	11-28-12	1
	NA		

Comments

NA

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

	Signature	Printed Name	Date
Records Accepted [✓]	Linda Martin	Linda Martin	11.29.12
Records Rejected [ ]			

Reason for Rejection:

Re-submittal:

Signature	Printed Name	Date

```
*********************
***   TX REPORT   ***
*********************

TRANSMISSION OK

TX/RX NO                1938
DESTINATION TEL #       913038432208
DESTINATION ID          DENVER
ST. TIME                11/29 07:21
TIME USE                00'16
PAGES SENT                1
RESULT                  OK
```


Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523 or 575-234-7431

Fax Number: 575-234-7033

- [ ] Original Record
- [ ] Fax Record
- [x] Electronic Record
- [ ] Copy

Attn:	Linda Martin	From:	Laura Nelson
Ship to:	CCP Records	Site:	Denver
	4021 National Parks Hwy	Company:	WTS
	MS:GSA:212	Telephone Number:	303-843-2269
	Carlsbad, NM 88220	Date Sent:	11-28-12
Telephone Number:	575-234-7523		

Document Number	Title / Description	Record Date	Total Pages
ANLRHVE12017	SPM Checklist	11-28-12	1
	NA		

Comments

NA

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

DIVIDER

PAGE

Attachment 3 – Visual Examination Site Project Manager Checklist

Batch Data Report No.: ANLRHVE12018

1. Has all the data received an independent technical review as evidenced by a completed checklist (Attachment 2) and the appropriate ITR signature?		☐ NO	☑ YES
2. Are BDR contents complete and match the Visual Examination Batch Data Report Table of Contents?		☐ NO	☑ YES
3. Is the BDR complete (appropriately filled in forms for each container)?		☐ NO	☑ YES
4. Have the RH Quality Assurance Objectives (QAOs) for VE been met?			
Precision – reconciled discrepancies between operators		☐ NO	☑ YES
Accuracy – trained operators		☐ NO	☑ YES
Representativeness – description of container contents		☐ NO	☑ YES
Completeness – completed data form and/or recording		☐ NO	☑ YES
Comparability – proper training and adequate AK for unopened containers		☐ NO	☑ YES
5. Were NCRs generated included in the BDR?	☐ NO	☐ YES	☑ N/A

Comments

No NCR's.

SPM:

Laura Nelson
Printed Name

Laura Nelson
Signature

10-31-12
Date

CCP RECORDS ORIGINAL
DATE RECD 11.5.12

Attachment 4 – Visual Examination Batch Data Report Cover Sheet

Batch Data Report No.: ANL RHVE 12018 Date: 10-18-12

	Waste Container ID Number:
1	1165
2	1166
3	
4	
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14	
15	
16	
17	
18	
19	
20	

PB 10-18-12

CCP RECORDS ORIGINAL
DATE RECD 11-1-12

01

Attachment 5 – Visual Examination Batch Data Report Table of Contents

Batch Data Report No.: ANLRHVE12018 Date: 10-18-12

Item	Description	Page No.
1	Visual Examination Batch Data Report Cover Sheet (Attachment 4)	01
2	Visual Examination Batch Data Report Table of Contents (Attachment 5)	02
3	Visual Examination Data Forms (Attachment 1)	03
4	Visual Examination Independent Technical Reviewer Checklist (Attachment 2)	23
5	Copy of NCRs (N/A [If not applicable])	N/A

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 10-2-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☒ N/A		Final Container ☐ N/A	
Container or Package ID Number:		Container or Package ID Number: 1165	
Container Type:		Container Type: 30 GALLON CONTAINER	
Waste Matrix Code:		Waste Matrix Code: S5400	
Waste Stream:		Waste Stream: AERH DM	
		Rigid Liner: ☒Y ☐N Type: 140 MIL	Rigid Liner Lid: ☐ Y ☒N
		Rigid Liner Vented or Hole Size: NA	
Percent Fill:	Percent Organic Waste:	Percent Fill: 85	Percent Organic Waste: 0
Layers of Confinement:	Closure Method:	Layers of Confinement: 1	Closure Method: HEAT SEALED FILTERED
Comments (e.g., filter information, NCRs): NA			

Waste Description:

BOTTOM CAN: 1041

TOP CAN: 983

03

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1165

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the *outermost container at the time of RTR or VE?*	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (*i.e.*, waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
ERIC BONS — Print Name
Eric Bons — Signature
10-2-12 — Date

Visual Examination Operator 2:
William H. Riley — Print Name
William H. Riley — Signature
10-02-12 — Date

04

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 9-5-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒N/A	
Container or Package ID Number: 1041		Container or Package ID Number:	
Container Type: 7 GALLON CONTAINER		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 85%	Percent Organic Waste: 0%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7 GALLON CONTAINER (IM)

SHIELD POT CENTERING RING (IM)

SHIELD POT # 8251

05

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1041

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
ERIC BOND — Print Name
Eric Bond — Signature
9-5-12 — Date

Visual Examination Operator 2:
William H. Riley — Print Name
William H. Riley — Signature
09-05-12 — Date

06

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 08-06-12	Batch Number: NA		
Procedure #: CCP-TP-500	Revision #: 11	Video Number: NA	
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A	Recording Start: NA	Recording Stop: NA	
Initial Container ☐ N/A	Final Container ☒N/A		
Container or Package ID Number: 8251	Container or Package ID Number:		
Container Type: 1 Gallon Shield Pot	Container Type:		
Waste Matrix Code: S 5400	Waste Matrix Code:		
Waste Stream: AL RH DM	Waste Stream:		
	Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N	
	Rigid Liner Vented or Hole Size:		
Percent Fill: 40	Percent Organic Waste: 0	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:
Vented 1 gallon 3/4" Thick lead lined Shield Pot (om) (Im)
Fuel and Cladding pieces (om) (Im)

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 8251

	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☑	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☑	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☑	
Does the container have observable liquid containing PCBs?	☐	☑	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☑	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☑	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☑	
Is there an indication of wastes containing explosives or compressed gases?	☐	☑	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☑	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☑	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☑	
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☑	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☑	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☑	
Is the waste consistent with the TRUCON Code?	☑	☐	

Comments: NA

Visual Examination Operator 1:
Monterry Harris — Print Name
Monterry Harris — Signature
8-6-12 — Date

Visual Examination Operator 2:
Gary Redman — Print Name
Gary Redman — Signature
8-6-12 — Date

08

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 09-17-12		Batch Number: N/A	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: N/A
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: N/A	Recording Stop: N/A
Initial Container ☐ N/A		Final Container ☒N/A	
Container or Package ID Number: 983		Container or Package ID Number:	
Container Type: 79gallon container		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 85%	Percent Organic Waste: 0%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: N/A	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): N/A			
Waste Description: 79gallon container (IM) Shield Pot Centering Ring (IM) Shield Pot # 8245			

09

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 983

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: N/A

Visual Examination Operator 1:
Pat Beallis — Print Name
Pat Beallis — Signature
09-17-12 — Date

Visual Examination Operator 2:
Gary Redman — Print Name
Gary Redman — Signature
09-17-12 — Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 08-02-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 8245		Container or Package ID Number:	
Container Type: 1 gallon Shield Pot		Container Type:	
Waste Matrix Code: 5 5400		Waste Matrix Code:	
Waste Stream: AERH DM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 30	Percent Organic Waste: 0	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:
Vented 1 gallon 3/4" Thick lead lined Shield Pot (om) (Im)
Fuel and cladding (om) (Im)
Pieces

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 8245

	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
Gary Redman (Print Name) — Gary Redman (Signature) — 08-02-12 (Date)

Visual Examination Operator 2:
GLORIA RUPPERT (Print Name) — Gloria Ruppert (Signature) — 08-02-12 (Date)

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 10-03-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☒N/A		Final Container ☐ N/A	
Container or Package ID Number:		Container or Package ID Number: 1166	
Container Type:		Container Type: 30-Gallon Container	
Waste Matrix Code:		Waste Matrix Code: S5400	
Waste Stream:		Waste Stream: AERHDM	
		Rigid Liner: ☒Y ☐N Type: 140 MiL	Rigid Liner Lid: ☐ Y ☒N
		Rigid Liner Vented or Hole Size: NA	
Percent Fill:	Percent Organic Waste:	Percent Fill: 85%	Percent Organic Waste: 0%
Layers of Confinement:	Closure Method:	Layers of Confinement: 1	Closure Method: Heat Sealed filtered
Comments (e.g., filter information, NCRs): NA			

Waste Description:

Bottom Can: 930

Top Can: 1039

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1166

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1: William H. Riley Print Name	Signature	10-03-12 Date
Visual Examination Operator 2: ERIC BOND Print Name	Signature	10-3-12 Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 09-18-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number NA
Recording Equipment Check: ☐SAT ☐UNSAT ☑N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☑N/A	
Container or Package ID Number: 930		Container or Package ID Number:	
Container Type: 7-Gallon Container		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 85%	Percent Organic Waste: 0%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7-Gallon Container-(IM)
Shield Pot Centering Ring-(IM)
Shield Pot # 8249

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 930

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1: William H. Riley Print Name	William H. Riley Signature	09-18-12 Date
Visual Examination Operator 2: ERIC BOND Print Name	Eric Bond Signature	9-18-12 Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 9-11-12	Batch Number: NA		
Procedure #: CCP-TP-500	Revision #: 11	Video Number NA	
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A	Recording Start: NA	Recording Stop: NA	
Initial Container ☐ N/A	Final Container ☒ N/A		
Container or Package ID Number: 8249	Container or Package ID Number:		
Container Type: 1 GALLON SHIELD POT	Container Type:		
Waste Matrix Code: S5400	Waste Matrix Code:		
Waste Stream: AERHDM	Waste Stream:		
	Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N	
	Rigid Liner Vented or Hole Size:		
Percent Fill: 60	Percent Organic Waste: 0	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): COMPLETED ON 9-12-12			

Waste Description:

VENTED 1 GALLON 3/4" THICK LEAD LINED SHIELD POT (om) (Im)

FUEL - CLADDING - DEBRIS PIECES (om) (Im)

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 8249

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, *whichever is greater in an internal container*?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
GLORIA RUPPERT — Print Name
Gloria Ruppert — Signature
9-12-12 — Date

Visual Examination Operator 2:
ERIC BOND — Print Name
Eric Bond — Signature
9-12-12 — Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 09-17-12		Batch Number: N/A	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: N/A
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: N/A	Recording Stop: N/A
Initial Container ☐ N/A		Final Container ☒N/A	
Container or Package ID Number: 1039		Container or Package ID Number:	
Container Type: 7gallon Container		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 85%	Percent Organic Waste: 0%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: N/A	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): N/A			

Waste Description:

7gallon container (IM)
Shield Pot + Centering Ring (IM)
Shield Pot # 8248

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1039

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: N/A

Visual Examination Operator 1:
Pat Beallis — Print Name
Pat Beallis — Signature
09-17-12 — Date

Visual Examination Operator 2:
Gary Redman — Print Name
Gary Redman — Signature
09-17-12 — Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 9-12-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 8248		Container or Package ID Number:	
Container Type: 1 GALLON SHIELD POT		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 40	Percent Organic Waste: 0	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

VENTED 1 GALLON 3/4" THICK LEAD LINED SHIELD POT (om) (Im)

FUEL - CLADDING - DEBRIS PIECES (om)(Im)

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 8248

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
GLORIA RUPPERT — Print Name
Gloria Ruppert — Signature
9-12-12 — Date

Visual Examination Operator 2:
ERIC BOND — Print Name
Eric Bond — Signature
9-12-12 — Date

Attachment 2 – Visual Examination Independent Technical Reviewer Checklist

Batch Data Report No.: ANLRHVE 12018

1. Were data generation and reduction conducted in a technically correct manner in accordance with the methods (procedure) used?	☐ NO	☑ YES	☐ N/A
2. Was the correct revision of the operating procedure used?	☐ NO	☑ YES	☐ N/A
3. Were all the transcription errors corrected?	☐ NO	☐ YES	☑ N/A
4. Are BDR contents complete and match the Visual Examination Batch Data report Table of Contents?	☐ NO	☑ YES	☐ N/A
5. Does the BDR include VE for no more than 20 containers?	☐ NO	☑ YES	☐ N/A
6. Is all data recorded signed and dated in reproducible ink?	☐ NO	☑ YES	☐ N/A
7. Is all raw data recorded clearly, legibly, and accurately?	☐ NO	☑ YES	☐ N/A
8. Are all changes to original data lined out, initialed and dated by the individual making the changes or an individual authorized to make the change?	☐ NO	☐ YES	☑ N/A
9. Is there an adequate written description of the contents?	☐ NO	☑ YES	☐ N/A
10. Were the recording equipment checks satisfactory?	☐ NO	☐ YES	☑ N/A
11. Has each container in this BDR been evaluated for the presence of prohibited wastes?	☐ NO	☑ YES	☐ N/A
12. Has the physical waste form in each container in this BDR been evaluated against the Waste Stream Description and the Waste Matrix Code?	☐ NO	☑ YES	☐ N/A
13. Have the RH Quality Assurance Objectives (QAOs) for VE been met?	☐ NO	☑ YES	☐ N/A
Precision – reconciled discrepancies between operators or between the operator and ITR.	☐	☑	☐
Accuracy – trained operators	☐	☑	☐
Representativeness – description of container contents	☐	☑	☐
Completeness – completed data form and/or recording	☐	☑	☐
Comparability – proper training and adequate AK source documents are available for unopened containers.	☐	☑	☐
14. Were NCRs generated included in the BDR?	☐ NO	☐ YES	☑ N/A
Comments: None			

Independent Technical Reviewer:

F. Wesley Root	F. Wesley Root	10-29-12
Printed Name	Signature	Date

DIVIDER PAGE ONLY

Not part of page count

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523 or 575-234-7431

Fax Number: 575-234-7033

[X] Original Record [ ] Copy
[ ] Fax Record
[ ] Electronic Record

Attn:	Sheri Punchios	From:	Wes Root
Ship to:	S. M. Stoller WIPP Rec. Mgmt. Govt.	Site:	ANL-E
	CCP Records	Company:	Nuclear Waste Partnership LLC
	4021 National Parks Hwy	Telephone Number:	630-252-8306
	Carlsbad, NM 88220	Date Sent:	10-30-12
Telephone Number:	575-234-7095		

Document Number	Title / Description	Record Date	Total Pages
ANLRHVE12018	Batch Data Report – Waste Container ID Numbers: 1165 and 1166.	10-18-12	23

Comments

None

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

Records Accepted [✓] Linda Martin — Linda Martin — 11.1.12
Signature — Printed Name — Date

Records Rejected [ ] _____ — _____ — _____
Signature — Printed Name — Date

Reason for Rejection:

Re-submittal: _____ — _____ — _____
Signature — Printed Name — Date

```
**********************
***   TX REPORT   ***
**********************

TRANSMISSION OK

TX/RX NO                1506
DESTINATION TEL #       916302526706
DESTINATION ID          WES ROOT
ST. TIME                11/01 10:17
TIME USE                00'15
PAGES SENT                1
RESULT                  OK
```


Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523 or 575-234-7431

Fax Number: 575-234-7033

[X] Original Record [ ] Copy
[ ] Fax Record
[ ] Electronic Record

Attn:	Sheri Punchios	From:	Wes Root
Ship to:	S. M. Stoller WIPP Rec. Mgmt. Govt.	Site:	ANL-E
	CCP Records	Company:	Nuclear Waste Partnership LLC
	4021 National Parks Hwy	Telephone Number:	630-252-8306
	Carlsbad, NM 88220	Date Sent:	10-30-12
Telephone Number:	575-234-7095		

Document Number	Title / Description	Record Date	Total Pages
ANLRHVE12018	Batch Data Report – Waste Container ID Numbers: 1165 and 1188.	10-18-12	23

Comments

None

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

	Signature	Printed Name	Date
Records Accepted [✓]	Linda Martin	Linda Martin	11.1.12
Records Rejected [ ]			

Reason for Rejection:

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523 or 575-234-7431

Fax Number: 575-234-7033

[ ] Original Record [ ] Copy
[ ] Fax Record
[x] Electronic Record

Attn:	Sheri Punchios /Linda Martin	From:	Laura Nelson
Ship to:	CCP Records	Site:	Denver
	4021 National Parks Hwy	Company:	WTS
	MS:GSA:212	Telephone Number:	303-843-2269
	Carlsbad, NM 88220	Date Sent:	10-31-12
Telephone Number:	575-234-7523		

Document Number	Title / Description	Record Date	Total Pages
ANLRHVE12018	SPM Checklist	10-31-12	1
	NA		

Comments

NA

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

	Signature	Printed Name	Date
Records Accepted [✓]	Linda Martin	Linda Martin	11.5.12
Records Rejected [ ]			

Reason for Rejection:

Re-submittal:

Signature	Printed Name	Date

```
**********************
***   TX REPORT   ***
**********************

TRANSMISSION OK

TX/RX NO                1523
DESTINATION TEL #       913038432208
DESTINATION ID          DENVER
ST. TIME                11/05 10:18
TIME USE                00'16
PAGES SENT                1
RESULT                  OK
```


Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523 or 575-234-7431

Fax Number: 575-234-7033

- [ ] Original Record
- [ ] Fax Record
- [x] Electronic Record
- [ ] Copy

Attn:	Sheri Punchios /Linda Martin	From:	Laura Nelson
Ship to:	CCP Records	Site:	Denver
	4021 National Parks Hwy	Company:	WTS
	MS:GSA:212	Telephone Number:	303-843-2269
	Carlsbad, NM 88220	Date Sent:	10-31-12
Telephone Number:	575-234-7523		

Document Number	Title / Description	Record Date	Total Pages
ANLRHVE12019	SPM Checklist	10-31-12	1
	NA		

Comments

NA

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

DIVIDER

PAGE

Attachment 3 – Visual Examination Site Project Manager Checklist

Batch Data Report No.: ANLRHVE12019

1. Has all the data received an independent technical review as evidenced by a completed checklist (Attachment 2) and the appropriate ITR signature?		☐ NO	☑ YES
2. Are BDR contents complete and match the Visual Examination Batch Data Report Table of Contents?		☐ NO	☑ YES
3. Is the BDR complete (appropriately filled in forms for each container)?		☐ NO	☑ YES
4. Have the RH Quality Assurance Objectives (QAOs) for VE been met?			
Precision – reconciled discrepancies between operators		☐ NO	☑ YES
Accuracy – trained operators		☐ NO	☑ YES
Representativeness – description of container contents		☐ NO	☑ YES
Completeness – completed data form and/or recording		☐ NO	☑ YES
Comparability – proper training and adequate AK for unopened containers		☐ NO	☑ YES
5. Were NCRs generated included in the BDR?	☐ NO	☐ YES	☑ N/A

Comments

No NCR'S.

SPM:

Laura Nelson — Printed Name

Laura Nelson — Signature

12-4-12 — Date

CCP RECORDS ORIGINAL
DATE REC'D 12.4.12

Attachment 4 – Visual Examination Batch Data Report Cover Sheet

Batch Data Report No.: ANLRHVE12019 Date: 11-13-12

	Waste Container ID Number:
1	1146
2	1148
3	1150
4	1151
5	1152
6	1153
7	1154
8	
9	
10	
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	

CB
11-13-12

01

CCP RECORDS ORIGINAL
DATE REC'D 12-4-12

Attachment 5 – Visual Examination Batch Data Report Table of Contents

Batch Data Report No.: ANLRHVE12019 Date: 11-13-12

Item	Description	Page No.
1	Visual Examination Batch Data Report Cover Sheet (Attachment 4)	01
2	Visual Examination Batch Data Report Table of Contents (Attachment 5)	02
3	Visual Examination Data Forms (Attachment 1)	03
4	Visual Examination Independent Technical Reviewer Checklist (Attachment 2)	73
5	Copy of NCRs (N/A [If not applicable])	NA

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 8-13-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☒N/A		Final Container ☐ N/A	
Container or Package ID Number:		Container or Package ID Number: 1146	
Container Type:		Container Type: 30 GALLON CONTAINER	
Waste Matrix Code:		Waste Matrix Code: S5400	
Waste Stream:		Waste Stream: AEBHDM	
		Rigid Liner: ☒Y ☐N Type: 140 MIL	Rigid Liner Lid: ☐ Y ☒N
		Rigid Liner Vented or Hole Size: NA	
Percent Fill:	Percent Organic Waste:	Percent Fill: 85%	Percent Organic Waste: 0%
Layers of Confinement:	Closure Method:	Layers of Confinement: 1	Closure Method: HEAT SEALED FILTERED
Comments (e.g., filter information, NCRs): VE COMPLETED ON 8-14-12			

Waste Description:

BOTTOM CAN: 1005

TOP CAN: 1053

03

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1146

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
ERIC BOND — Print Name
Eric Bond — Signature
8-14-12 — Date

Visual Examination Operator 2:
William H. Riley — Print Name
William H. Riley — Signature
08-14-12 — Date

04

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 6-8-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 1005		Container or Package ID Number:	
Container Type: 7 GALLON CONTAINER		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERA DM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 85	Percent Organic Waste: 0	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7 GALLON CONTAINER (EM)
SHIELD POT CENTERING RING (EM)
SHIELD POT #7173

05

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1005

	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 228 Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:

Print Name	Signature	Date
ERIC BOND	Eric Bond	6-6-12

Visual Examination Operator 2:

Print Name	Signature	Date
William H. Riley	William H. Riley	06-06-12

06

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 6-6-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒N/A	
Container or Package ID Number: 7173		Container or Package ID Number:	
Container Type: 1GALLON SHIELD POT		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 0	Percent Organic Waste: 0	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NO WASTE WAS ADDED TO SHIELD POT			
Waste Description: VENTED 1GALLON "1" INCH THICK LEAD LINED SHIELD POT (om)(~~em~~)			

07

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 7173

	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
[illegible] TZb Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
ERIC BOND — Print Name
[signature] — Signature
6-6-12 — Date

Visual Examination Operator 2:
William H. Riley — Print Name
[signature] — Signature
06-06-12 — Date

08

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 06-20-12		Batch Number: NA	
Procedure #CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒N/A	
Container or Package ID Number: 1053		Container or Package ID Number:	
Container Type: 7-Gallon Container		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 85%	Percent Organic Waste: 0%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7-Gallon Container-(IM)
Shield Pot Centering Ring-(IM)
Shield Pot # 7094

09

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1053

Prohibited Item(s) Summary	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH-TRU Only			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
William H. Riley — Print Name
Signature — Date: 06-20-12

Visual Examination Operator 2:
ERIC BOND — Print Name
Signature — Date: 6-20-12

Controlled Copy

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 6-24-11		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 7094		Container or Package ID Number:	
Container Type: 1 GALLON SHIELD POT		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 60% Percent Organic Waste: 0%		Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): LID INSTALLED AND SHIELD POT COMPLETE ON 6-27-11			

Waste Description: VENTED 1 GALLON 3/4 INCH THICK LEAD SHIELD POT (OM)(IM)

FUEL SPECIMEN # 057A8 (OM)
FUEL SPECIMEN # 057A1 (OM)
FUEL SPECIMEN # 057A3A (OM)
FUEL SPECIMEN # 057A3B (OM)
FUEL SPECIMEN # 057A9A (OM)
FUEL SPECIMEN # 057A9B (OM)

11

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 7094

Prohibited Item(s) Summary	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authonzation?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1: ERIC BOND Print Name	Eric Bond Signature	6-27-11 Date
Visual Examination Operator 2: GLORIA RUPPERT Print Name	Gloria Ruppert Signature	6-27-11 Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 08-15-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☒N/A		Final Container ☐ N/A	
Container or Package ID Number:		Container or Package ID Number: 1148	
Container Type:		Container Type: 30-Gallon Container	
Waste Matrix Code:		Waste Matrix Code: S5400	
Waste Stream:		Waste Stream: AERHDM	
		Rigid Liner: ☒Y ☐N Type: 140 MIL	Rigid Liner Lid: ☐ Y ☒N
		Rigid Liner Vented or Hole Size: NA	
Percent Fill:	Percent Organic Waste:	Percent Fill 85%	Percent Organic Waste: 0%
Layers of Confinement:	Closure Method:	Layers of Confinement: 1	Closure Method: Heat Sealed filtered
Comments (e.g., filter information, NCRs): NA			

Waste Description:

Bottom Can: 1013

Top Can: 970

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1148

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
William H. Biley — Print Name
Signature — Date: 08-15-12

Visual Examination Operator 2:
ERIC BOND — Print Name
Signature — Date: 8-15-12

Attachment 1 – Visual Examination Data Form

Site ID: RHAML			
Examination Date: 6-6-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 1013		Container or Package ID Number:	
Container Type: 7 GALLON CONTAINER		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHAM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 85	Percent Organic Waste: 0	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7 GALLON CONTAINER (IM)
SHIELD POT CENTERING RING (IM)
SHIELD POT #7171

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1013

Prohibited Items Summary	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
ERIC BOND — Print Name
Eric Bond — Signature
6-6-12 — Date

Visual Examination Operator 2:
William H. Riley — Print Name
William H. Riley — Signature
06-06-12 — Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 6-6-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 7171		Container or Package ID Number:	
Container Type: 1 GALLON SHIELD POT		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 0	Percent Organic Waste: 0	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NO WASTE HAS BEEN ADDED TO SHIELD POT			

Waste Description:

VENTED 1 GALLON 1 INCH THICK LEAD LINED SHIELD POT (OM) (IM)

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Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 7171

Prohibited Item(s) Summary	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
ERIC BOND — Print Name
[signature] — Signature
6-6-12 — Date

Visual Examination Operator 2:
William H. Riley — Print Name
[signature] — Signature
06-06-12 — Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 5-24-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		**Final Container** ☒ N/A	
Container or Package ID Number: 970		Container or Package ID Number:	
Container Type: 7 GALLON CONTAINER		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: A E B H D M		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 85%	Percent Organic Waste: 0%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7 GALLON CONTAINER (IM)
SHIELD POT CENTERING RING (IM)
SHIELD POT # 7167

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 970

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:		
ERIC BOWD	Eric Bowd	5-24-12
Print Name	Signature	Date

Visual Examination Operator 2:		
F. Wesley Root	F. Wesley Root	5-24-12
Print Name	Signature	Date

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Controlled Copy

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 09-26-11		Batch Number: NA	
Procedure #CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒N/A	
Container or Package ID Number: 7167		Container or Package ID Number:	
Container Type: 1-Gallon Container		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 40%	Percent Organic Waste: 0%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description: Vented 1-Gallon 1-INCH thick lead Lined shield Pot-(OM) (IM)

Fuel Specimen-(074F3)-(OM)

Fuel Specimen-(074F4)-(OM)

Fuel Specimen-(074F2)-(OM)

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Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 7167

Prohibited Item(s) Summary	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1: William H. Riley Print Name	Will H. Ri Signature	09-26-11 Date
Visual Examination Operator 2: ERIC BOHA Print Name	Eric Boha Signature	9-26-11 Date

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Attachment 1 – Visual Examination Data Form

Site ID: RHANL	
Examination Date: 08-15-12	Batch Number: NA
Procedure #: CCP-TP-500	Revision #: 11 / Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A	Recording Start: NA / Recording Stop: NA
Initial Container ☒N/A	Final Container ☐ N/A
Container or Package ID Number:	Container or Package ID Number: 1150
Container Type:	Container Type: 30-Gallon Container
Waste Matrix Code:	Waste Matrix Code: S5400
Waste Stream:	Waste Stream: AERHDM
	Rigid Liner: ☒Y ☐N Type: 140 mil / Rigid Liner Lid: ☐ Y ☒N
	Rigid Liner Vented or Hole Size: NA
Percent Fill: / Percent Organic Waste:	Percent Fill: 85% / Percent Organic Waste: 0%
Layers of Confinement: / Closure Method:	Layers of Confinement: 1 / Closure Method: Heat sealed filtered
Comments (e.g., filter information, NCRs): NA	

Waste Description:

Bottom Can: 1007

Top Can: 1057

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1150

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
William H. Riley — Print Name
Signature — Date: 08-15-12

Visual Examination Operator 2:
ERIC BOWIS — Print Name
Signature — Date: 8-15-12

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 6-5-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 1007		Container or Package ID Number:	
Container Type: 7 GALLON CONTAINER		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHAM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 85	Percent Organic Waste: 0	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7 GALLON CONTAINER (IM)

SHIELD POT CENTERING RING (IM)

SHIELD POT #7172

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1007

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
ERIC BOND — Print Name
Eric Bond — Signature
6-5-12 — Date

Visual Examination Operator 2:
William H. Riley — Print Name
William H. Riley — Signature
06-05-12 — Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 6-5-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 7172		Container or Package ID Number:	
Container Type: 1 GALLON SHIELD POT		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHAM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 0	Percent Organic Waste: 0	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NO WASTE WAS ADDED TO SHIELD POT			
Waste Description: VENTED 1 GALLON "1" INCH THICK LEAD LINED SHIELD POT (cm) (in)			

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Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 7172

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:

Print Name	Signature	Date
ERIC BOWD	Eric Bowd	6-5-12

Visual Examination Operator 2:

Print Name	Signature	Date
William H. Riley	William H. Riley	06-05-12

Attachment 1 – Visual Examination Data Form

Site ID: RHANL	
Examination Date: 06-07-12	Batch Number: NA
Procedure #: CCP-TP-500	Revision #: 11 / Video Number NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A	Recording Start: NA / Recording Stop: NA
Initial Container ☐ N/A	Final Container ☒N/A
Container or Package ID Number: 1057	Container or Package ID Number:
Container Type: 7-Gallon Container	Container Type:
Waste Matrix Code: S5400	Waste Matrix Code:
Waste Stream: AERHDM	Waste Stream:
	Rigid Liner: ☐Y ☐N Type: / Rigid Liner Lid: ☐ Y ☐N
	Rigid Liner Vented or Hole Size:
Percent Fill: 85% / Percent Organic Waste: 0%	Percent Fill: / Percent Organic Waste:
Layers of Confinement: 0 / Closure Method: NA	Layers of Confinement: / Closure Method:
Comments (e.g., filter information, NCRs): NA	

Waste Description:

7-Gallon Container-(IM)
Shield Pot Centering Ring-(IM)
Shield Pot # 7168

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1057

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
William H. Riley — Print Name
Will H. R — Signature
06-07-12 — Date

Visual Examination Operator 2:
ERIC BOND — Print Name
Eric Bond — Signature
6-7-12 — Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 09-27-11		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒N/A	
Container or Package ID Number: 7168		Container or Package ID Number:	
Container Type: 1-Gallon Container		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 45%	Percent Organic Waste: 0%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description: Vented 1-Gallon 1-INCH Thick Lead Lined Shield Pot-(OM)(±M)
Fuel Specimen-074B2-(OM)
Fuel Specimen-074B3-(OM)
Fuel Specimen-074B4-(OM)
Fuel Specimen-074B1-(OM)

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 7168

	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
[illegible]			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:

Print Name	Signature	Date
William H. Riley	Will. H. R	09-27-11

Visual Examination Operator 2:

Print Name	Signature	Date
ERIC BOND	Eric Bond	9-27-11

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 08-15-12		Batch Number: NA	
Procedure # CCP-TP-500		Revision # 11	Video Number NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☒ N/A		Final Container ☐ N/A	
Container or Package ID Number:		Container or Package ID Number: 1151	
Container Type:		Container Type: 30-Gallon Container	
Waste Matrix Code:		Waste Matrix Code: S5400	
Waste Stream:		Waste Stream: AERHDM	
		Rigid Liner: ☒Y ☐N Type: 140 MiL	Rigid Liner Lid: ☐ Y ☒N
		Rigid Liner Vented or Hole Size: NA	
Percent Fill:	Percent Organic Waste:	Percent Fill: 85%	Percent Organic Waste: 0%
Layers of Confinement:	Closure Method:	Layers of Confinement: 1	Closure Method: Heat Sealed filtered
Comments (e.g., filter information, NCRs): NA			

Waste Description:

Bottom Can: 998

Top Can: 1066

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 115

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
William H. Riley — Print Name
Signature — Date: 08-15-12

Visual Examination Operator 2:
ERIC BONS — Print Name
Signature — Date: 8-15-12

Attachment 1 – Visual Examination Data Form

Site ID: RHANC			
Examination Date: 6-5-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 998		Container or Package ID Number:	
Container Type: 7 GALLON CONTAINER		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 85	Percent Organic Waste: 0	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7 GALLON CONTAINER (IM)
SHIELD POT CENTERING RING (IM)
SHIELD POT # 7178

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 998

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
ERIC BOND — Print Name
Eric Bond — Signature
6-5-12 — Date

Visual Examination Operator 2:
William H. Riley — Print Name
Will. H. R. — Signature
06-05-12 — Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 6-5-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 7178		Container or Package ID Number:	
Container Type: 1 GALLON SHIELD POT		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHGM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 0	Percent Organic Waste: 0	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NO WASTE WAS ADDED TO SHIELD POT			

Waste Description: VENTED 1 GALLON "1" INCH THICK LEAD LINED SHIELD POT (cm)(in)

3P

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 7178

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
ERIC BOND — Print Name
[signature] — Signature
6-5-12 — Date

Visual Examination Operator 2:
William H. Riley — Print Name
[signature] — Signature
06-05-12 — Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL	
Examination Date: 06-08-12	Batch Number: NA
Procedure #: CCP-TP-500	Revision #: 11 / Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A	Recording Start: NA / Recording Stop: NA
Initial Container ☐ N/A	**Final Container** ☒ N/A
Container or Package ID Number: 1066	Container or Package ID Number:
Container Type: 7-Gallon Container	Container Type:
Waste Matrix Code: S5400	Waste Matrix Code:
Waste Stream: AERHDM	Waste Stream:
	Rigid Liner: ☐Y ☐N Type: / Rigid Liner Lid: ☐ Y ☐N
	Rigid Liner Vented or Hole Size:
Percent Fill: 85% / Percent Organic Waste: 0%	Percent Fill: / Percent Organic Waste:
Layers of Confinement: 0 / Closure Method: NA	Layers of Confinement: / Closure Method:
Comments (e.g., filter information, NCRs): NA	

Waste Description:

7-Gallon Container - (IM)
Shield Pot Centering Ring - (IM)
Shield Pot # 7169

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1066

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste ddes **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1: William H. Riley Print Name	Signature	06-08-12 Date
Visual Examination Operator 2: ERIC BONIS Print Name	Signature	6-8-12 Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 9-29-11		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 7169		Container or Package ID Number:	
Container Type: 1 GALLON CONTAINER		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 40% Percent Organic Waste: 0%		Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description: VENTED 1 GALLON 1-INCH THICK LEAD LINED SHIELD POT (OM) (IM)

FUEL SPECIMEN 074G5 (OM)
FUEL SPECIMEN 074G6 (OM)
FUEL SPECIMEN 074G2 (OM)
FUEL SPECIMEN 074G3 (OM)
FUEL SPECIMEN 074G4 (OM)

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 7169

Prohibited Item(s) Summary	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
William H. Riley (Print Name) | Will H. Ri (Signature) | 09-29-11 (Date)

Visual Examination Operator 2:
ERIC BOND (Print Name) | Eric Bond (Signature) | 9-29-11 (Date)

Attachment 1 – Visual Examination Data Form

Site ID: RHAWL			
Examination Date: 8-16-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☒ N/A		Final Container ☐ N/A	
Container or Package ID Number:		Container or Package ID Number: 1152	
Container Type:		Container Type: 30 GALLON CONTAINER	
Waste Matrix Code:		Waste Matrix Code: S5400	
Waste Stream:		Waste Stream: AERADM	
		Rigid Liner: ☒Y ☐N Type: 140 MIL	Rigid Liner Lid: ☐ Y ☒N
		Rigid Liner Vented or Hole Size: NA	
Percent Fill:	Percent Organic Waste:	Percent Fill: 85%	Percent Organic Waste: 0%
Layers of Confinement:	Closure Method:	Layers of Confinement: 1	Closure Method: HEAT SEALED FILTERED
Comments (e.g., filter information, NCRs): VE COMPLETE ON 8-17-12			

Waste Description:

BOTTOM CAN: 1004

TOP CAN: 1073

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1152

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the *outermost container at the time of RTR or VE?*	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (*i.e.*, waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA *Hazardous Waste Numbers of D001, D002, or D003)?*	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
William H. Riley — Print Name
[signature] — Signature
08-17-12 — Date

Visual Examination Operator 2:
ERIC BOND — Print Name
[signature] — Signature
8-17-12 — Date

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Attachment 1 – Visual Examination Data Form

Site ID: RHANL	
Examination Date: 06-07-12	Batch Number: NA
Procedure #: CCP-TP-500	Revision #: 11 / Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A	Recording Start: NA / Recording Stop: NA
Initial Container ☐ N/A	Final Container ☒ N/A
Container or Package ID Number: 1004	Container or Package ID Number:
Container Type: 7-Gallon Container	Container Type:
Waste Matrix Code: S5400	Waste Matrix Code:
Waste Stream: AERHDM	Waste Stream:
	Rigid Liner: ☐Y ☐N Type: / Rigid Liner Lid: ☐Y ☐N
	Rigid Liner Vented or Hole Size:
Percent Fill: 85% / Percent Organic Waste: 0%	Percent Fill: / Percent Organic Waste:
Layers of Confinement: 0 / Closure Method: NA	Layers of Confinement: / Closure Method:
Comments (e.g., filter information, NCRs): NA	

Waste Description:

7-Gallon Container- (IM)
Shield Pot Centering Ring-(IM)
Shield Pot #7210

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1004

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
William H. Riley — Print Name
Will H. Ri — Signature
06-07-12 — Date

Visual Examination Operator 2:
ERIC BOND — Print Name
Eric Bond — Signature
6-7-12 — Date

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Attachment 1 – Visual Examination Data Form

Site ID: BHANL			
Examination Date: 09-27-11		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒N/A	
Container or Package ID Number: 7210		Container or Package ID Number:	
Container Type: 1-Gallon Container		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 45%	Percent Organic Waste: 0%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description: Vented 1-Gallon 3/4-INCH thick Lead Lined Shield Pot-(OM)(IM)

Fuel Specimen-074A3-(OM)

Fuel Specimen-074A4-(OM)

Fuel Specimen-074A2-(OM)

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 7210

Prohibited Item(s) Summary	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1: William H. Riley Print Name	Will H. Ri Signature	09-27-11 Date
Visual Examination Operator 2: ERIC BOND Print Name	Eric Bond Signature	9-27-11 Date

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Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 6-6-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 1073		Container or Package ID Number:	
Container Type: 7 GALLON CONTAINER		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 85	Percent Organic Waste: 0	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7 GALLON CONTAINER (IM)
SHIELD POT CENTERING RING (IM)
SHIELD POT # 7177

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1073

Prohibited Items Summary	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
Rl 726 Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
ERIC BOND — Print Name
[signature] — Signature
6-6-12 — Date

Visual Examination Operator 2:
William H. Riley — Print Name
[signature] — Signature
06-06-12 — Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 6-6-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 7177		Container or Package ID Number:	
Container Type: 1 GALLON SHIELD POT		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHAM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 0	Percent Organic Waste: 0	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NO WASTE WAS ADDED TO SHIELD POT			

Waste Description:

VENTED 1 GALLON "1" INCH THICK LEAD LINED SHIELD POT (OM)(IM)

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Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 7177

Prohibited Items Summary	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
DOT 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
ERIC BONDS (Print Name) — Eric Bond (Signature) — 6-6-12 (Date)

Visual Examination Operator 2:
William H. Riley (Print Name) — William H. Riley (Signature) — 06-06-12 (Date)

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 08-17-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☒N/A		Final Container ☐ N/A	
Container or Package ID Number:		Container or Package ID Number: 1153	
Container Type:		Container Type: 30-Gallon Container	
Waste Matrix Code:		Waste Matrix Code: S5400	
Waste Stream:		Waste Stream: AERHDM	
		Rigid Liner: ☒Y ☐N Type: 140 MIL	Rigid Liner Lid: ☐ Y ☒N
		Rigid Liner Vented or Hole Size: NA	
Percent Fill:	Percent Organic Waste:	Percent Fill: 85%	Percent Organic Waste: 0%
Layers of Confinement:	Closure Method:	Layers of Confinement: 1	Closure Method: Heat Sealed filter
Comments (e.g., filter information, NCRs): NA			

Waste Description:

BOTTOM CAN: 1014

TOP CAN: 960

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1153

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
William H. Riley — Print Name
William H. Riley — Signature
08-17-12 — Date

Visual Examination Operator 2:
Monty Harris — Print Name
Monterey Harris — Signature
8-17-12 — Date

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Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 6-6-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒N/A	
Container or Package ID Number: 1014		Container or Package ID Number:	
Container Type: 7 GALLON CONTAINER		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AE BHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 85	Percent Organic Waste: 0	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7 GALLON CONTAINER (IM)
SHIELD POT CENTERING RING (IM)
SHIELD POT #7176

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Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1014

Prohibited Items Summary	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH TRU Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags NOT defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
ERIC BOND — Print Name
Eric Bond — Signature
6-6-12 — Date

Visual Examination Operator 2:
William H. Riley — Print Name
Will. H. Ri — Signature
06-06-12 — Date

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Attachment 1 – Visual Examination Data Form

Site ID: RHANC			
Examination Date: 6-6-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 7176		Container or Package ID Number:	
Container Type: 1GALLON SHIELD POT		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHAM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 0	Percent Organic Waste: 0	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NO WASTE WAS ADDED TO SHIELD POT			

Waste Description:

VENTED 1GALLON "1" INCH THICK LEAD LINED SHIELD POT[0m][1m]

SD

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 7176

Prohibited Items Summary	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:

Print Name	Signature	Date
ERIC BOND	Eric Bond	6-6-12

Visual Examination Operator 2:

Print Name	Signature	Date
William H. Riley	Will. H. Ri	06-06-12

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 5-24-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 960		Container or Package ID Number:	
Container Type: 7 GALLON CONTAINER		Container Type:	
Waste Matrix Code: S 5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 85%	Percent Organic Waste: 0%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7 GALLON CONTAINER (IM)

SHIELD POT CENTERING RING (IM)

SHIELD POT # 7216

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 960

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
ERIC BOND — Print Name
Eric Bond — Signature
5-24-12 — Date

Visual Examination Operator 2:
F. Wesley Root — Print Name
F. Wesley Root — Signature
5-24-12 — Date

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Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 09-26-11		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒N/A	
Container or Package ID Number: 7216		Container or Package ID Number:	
Container Type: 1-Gallon Container		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐Y ☐N
		Rigid Liner Vented or Hole Size	
Percent Fill: 45%	Percent Organic Waste: 0%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description: Vented 1-Gallon 3/4-INCH thick Lead Lined shield Pot-(OM) (IM)

Fuel Specimen-074C3-(OM)
Fuel Specimen-074C4-(OM)
Fuel Specimen-074C2-(OM)
Fuel Specimen-074C5-(OM)

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Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 7216

Prohibited Item(s) Summary	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, *whichever is greater in an internal container*?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping *container materials*, or *other wastes* (*i.e.*, waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** *defined in the* applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
William H. Riley — Print Name
Will. H. Ri — Signature
09-26-11 — Date

Visual Examination Operator 2:
ERIC BOND — Print Name
Eric Bond — Signature
9-26-11 — Date

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Attachment 1 – Visual Examination Data Form

Site ID: RHANL	
Examination Date: 09-17-12	Batch Number: NA
Procedure #: CCP-TP-500	Revision #: 11 / Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A	Recording Start: NA / Recording Stop: NA
Initial Container ☒N/A	Final Container ☐ N/A
Container or Package ID Number:	Container or Package ID Number: 1154
Container Type:	Container Type: 30-Gallon Container
Waste Matrix Code:	Waste Matrix Code: S5400
Waste Stream:	Waste Stream: AERHDM
	Rigid Liner: ☒Y ☐N Type: 140 Mil / Rigid Liner Lid: ☐ Y ☒N
	Rigid Liner Vented or Hole Size: NA
Percent Fill: / Percent Organic Waste:	Percent Fill: 85% / Percent Organic Waste: 0%
Layers of Confinement: / Closure Method:	Layers of Confinement: 1 / Closure Method: Heat Sealed filtered
Comments (e.g., filter information, NCRs): NA	

Waste Description:

Bottom CAN: 994

Top CAN: 1061

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1154

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
William H. Riley — Print Name
Will H. Ri — Signature
09-17-12 — Date

Visual Examination Operator 2:
ERIC BOND — Print Name
[illegible] — Signature
9-17-12 — Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANI			
Examination Date: 6-5-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 994		Container or Package ID Number:	
Container Type: 7 GALLON CONTAINER		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHAM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 85	Percent Organic Waste: 0	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7 GALLON CONTAINER (IM)

SHIELD POT CENTERING RING (IM)

SHIELD POT #7170

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Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 994

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
ERIC BOND — Print Name
Eric Bond — Signature
6-5-12 — Date

Visual Examination Operator 2:
William H. Biley — Print Name
William H. Biley — Signature
06-05-12 — Date

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Attachment 1 – Visual Examination Data Form

Site ID: RHANL	
Examination Date: 6-5-12	Batch Number: NA
Procedure #: CCP-TP-500	Revision #: 11 / Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A	Recording Start: NA / Recording Stop: NA
Initial Container ☐ N/A	Final Container ☒ N/A
Container or Package ID Number: 7170	Container or Package ID Number:
Container Type: 1 GALLON SHIELD POT	Container Type:
Waste Matrix Code: S5400	Waste Matrix Code:
Waste Stream: AERHSM	Waste Stream:
	Rigid Liner: ☐Y ☐N Type: / Rigid Liner Lid: ☐ Y ☐N
	Rigid Liner Vented or Hole Size:
Percent Fill: 0 / Percent Organic Waste: 0	Percent Fill: / Percent Organic Waste:
Layers of Confinement: 0 / Closure Method: NA	Layers of Confinement: / Closure Method:
Comments (e.g., filter information, NCRs): NO WASTE WAS ADDED TO SHIELD POT	

Waste Description: VENTED 1 GALLON "1" INCH THICK LEAD LINED SHIELD POT (OM)(FM)

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Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 7170

	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:

Print Name	Signature	Date
ERIC BOND	Eric Bond	6-5-12

Visual Examination Operator 2:

Print Name	Signature	Date
William H. Riley	William H. Riley	06-05-12

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 06-20-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 1061		Container or Package ID Number:	
Container Type: 7-Gallon Container		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 85%	Percent Organic Waste: 0%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7-Gallon Container- (IM)

Shield Pot Centering Ring- (IM)

Shield Pot # 7223

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1061

Prohibited Item(s) Summary	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1: William H. Riley Print Name	Will. H. Ri Signature	06-20-12 Date
Visual Examination Operator 2: ERIC BONA Print Name	Eric Bond Signature	6-20-12 Date

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Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 09-27-11		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		**Final Container** ☒N/A	
Container or Package ID Number: 7223		Container or Package ID Number:	
Container Type: 1-Gallon Container		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 40%	Percent Organic Waste: 0%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description: Vented 1-Gallon 3/4-INCH Thick Lead Lined Shield Pot-(OM)(IM)

Fuel Specimen-074K3-(OM)

Fuel Specimen-074K4-(OM)

Fuel Specimen-074K2-(OM)

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Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 7223

Prohibited Items Summary	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:

Print Name	Signature	Date
William H. Riley	Will. H. Ri	09-27-11

Visual Examination Operator 2:

Print Name	Signature	Date
ERIC BOND	Eric Bond	9-27-11

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Attachment 2 – Visual Examination Independent Technical Reviewer Checklist

Batch Data Report No.: ANLRHVE12019

1. Were data generation and reduction conducted in a technically correct manner in accordance with the methods (procedure) used?	☐ NO	☒ YES	☐ N/A
2. Was the correct revision of the operating procedure used?	☐ NO	☒ YES	☐ N/A
3. Were all the transcription errors corrected?	☐ NO	☐ YES	☒ N/A
4. Are BDR contents complete and match the Visual Examination Batch Data report Table of Contents?	☐ NO	☒ YES	☐ N/A
5. Does the BDR include VE for no more than 20 containers?	☐ NO	☒ YES	☐ N/A
6. Is all data recorded signed and dated in reproducible ink?	☐ NO	☒ YES	☐ N/A
7. Is all raw data recorded clearly, legibly, and accurately?	☐ NO	☒ YES	☐ N/A
8. Are all changes to original data lined out, initialed and dated by the individual making the changes or an individual authorized to make the change?	☐ NO	☐ YES	☒ N/A
9. Is there an adequate written description of the contents?	☐ NO	☒ YES	☐ N/A
10. Were the recording equipment checks satisfactory?	☐ NO	☐ YES	☒ N/A
11. Has each container in this BDR been evaluated for the presence of prohibited wastes?	☐ NO	☒ YES	☐ N/A
12. Has the physical waste form in each container in this BDR been evaluated against the Waste Stream Description and the Waste Matrix Code?	☐ NO	☒ YES	☐ N/A
13. Have the RH Quality Assurance Objectives (QAOs) for VE been met?	☐ NO	☒ YES	☐ N/A
Precision – reconciled discrepancies between operators or between the operator and ITR.	☐	☒	☐
Accuracy – trained operators	☐	☒	☐
Representativeness – description of container contents	☐	☒	☐
Completeness – completed data form and/or recording	☐	☒	☐
Comparability – proper training and adequate AK source documents are available for unopened containers.	☐	☒	☐
14. Were NCRs generated included in the BDR?	☐ NO	☐ YES	☒ N/A
Comments: NA			

Independent Technical Reviewer:

Gary Redman — Printed Name

Gary Redman — Signature

11-15-12 — Date

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DIVIDER PAGE ONLY

Not part of page count

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523 or 575-234-7431

Fax Number: 575-234-7033

[X] Original Record
[ ] Fax Record
[ ] Electronic Record
[ ] Copy

Attn:	Sheri Punchios	From:	Wes Root
Ship to:	S. M. Stoller WIPP Rec. Mgmt. Govt.	Site:	ANL-E
	CCP Records	Company:	Nuclear Waste Partnership LLC
	4021 National Parks Hwy	Telephone Number:	630-252-8306
	Carlsbad, NM 88220	Date Sent:	11-30-12
Telephone Number:	575-234-7095		

Document Number	Title / Description	Record Date	Total Pages
ANLRHVE12019	Batch Data Report – Waste Container ID Numbers: 1146, 1148, 1150, 1151, 1152, 1153, and 1154.	11-13-12	73

Comments

None

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

	Signature	Printed Name	Date
Records Accepted [✓]	Linda Martin	Linda Martin	12.4.12
Records Rejected [ ]			

Reason for Rejection:

Re-submittal:

Signature	Printed Name	Date

****
*** TX REPORT ***
****

TRANSMISSION OK

TX/RX NO	1983
DESTINATION TEL #	916302526706
DESTINATION ID	WES ROOT
ST. TIME	12/04 07:33
TIME USE	00'16
PAGES SENT	1
RESULT	OK

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220
Telephone Number: 575-234-7523 or 575-234-7431
Fax Number: 575-234-7033

[X] Original Record [ ] Copy
[ ] Fax Record
[ ] Electronic Record

Attn:	Sheri Punchios	From:	Wes Root
Ship to:	S. M. Stoller WIPP Rec. Mgmt. Govl.	Site:	ANL-E
	CCP Records	Company:	Nuclear Waste Partnership LLC
	4021 National Parks Hwy	Telephone Number:	630-252-8306
	Carlsbad, NM 88220	Date Sent:	11-30-12
Telephone Number:	575-234-7095		

Document Number	Title / Description	Record Date	Total Pages
ANLRHVE12019	Batch Data Report – Waste Container ID Numbers: 1146, 1148, 1150, 1151, 1152, 1153, and 1154.	11-13-12	73

Comments

None

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

Records Accepted [✓]	Linda Martin	Linda Martin	12.4.12
	Signature	Printed Name	Date
Records Rejected [ ]			
	Signature	Printed Name	Date

Reason for Rejection:

```
*********************
***   TX REPORT   ***
*********************

TRANSMISSION OK

TX/RX NO                2069
DESTINATION TEL #       913038432208
DESTINATION ID          DENVER
ST. TIME                12/04 14:54
TIME USE                00'17
PAGES SENT                1
RESULT                  OK
```


Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523 or 575-234-7431

Fax Number: 575-234-7033

[ ] Original Record [ ] Copy
[ ] Fax Record
[x] Electronic Record

Attn:	Linda Martin	From:	Laura Nelson
Ship to:	CCP Records	Site:	Denver
	4021 National Parks Hwy	Company:	WTS
	MS:GSA:212	Telephone Number:	303-843-2269
	Carlsbad, NM 88220	Date Sent:	12-4-12
Telephone Number:	575-234-7523		

Document Number	Title / Description		Record Date	Total Pages
ANLRHVE12019	SPM Checklist		12-4-12	1
	NA			

Comments

NA

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

DIVIDER

PAGE

Attachment 3 – Visual Examination Site Project Manager Checklist

Batch Data Report No.: ANLRHVE13001

1. Has all the data received an independent technical review as evidenced by a completed checklist (Attachment 2) and the appropriate ITR signature?		☐ NO	☑ YES
2. Are BDR contents complete and match the Visual Examination Batch Data Report Table of Contents?		☐ NO	☑ YES
3. Is the BDR complete (appropriately filled in forms for each container)?		☐ NO	☑ YES
4. Have the RH Quality Assurance Objectives (QAOs) for VE been met?			
Precision – reconciled discrepancies between operators		☐ NO	☑ YES
Accuracy – trained operators		☐ NO	☑ YES
Representativeness – description of container contents		☐ NO	☑ YES
Completeness – completed data form and/or recording		☐ NO	☑ YES
Comparability – proper training and adequate AK for unopened containers		☐ NO	☑ YES
5. Were NCRs generated included in the BDR?	☐ NO	☐ YES	☑ N/A

Comments

No NCR's.

SPM:

Laura Nelson
Printed Name

Laura Nelson
Signature

2-13-13
Date

NTPC RECORDS ORIGINAL
DATE REC'D 2.14.13

Attachment 4 – Visual Examination Batch Data Report Cover Sheet

Batch Data Report No.: ANL RHVE13001 Date: 02-07-13

	Waste Container ID Number:
1	1171
2	1173
3	1175
4	1177
5	1179
6	1181
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	

GP 02-07-13

CCP RECORDS ORIGINAL
DATE REC'D 2.12.13

01

Attachment 5 – Visual Examination Batch Data Report Table of Contents

Batch Data Report No.: ANLRHVE13001 Date: 02-07-13

Item	Description	Page No.
1	Visual Examination Batch Data Report Cover Sheet (Attachment 4)	01
2	Visual Examination Batch Data Report Table of Contents (Attachment 5)	02
3	Visual Examination Data Forms (Attachment 1)	03
4	Visual Examination Independent Technical Reviewer Checklist (Attachment 2)	39
5	Copy of NCRs (N/A [If not applicable])	NA

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 1-23-13		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☒ N/A		Final Container ☐ N/A	
Container or Package ID Number:		Container or Package ID Number: 1171	
Container Type:		Container Type: 30 GALLON CONTAINER	
Waste Matrix Code:		Waste Matrix Code: S5400	
Waste Stream:		Waste Stream: AERHDM	
		Rigid Liner: ☒Y ☐N Type: 140 MIL	Rigid Liner Lid: ☐ Y ☒N
		Rigid Liner Vented or Hole Size: NA	
Percent Fill:	Percent Organic Waste:	Percent Fill: 85%	Percent Organic Waste: 30%
Layers of Confinement:	Closure Method:	Layers of Confinement: 1	Closure Method: HEAT SEALED FILTERED
Comments (e.g., filter information, NCRs): NA			

Waste Description:

BOTTOM CAN: 1062

TOP CAN: 1117

03

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1171

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
ERIC BOND — Print Name
Eric Bond — Signature
1-23-13 — Date

Visual Examination Operator 2:
GLORIA RUPPERT — Print Name
Gloria Ruppert — Signature
1-23-13 — Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 9-19-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 1062		Container or Package ID Number:	
Container Type: 7 GALLON CONTAINER		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AEBHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 80%	Percent Organic Waste: 30%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7 GALLON CONTAINER (IM)
DRY RAGS (C)
GREEN SCRUBBING PAD (P)
METAL HARDWARE (IM)
EMPTY BOTTLES (P)
TAPE (C)
EMPTY BAGS (P)
BROKEN GLASS (OIM)

05

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1062

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:

Print Name	Signature	Date
ERIC BOND	Eric Bond	9-19-12

Visual Examination Operator 2:

Print Name	Signature	Date
William H. Riley	Will. H. Ri	09-19-12

06

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 10-31-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒N/A	
Container or Package ID Number: 1117		Container or Package ID Number:	
Container Type: 7 GALLON CONTAINER		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AEBHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 80%	Percent Organic Waste: 20%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7 GALLON CONTAINER (IM)
METAL LABWARE (IM) (AM)
NAV RAGS (C)
PLASTIC PIECES (P)
EMPTY TUBES (IM)
FIREBRICK (OIM)
PAPER (C)

07

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1117

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:

Print Name	Signature	Date
ERIC BOND	[signature]	10-31-12

Visual Examination Operator 2:

Print Name	Signature	Date
William H. Riley	[signature]	10-31-12

08

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 1-24-13		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☒ N/A		Final Container ☐ N/A	
Container or Package ID Number:		Container or Package ID Number: 1173	
Container Type:		Container Type: 30 GALLON CONTAINER	
Waste Matrix Code:		Waste Matrix Code: S5400	
Waste Stream:		Waste Stream: AERHDM	
		Rigid Liner: ☒Y ☐N Type: 140 MIL	Rigid Liner Lid: ☐ Y ☒N
		Rigid Liner Vented or Hole Size: NA	
Percent Fill:	Percent Organic Waste:	Percent Fill: 85%	Percent Organic Waste: 30%
Layers of Confinement:	Closure Method:	Layers of Confinement: 1	Closure Method: HEAT SEALED FILTERED
Comments (e.g., filter information, NCRs): NA			

Waste Description:

BOTTOM CAN: 1083

TOP CAN: 947

09

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1173

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1: ERIC BOND Print Name	Eric Bond Signature	1-24-13 Date
Visual Examination Operator 2: GLORIA RUPPERT Print Name	Gloria Ruppert Signature	1-24-13 Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 11-01-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒N/A	
Container or Package ID Number: 1083		Container or Package ID Number:	
Container Type: 7-Gallon Container		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 90%	Percent Organic Waste: 30%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7-Gallon Container-(IM)
Dry Rags-(C)
Plastic Pieces-(P)
Metal hardware-(IM)
Empty Cans-(AM)
Empty Plastic Bags-(P)
Electrical Cord-(P)(OM)(IM)
Metal Pieces-(AM)(IM)
Empty tubes-(IM)
Steel wheel-(IM)
Asbestos Insulation-(OIM)

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1083

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1: William H. Biley Print Name	William H. Biley Signature	11-01-12 Date
Visual Examination Operator 2: ERIC BOND Print Name	Eric Bond Signature	11-1-12 Date

12

Attachment 1 – Visual Examination Data Form

Site ID: RHAM			
Examination Date: 4-14-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 947		Container or Package ID Number:	
Container Type: 7 GALLON CONTAINER		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHAM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 80%	Percent Organic Waste: 40%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:
7 GALLON CONTAINER (IM)
CUT UP PIECES OF METAL (IM) O-RINGS (R)
DRY RAGS (C)
POUCH MATERIAL (P)
ELECTRICAL CORD (P)(OM)(IM)
PAPER (C)
TAPE (C)
SAW BLADE (IM)

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 947

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
ERIC BONDS — Print Name
Eric Bond — Signature
9-14-12 — Date

Visual Examination Operator 2:
William H. Biley — Print Name
William H. Biley — Signature
09-14-12 — Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL	
Examination Date: 1-28-13	Batch Number: NA
Procedure #: CCP-TP-500	Revision #: 11 / Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A	Recording Start: NA / Recording Stop: NA
Initial Container ☒N/A	Final Container ☐ N/A
Container or Package ID Number:	Container or Package ID Number: 1175
Container Type:	Container Type: 30 GALLON CONTAINER
Waste Matrix Code:	Waste Matrix Code: S5400
Waste Stream:	Waste Stream: AERHAM
	Rigid Liner: ☒Y ☐N Type: 140 MIL / Rigid Liner Lid: ☐ Y ☒N
	Rigid Liner Vented or Hole Size: NA
Percent Fill: / Percent Organic Waste:	Percent Fill: 85% / Percent Organic Waste: 30%
Layers of Confinement: / Closure Method:	Layers of Confinement: 1 / Closure Method: HEAT SEALED ALTRAD
Comments (e.g., filter information, NCRs): NA	

Waste Description:

BOTTOM CAN: 1097

TOP CAN: 929

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1175

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1: ERIC BOND Print Name	Eric [signature] Signature	1-28-13 Date
Visual Examination Operator 2: GLORIA RUPPERT Print Name	Gloria Ruppert Signature	1-28-13 Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL	
Examination Date: 10-25-12	Batch Number: NA
Procedure #: CCP-TP-500	Revision #: 11 / Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A	Recording Start: NA / Recording Stop: NA
Initial Container ☐ N/A	**Final Container** ☒ N/A
Container or Package ID Number: 1097	Container or Package ID Number:
Container Type: 7 GALLON CONTAINER	Container Type:
Waste Matrix Code: S5400	Waste Matrix Code:
Waste Stream: AERHDM	Waste Stream:
	Rigid Liner: ☐Y ☐N Type: / Rigid Liner Lid: ☐Y ☐N
	Rigid Liner Vented or Hole Size:
Percent Fill: 40% / Percent Organic Waste: 30%	Percent Fill: / Percent Organic Waste:
Layers of Confinement: 0 / Closure Method: NA	Layers of Confinement: / Closure Method:
Comments (e.g., filter information, NCRs): NA	

Waste Description:

7 GALLON CONTAINER (IM) FIREBRICK (OIM)

DRY RAGS (C)

MET MOUNT FRAGMENTS (P) (IM)

PAPER (C)

METAL LABWARE (IM) (AM)

GLASS (OIM)

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1097

Prohibited Item(s) Summary	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:

Print Name	Signature	Date
EBC BONDS	[signature]	10-25-12

Visual Examination Operator 2:

Print Name	Signature	Date
William H. Riley	[signature]	10-25-12

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 9-14-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒N/A	
Container or Package ID Number: 929		Container or Package ID Number:	
Container Type: 7 GALLON CONTAINER		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 80%	Percent Organic Waste: 30%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7 GALLON CONTAINER (IM)
DRY RAGS (C)
BROKEN GLASS (OIM)
METAL HARDWARE (IM)
EMPTY BOTTLES (P)
DRY SCRUBBING PAD (P)
SHU ZAW BLADES (IM)
RUBBER BAND (R)

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 929

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
ERIC BOND — Print Name
Eric Bond — Signature
9-19-12 — Date

Visual Examination Operator 2:
William H. Riley — Print Name
William H. Riley — Signature
09-19-12 — Date

Attachment 1 – Visual Examination Data Form

Site ID: BHANL			
Examination Date: 1-29-13		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☒ N/A		Final Container ☐ N/A	
Container or Package ID Number:		Container or Package ID Number: 1177	
Container Type:		Container Type: 30 GALLON CONTAINER	
Waste Matrix Code:		Waste Matrix Code: S5400	
Waste Stream:		Waste Stream: AERHOM	
		Rigid Liner: ☒Y ☐N Type: 140 MIL	Rigid Liner Lid: ☐ Y ☒N
		Rigid Liner Vented or Hole Size: NA	
Percent Fill:	Percent Organic Waste:	Percent Fill: 85%	Percent Organic Waste: 10%
Layers of Confinement:	Closure Method:	Layers of Confinement: 1	Closure Method: HEAT SEALED FILTERED
Comments (e.g., filter information, NCRs): NA			

Waste Description:

BOTTOM CAN: 1098

TOP CAN: 1022

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1177

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
GLORIA RUPPERT — Gloria Ruppert — 1-29-13
Print Name — Signature — Date

Visual Examination Operator 2:
ERIC BOND — Eric Bond — 1-29-13
Print Name — Signature — Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 11-8-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 1098		Container or Package ID Number:	
Container Type: 7 GALLON CONTAINER		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AKBHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 80%	Percent Organic Waste 10%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: C	Closure Method: NA	Layers of Confinement:	Closure Method:

Comments (e.g., filter information, NCRs):

NA

Waste Description:

7 GALLON CONTAINER (IM)
FIREBRICK PIECES (OIM)
DRY RAGS (C)
METAL LABWARE (IM)(AM)
EMPTY BOTTLES (P)
CUT UP SAW HANDLE (P)(C)
PAPER (C)
CLOTH ROPE (C)

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1098

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:		
ERIC BOND	Eric Bond	11-8-12
Print Name	Signature	Date

Visual Examination Operator 2:		
William H. Riley	William H. Riley	11-08-12
Print Name	Signature	Date

Attachment 1 – Visual Examination Data Form

Site ID: BHANI			
Examination Date: 11-8-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 1022		Container or Package ID Number:	
Container Type: 7 GALLON CONTAINER		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 90%	Percent Organic Waste: 10%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7 GALLON CONTAINER (IM) PLASTIC LABWARE (P)
SAW BLADE (IM)
METAL LABWARE (IM)
FIRE BRICK PIECES (OIM)
EMPTY BOTTLES (P)
ELECTRICAL CABLE (R)(IM)(OM)
EMPTY TUBES (IM)
PAPER (C)

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1022

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:

Print Name	Signature	Date
ERIC BOND	[signature]	11-8-12

Visual Examination Operator 2:

Print Name	Signature	Date
William H. Riley	[signature]	11-08-12

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 1-29-13		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☒ N/A		Final Container ☐ N/A	
Container or Package ID Number:		Container or Package ID Number: 1179	
Container Type:		Container Type: 30 GALLON CONTAINER	
Waste Matrix Code:		Waste Matrix Code: S5400	
Waste Stream:		Waste Stream: AERHOM	
		Rigid Liner: ☒Y ☐N Type: 140 MIL	Rigid Liner Lid: ☐ Y ☒N
		Rigid Liner Vented or Hole Size: NA	
Percent Fill:	Percent Organic Waste:	Percent Fill: 85%	Percent Organic Waste: 20%
Layers of Confinement:	Closure Method:	Layers of Confinement: 1	Closure Method: HEAT SEALED FILTERED
Comments (e.g., filter information, NCRs): NA			

Waste Description:

BOTTOM CAN: 912

TOP CAN: 1100

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1179

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: N.A

Visual Examination Operator 1:
GLORIA RUPPERT — Gloria Ruppert — 01-29-13
Print Name — Signature — Date

Visual Examination Operator 2:
ERIC BOND — [signature] — 1-29-13
Print Name — Signature — Date

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Attachment 1 – Visual Examination Data Form

Site ID: BHAWC			
Examination Date: 9-18-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 912		Container or Package ID Number:	
Container Type: 7 GALLON CONTAINER		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERADM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 85%	Percent Organic Waste: 40%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7 GALLON CONTAINER (IM)
DRY RAGS (C)
EMPTY BAGS (P)
TAPE (C)
LEAD BRICK (OM)
MET MOUNT FRAGMENTS (P)(IM)
METAL HARDWARE (IM)
BROKEN GLASS (OIM)
EMPTY PLASTIC BOTTLES (P)
SAW BLADES (IM)

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 912

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:		
ERIC BOND	Eric Bond	9-19-12
Print Name	Signature	Date

Visual Examination Operator 2:		
William H. Riley	Will H. Riley	09-19-12
Print Name	Signature	Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 11-8-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 1100		Container or Package ID Number:	
Container Type: 7 GALLON CONTAINER		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 90%	Percent Organic Waste 10%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7 GALLON CONTAINER (IM)
CUT UP METAL PIECES (IM)(AM)
BOTTLE CAPS (P)
EMPTY BOTTLES (P)
RUBBER LABWARE (R)
FIREBRICK PIECES (OIM)
ELECTRICAL CORD (R)(IM)(OM)

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1100

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:

Print Name	Signature	Date
ERIC BOND	Eric Bond	11-8-12

Visual Examination Operator 2:

Print Name	Signature	Date
William H. Riley	Will-H-R	11-08-12

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 01-31-13		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☒N/A		Final Container ☐ N/A	
Container or Package ID Number:		Container or Package ID Number: 1181	
Container Type:		Container Type: 30 Gallon Container	
Waste Matrix Code:		Waste Matrix Code: S 5400	
Waste Stream:		Waste Stream: AERHDM	
		Rigid Liner: ☒Y ☐N Type: 140 Mil	Rigid Liner Lid: ☐ Y ☒N
		Rigid Liner Vented or Hole Size: NA	
Percent Fill:	Percent Organic Waste:	Percent Fill: 85	Percent Organic Waste: 40
Layers of Confinement:	Closure Method:	Layers of Confinement: 1	Closure Method: Heat Sealed Filtered
Comments (e.g., filter information, NCRs): NA			

Waste Description:

Bottom Can: 1114

Top Can: 1045

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1181

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:

Print Name	Signature	Date
Gary Redman	Gary Redman	01-31-13

Visual Examination Operator 2:

Print Name	Signature	Date
GLORIA RUPPERT	Gloria Ruppert	01-31-13

Attachment 1 – Visual Examination Data Form

Site ID: RHANL	
Examination Date: 10-31-12	Batch Number: NA
Procedure #: CCP-TP-500	Revision #: 11 / Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A	Recording Start: NA / Recording Stop: NA
Initial Container ☐ N/A	Final Container ☒ N/A
Container or Package ID Number: 114	Container or Package ID Number:
Container Type: 7 GALLON CONTAINER	Container Type:
Waste Matrix Code: S5400	Waste Matrix Code:
Waste Stream: AEBHDM	Waste Stream:
	Rigid Liner: ☐Y ☐N Type: / Rigid Liner Lid: ☐Y ☐N
	Rigid Liner Vented or Hole Size:
Percent Fill: 80% / Percent Organic Waste: 20%	Percent Fill: / Percent Organic Waste:
Layers of Confinement: 0 / Closure Method: NA	Layers of Confinement: / Closure Method:
Comments (e.g., filter information, NCRs): NA	

Waste Description:

7 GALLON CONTAINER (IM)
METAL LABWARE (IM) (AM)
MET MOUNT FRAGMENTS (IM) ~~(R)~~ (P)
GLASS (OIM)
FIRE BRICK (OIM)
PAPER (C)
DRY RAGS (C)
GLOVES (R)
EMPTY CANS (IM)

EB 1-31-13

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Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1114

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:		
ERIC BOND	Eric Bond	10-31-12
Print Name ERIC BOND	Signature Eric Bond	Date 1-31-13

Visual Examination Operator 2:		
William H. Riley	William H. Riley	10-31-12
Print Name	Signature	Date
William H. Riley	William H. Riley	01-31-13

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 08-20-12		Batch Number: NA	
Procedure #: CCP TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 1045		Container or Package ID Number:	
Container Type: 7 Gallon Container		Container Type:	
Waste Matrix Code: S S400		Waste Matrix Code:	
Waste Stream: AERIDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐Y ☐N
GR 08-20-12		Rigid Liner Vented or Hole Size:	
Percent Fill: 90	Percent Organic Waste: ~~65~~ 60	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7 Gallon Container (Im)
Manipulator Tape (Im)
hard ware (Im)
radio receivers (om) (P)
Tape (c) (P)
dry rags (c)
glove box gloves (R)
Flash light (om) (Im)
electrical cord (om) (P)
hand Tools (Im)
Battery charger (Im) (om) (P)
engraver (om) (Im) (P)
Circuit Board (P) (om) (Im)
glass (OIm)
suction cup (P) (R)
Metal pieces (Im) (Am)
empty plastic bag (P)
plastic cap (P)
08-20-12 WHR ~~Q Tips (c)~~
Manipulator part (Im) (Am)
empty metal Tube (Im)
O rings (R)
brush (P) (c)
electrical plug (om) (P) (Im)
metal cable (Im)
met mount Fragments (om) (Im) (P)
Saw blades (Im) (OIm)
Cotton Swabs - (c)

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1045

	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste ddes **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:

Print Name	Signature	Date
Gary Redman	Gary Redman	08-20-12

Visual Examination Operator 2:

Print Name	Signature	Date
William H. Riley	Will H. Ri	08-20-12

Attachment 2 – Visual Examination Independent Technical Reviewer Checklist

Batch Data Report No.: ANLRHVE13001

1. Were data generation and reduction conducted in a technically correct manner in accordance with the methods (procedure) used?	☐ NO	☒ YES	☐ N/A
2. Was the correct revision of the operating procedure used?	☐ NO	☒ YES	☐ N/A
3. Were all the transcription errors corrected?	☐ NO	☐ YES	☒ N/A
4. Are BDR contents complete and match the Visual Examination Batch Data report Table of Contents?	☐ NO	☒ YES	☐ N/A
5. Does the BDR include VE for no more than 20 containers?	☐ NO	☒ YES	☐ N/A
6. Is all data recorded signed and dated in reproducible ink?	☐ NO	☒ YES	☐ N/A
7. Is all raw data recorded clearly, legibly, and accurately?	☐ NO	☒ YES	☐ N/A
8. Are all changes to original data lined out, initialed and dated by the individual making the changes or an individual authorized to make the change?	☐ NO	☒ YES	☐ N/A
9. Is there an adequate written description of the contents?	☐ NO	☒ YES	☐ N/A
10. Were the recording equipment checks satisfactory?	☐ NO	☐ YES	☒ N/A
11. Has each container in this BDR been evaluated for the presence of prohibited wastes?	☐ NO	☒ YES	☐ N/A
12. Has the physical waste form in each container in this BDR been evaluated against the Waste Stream Description and the Waste Matrix Code?	☐ NO	☒ YES	☐ N/A
13. Have the RH Quality Assurance Objectives (QAOs) for VE been met?	☐ NO	☒ YES	☐ N/A
Precision – reconciled discrepancies between operators or between the operator and ITR.	☐	☒	☐
Accuracy – trained operators	☐	☒	☐
Representativeness – description of container contents	☐	☒	☐
Completeness – completed data form and/or recording	☐	☒	☐
Comparability – proper training and adequate AK source documents are available for unopened containers.	☐	☒	☐
14. Were NCRs generated included in the BDR?	☐ NO	☐ YES	☒ N/A
Comments: NA			

Independent Technical Reviewer:

Monty Harris — Printed Name

Monterry Harris — Signature

2-8-13 — Date

DIVIDER PAGE ONLY

Not part of page count

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523 or 575-234-7431

Fax Number: 575-234-7033

[X] Original Record [ ] Copy
[ ] Fax Record
[ ] Electronic Record

Attn:	Sheri Punchios	From:	Wes Root
Ship to:	S. M. Stoller WIPP Rec. Mgmt. Govt.	Site:	ANL-E
	CCP Records	Company:	Nuclear Waste Partnership LLC
	4021 National Parks Hwy	Telephone Number:	630-252-8306
	Carlsbad, NM 88220	Date Sent:	2-8-13
Telephone Number:	575-234-7095		

Document Number	Title / Description	Record Date	Total Pages
ANLRHVE13001	Batch Data Report – Waste Container ID Numbers: 1171, 1173, 1175, 1177, 1179 and 1181.	02-07-13	39

Comments

None

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

	Signature	Printed Name	Date
Records Accepted [✓]	Linda Martin	LINDA MARTIN	2/2/13
Records Rejected [ ]			

Reason for Rejection:

Re-submittal:

Signature	Printed Name	Date

****
*** TX REPORT ***
****

TRANSMISSION OK

TX/RX NO	3003
DESTINATION TEL #	916302526706
DESTINATION ID	WES ROOT
ST. TIME	02/12 07:47
TIME USE	00'17
PAGES SENT	1
RESULT	OK

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523 or 575-234-7431

Fax Number: 575-234-7033

[X] Original Record [ ] Copy
[ ] Fax Record
[ ] Electronic Record

Attn:	Sheri Punchios	From:	Wes Root
Ship to:	S. M. Stoller WIPP Rec. Mgmt. Govt.	Site:	ANL-E
	CCP Records	Company:	Nuclear Waste Partnership LLC
	4021 National Parks Hwy	Telephone Number:	630-252-8306
	Carlsbad, NM 88220	Date Sent:	2-8-13
Telephone Number:	575-234-7095		

Document Number	Title/Description		
ANLRHVE13001	Batch Data Report – Waste Container ID Numbers: 1171, 1173, 1176, 1177, 1179 and 1181.	02-07-13	39

Comments

None

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

	Signature	Printed Name	Date
Records Accepted [✓]	Linda Martin	LINDA MARTIN	2.12.13
Records Rejected [ ]			

Reason for Rejection:

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523 or 575-234-7431

Fax Number: 575-234-7033

[ ] Original Record [ ] Copy
[ ] Fax Record
[x] Electronic Record

Attn:	Linda Martin	From:	Laura Nelson
Ship to:	CCP Records	Site:	Denver
	4021 National Parks Hwy	Company:	WTS
	MS:GSA:212	Telephone Number:	303-843-2269
	Carlsbad, NM 88220	Date Sent:	2-13-13
Telephone Number:	575-234-7523		

Document Number	Title / Description	Record Date	Total Pages
ANLRHVE13001	SPM Checklist	2-13-13	1
	NA		

Comments

NA

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

	Signature	Printed Name	Date
Records Accepted [✓]	Linda Martin	LINDA MARTIN	2.14.13
Records Rejected [ ]			

Reason for Rejection:

Re-submittal:

Signature	Printed Name	Date

```
**********************
***   TX REPORT   ***
**********************

TRANSMISSION OK

TX/RX NO                3065
DESTINATION TEL #       913038432208
DESTINATION ID          DENVER
ST. TIME                02/14 08:08
TIME USE                00'15
PAGES SENT                1
RESULT                  OK
```


Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523 or 575-234-7431

Fax Number: 575-234-7033

- [ ] Original Record
- [ ] Fax Record
- [x] Electronic Record
- [ ] Copy

Attn:	Linda Martin	From:	Laura Nelson
Ship to:	CCP Records	Site:	Denver
	4021 National Parks Hwy	Company:	WTS
	MS:GSA:212	Telephone Number:	303-843-2269
	Carlsbad, NM 88220	Date Sent:	2-13-13
Telephone Number:	575-234-7523		

Document Number	Title / Description	Record Date	Total Pages
ANLRHVE13001	SPM Checklist	2-13-13	1
	NA		

Comments

NA

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

DIVIDER

PAGE

Attachment 3 – Visual Examination Site Project Manager Checklist

Batch Data Report No.: ANLRHVE13002

1. Has all the data received an independent technical review as evidenced by a completed checklist (Attachment 2) and the appropriate ITR signature?		☐ NO	☑ YES
2. Are BDR contents complete and match the Visual Examination Batch Data Report Table of Contents?		☐ NO	☑ YES
3. Is the BDR complete (appropriately filled in forms for each container)?		☐ NO	☑ YES
4. Have the RH Quality Assurance Objectives (QAOs) for VE been met?			
Precision – reconciled discrepancies between operators		☐ NO	☑ YES
Accuracy – trained operators		☐ NO	☑ YES
Representativeness – description of container contents		☐ NO	☑ YES
Completeness – completed data form and/or recording		☐ NO	☑ YES
Comparability – proper training and adequate AK for unopened containers		☐ NO	☑ YES
5. Were NCRs generated included in the BDR?	☐ NO	☐ YES	☑ N/A

Comments

No NCRs.

SPM:

Laura Nelson
Printed Name

Laura Nelson
Signature

2-13-13
Date

NTPC RECORDS ORIGINAL
DATE REC'D 2.14.13

Attachment 4 – Visual Examination Batch Data Report Cover Sheet

Batch Data Report No.: ANLRHVE13002 Date: 02-07-13

	Waste Container ID Number:
1	1172
2	1174
3	1176
4	1178
5	1180
6	1182
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	

02-07-13
G.R.

CCP RECORDS ORIGINAL
DATE REC'D 2.12.13

01

Attachment 5 – Visual Examination Batch Data Report Table of Contents

Batch Data Report No.: ANLRHVE13002 Date: 02-07-13

Item	Description	Page No.
1	Visual Examination Batch Data Report Cover Sheet (Attachment 4)	1
2	Visual Examination Batch Data Report Table of Contents (Attachment 5)	2
3	Visual Examination Data Forms (Attachment 1)	3
4	Visual Examination Independent Technical Reviewer Checklist (Attachment 2)	63
5	Copy of NCRs (N/A [If not applicable])	NA

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 1-24-13		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☒ N/A		Final Container ☐ N/A	
Container or Package ID Number:		Container or Package ID Number: 1172	
Container Type:		Container Type: 30 GALLON CONTAINER	
Waste Matrix Code:		Waste Matrix Code: S5400	
Waste Stream:		Waste Stream: AEB HDM	
		Rigid Liner: ☒Y ☐N Type: 140 MIL	Rigid Liner Lid: ☐ Y ☒N
		Rigid Liner Vented or Hole Size: NA	
Percent Fill:	Percent Organic Waste:	Percent Fill: 85%	Percent Organic Waste: 0%
Layers of Confinement:	Closure Method:	Layers of Confinement: 1	Closure Method: HEAT SEALED FILTERED
Comments (e.g., filter information, NCRs): NA			

Waste Description:

BOTTOM CAN: 1016

TOP CAN: 996

03

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1172

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:

Print Name	Signature	Date
ERIC BOND	[signature]	1-24-13

Visual Examination Operator 2:

Print Name	Signature	Date
GLORIA RUPPERT	Gloria Ruppert	1-24-13

04

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 12-06-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒N/A	
Container or Package ID Number: 1016		Container or Package ID Number:	
Container Type: 7 Gallon Container		Container Type:	
Waste Matrix Code: S 5400		Waste Matrix Code:	
Waste Stream: AERHOM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 85	Percent Organic Waste: 0	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7 Gallon Container (Im)
Shield PoT Centering Ring (Im)
Shield PoT # 8269

05

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1016

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:		
Gary Redman	Gary Redman	12-06-12
Print Name	Signature	Date

Visual Examination Operator 2:		
ERIC BOND	[signature]	12-6-12
Print Name	Signature	Date

06

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 11-28-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒N/A	
Container or Package ID Number: 8269		Container or Package ID Number:	
Container Type: 1-Gallon Shield Pot		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 90%	Percent Organic Waste: 0%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

Vented 1-Gallon 3/4-INCH Thick Lead Lined Shield Pot-(OM)(IM)

Loop debris - (OM)(IM)

TMI Grab Sample debris - (OM)(IM)

07

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 8269

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1: William H. Riley Print Name	Will H. Riley Signature	11-28-12 Date
Visual Examination Operator 2: Eric Bond Print Name	Eric Bond Signature	11-28-12 Date

08

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 12-06-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒N/A	
Container or Package ID Number: 990		Container or Package ID Number:	
Container Type: 7 Gallon Container		Container Type:	
Waste Matrix Code: S 5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 85	Percent Organic Waste: 0	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7 Gallon Container (Im)
Shield Pot Centering Ring (Im)
Shield Pot # 7233

09

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 990

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: N.A

Visual Examination Operator 1:		
Gary Redman	Gary Redman	12-06-12
Print Name	Signature	Date
Visual Examination Operator 2:		
ERIC BOND	[signature]	12-6-12
Print Name	Signature	Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 8-7-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 7233		Container or Package ID Number:	
Container Type: 1 gallon Shield pot		Container Type:	
Waste Matrix Code: S 5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 00	Percent Organic Waste: 0	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): ~~NA~~ GR 12-6-12 VE Completed GR 12-6-12 on 12-6-12			

Waste Description:
Vented 1 gallon 3/4 Thick lead lined Shield Pot (OM) (IM)
Fuel and Cladding pieces (OM) (IM)

11

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 7233

	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: N/A

Visual Examination Operator 1:

Print Name	Signature	Date
Gary Redman	Gary Redman	08-07-12
Gary Redman	Gary Redman	12-6-12

Visual Examination Operator 2:

Print Name	Signature	Date
ERIC BOND	Eric Bond	8-7-12
ERIC BOND	Eric Bond	12-6-12

Attachment 1 – Visual Examination Data Form

Site ID: RHANI			
Examination Date: 1-24-13		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☒ N/A		Final Container ☐ N/A	
Container or Package ID Number:		Container or Package ID Number: 1174	
Container Type:		Container Type: 30 GALLON CONTAINER	
Waste Matrix Code:		Waste Matrix Code: S5400	
Waste Stream:		Waste Stream: RERADM	
		Rigid Liner: ☒Y ☐N Type: 140 MIL	Rigid Liner Lid: ☐ Y ☒N
		Rigid Liner Vented or Hole Size: NA	
Percent Fill:	Percent Organic Waste:	Percent Fill: 85%	Percent Organic Waste: 0%
Layers of Confinement:	Closure Method:	Layers of Confinement: 1	Closure Method: HEAT SEALED FILTERED
Comments (e.g., filter information, NCRs): NA			

Waste Description:

BOTTOM CAN: 974

TOP CAN: 1088

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1174

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:

Print Name	Signature	Date
ERIC BOWM	Eric Bowm	1-24-13

Visual Examination Operator 2:

Print Name	Signature	Date
GLORIA RUPPERT	Gloria Ruppert	1-24-13

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 12-06-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒N/A	
Container or Package ID Number: 974		Container or Package ID Number:	
Container Type: 7 Gallon Container		Container Type:	
Waste Matrix Code: S 5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 85	Percent Organic Waste: 0	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7 Gallon Container (Im)
Shield Pot Centering Ring (Im)
Shield Pot # 8255

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 974

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: N/A

Visual Examination Operator 1:

Print Name	Signature	Date
Gary Redman	Gary Redman	12-06-12

Visual Examination Operator 2:

Print Name	Signature	Date
ERIC ISONA	[illegible]	12-6-12

Attachment 1 – Visual Examination Data Form

Site ID: KHANL			
Examination Date: 11-27-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		**Final Container** ☒ N/A	
Container or Package ID Number: 8255		Container or Package ID Number:	
Container Type: 1GALLON SHIELD POT		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 70%	Percent Organic Waste: 0%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:
VENTED 1GALLON "3/4" INCH THICK LEAD LINED SHIELD POT (OM) (IM)

FUEL AND CLADDING (OM) (IM)
PIECES

LOOP SECTION FRAGMENTS (OM) (IM)

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 8255

Prohibited Items	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
ERIC BOND — Print Name
Eric Bond — Signature
11-27-12 — Date

Visual Examination Operator 2:
William H. Riley — Print Name
Will. H. R. — Signature
11-27-12 — Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 12-06-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒N/A	
Container or Package ID Number: 1088		Container or Package ID Number:	
Container Type: 7 Gallon Container		Container Type:	
Waste Matrix Code: S 5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 85	Percent Organic Waste: 0	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7 Gallon Container (IM)
Shield Pot Centering Ring (IM)
Shield Pot # 8271

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1088

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:		
Gary Redman	Gary Redman	12-06-12
Print Name	Signature	Date
Visual Examination Operator 2:		
ERIC BOWS	[illegible]	12-6-12
Print Name	Signature	Date

Attachment 1 – Visual Examination Data Form

Site ID: RHAN			
Examination Date: 11-27-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 8271		Container or Package ID Number:	
Container Type: 1 GALLON SHIELD POT		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: RERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 80%	Percent Organic Waste: 0%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description: VENTED 1 GALLON "3/4" INCH THICK LEAD LINED SHIELD POT (OM) (IM)

FUEL AND CLADDING (OM) (IM)
FRAGMENTS

LOOP SECTION PIECES (OM) (IM)

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 8271

	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: N/A

Visual Examination Operator 1:

Print Name	Signature	Date
ERIC BOND	[signature]	11-27-12

Visual Examination Operator 2:

Print Name	Signature	Date
William H. Riley	[signature]	11-27-12

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 1-28-13		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☒ N/A		Final Container ☐ N/A	
Container or Package ID Number:		Container or Package ID Number: 1176	
Container Type:		Container Type: 30 GALLON CONTAINER	
Waste Matrix Code:		Waste Matrix Code: S 5400	
Waste Stream:		Waste Stream: AERHDM	
		Rigid Liner: ☒Y ☐N Type: 140 MIL	Rigid Liner Lid: ☐ Y ☒N
		Rigid Liner Vented or Hole Size: NA	
Percent Fill:	Percent Organic Waste:	Percent Fill: 85%	Percent Organic Waste: 0%
Layers of Confinement:	Closure Method:	Layers of Confinement: 1	Closure Method: HEAT SEALED FILTERED
Comments (e.g., filter information, NCRs): NA			

Waste Description:

BOTTOM CAN: 1017

TOP CAN: 993

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1176

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
ERIC BOND — Print Name
Signature — Date: 1-28-13

Visual Examination Operator 2:
GLORIA RUPPERT — Print Name
Gloria Ruppert — Signature
Date: 1-28-13

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 05-07-12	Batch Number: NA		
Procedure #: CCP-TP-500	Revision #: 11	Video Number NA	
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A	Recording Start: NA	Recording Stop: NA	
Initial Container ☐ N/A	Final Container ☒N/A		
Container or Package ID Number: 1017	Container or Package ID Number:		
Container Type: 7-Gallon Container	Container Type:		
Waste Matrix Code: S5400	Waste Matrix Code:		
Waste Stream: AERHDM	Waste Stream:		
	Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N	
	Rigid Liner Vented or Hole Size:		
Percent Fill: 85% / Percent Organic Waste: 0%	Percent Fill:	Percent Organic Waste:	
Layers of Confinement: 0 / Closure Method: NA	Layers of Confinement:	Closure Method:	
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7-Gallon Container-(IM)
Shield Pot Centering Ring-(IM)
Shield Pot # 9223

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1017

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:		
William H. Riley	William H. Riley	05-07-12
Print Name	Signature	Date

Visual Examination Operator 2:		
Pat Beallis	Pat Beallis	5-7-12
Print Name	Signature	Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 04-25-12	Batch Number: N/A		
Procedure #: CCP-TP-500	Revision #: 11	Video Number: N/A	
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A	Recording Start: N/A	Recording Stop: N/A	
Initial Container GR 04-26-12 ☐ N/A	Final Container ☒N/A		
Container or Package ID Number: ~~7223~~ 9223	Container or Package ID Number:		
Container Type: 1 Gallon Shield Pot	Container Type:		
Waste Matrix Code: S5400	Waste Matrix Code:		
Waste Stream: AERHIDM	Waste Stream:		
	Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐Y ☐N	
	Rigid Liner Vented or Hole Size:		
Percent Fill: 10% Percent Organic Waste: 0	Percent Fill:	Percent Organic Waste:	
Layers of Confinement: 0 Closure Method: N/A	Layers of Confinement:	Closure Method:	
Comments (e.g., filter information, NCRs): N/A			

Waste Description:

Vented 1 Gallon 3/4 inch Thick Lead Lined Shield Pot (OM)(IM)
Fuel Pieces (OM) (IM)
Fuel and cladding (OM)(IM)

Attachment 1 – Visual Examination Data Form (continued)

G-R 04-26-12
9223

Container or Package ID Number ~~7223~~

Prohibited Item(s) Summary	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: N/A

Visual Examination Operator 1: Spencer Pattee	Spencer Pattee	04-25-12
Print Name: Spencer Pattee	Signature: Spencer Pattee	Date: 4-26-12
Visual Examination Operator 2: Gary Redman	Gary Redman	04-25-12
Print Name: Gary Redman	Signature: Gary Redman	Date: 04-26-12

28

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 05-07-12		Batch Number: NA	
Procedure #CCP-TP 500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒N/A	
Container or Package ID Number: 993		Container or Package ID Number:	
Container Type: 7-Gallon Container		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 85%	Percent Organic Waste: 0%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7-Gallon Container-(IM)
Shield Pot Centering Ring-(IM)
Shield Pot # 7256

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 993

Prohibited Items Summary	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH TZB Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1: William H. Riley Print Name	Wil H. Ri Signature	05-07-12 Date
Visual Examination Operator 2: Pat Beallis Print Name	Pat Beallis Signature	5-7-12 Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 04-25-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒N/A	
Container or Package ID Number: 7256		Container or Package ID Number:	
Container Type: 1 Gallon Shield Pot		Container Type:	
Waste Matrix Code: S 5400		Waste Matrix Code:	
Waste Stream: AE RH OM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 20	Percent Organic Waste: 0	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description: Vented 1 Gallon 3/4" Thick lead lined Shield Pot (Om) (Im)

Loop Section (IRR eguiar shape) (Im) (Om) ~~(0 Im)~~ GR 04-25-12

Fuel and Cladding (Im)(Om) ~~(0 Im)~~ GR 04-25-12

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 7256

Prohibited Items Summary	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
Gary Redman — Print Name
Gary Redman — Signature
04-25-12 — Date

Visual Examination Operator 2:
Spencer Pattee — Print Name
Spencer Pattee — Signature
04-25-12 — Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 1-29-13		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☒N/A		Final Container ☐ N/A	
Container or Package ID Number:		Container or Package ID Number: 1178	
Container Type:		Container Type: 30 GALLON CONTAINER	
Waste Matrix Code:		Waste Matrix Code: S5400	
Waste Stream:		Waste Stream: AERHDM	
		Rigid Liner: ☒Y ☐N Type: 140 MIL	Rigid Liner Lid: ☐ Y ☒N
		Rigid Liner Vented or Hole Size: NA	
Percent Fill:	Percent Organic Waste:	Percent Fill: 85%	Percent Organic Waste: 10%
Layers of Confinement:	Closure Method:	Layers of Confinement: /	Closure Method: HEAT SEALED FILTERED
Comments (e.g., filter information, NCRs): NA			

Waste Description:

BOTTOM CAN: 931

TOP CAN: 1029

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1178

Prohibited Item(s) Summary	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:

Print Name	Signature	Date
ERIC BOND	Eric Bond	1-29-13

Visual Examination Operator 2:

Print Name	Signature	Date
GLORIA RUPPERT	Gloria Ruppert	1-29-13

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 11-26-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 931		Container or Package ID Number:	
Container Type: 7 GALLON CONTAINER		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 85% Percent Organic Waste: 10%		Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7 GALLON CONTAINER (TM)
SHIELD POT CENTERING RING (TM)
SHIELD POT # 8256

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 931

	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
[illegible]			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1: ERIC BOND Print Name	Signature	11-26-12 Date
Visual Examination Operator 2: William H. Biley Print Name	Signature	11-26-12 Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANC			
Examination Date: 10-10-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 8256		Container or Package ID Number:	
Container Type: 1 GALLON SHIELD POT		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 60%	Percent Organic Waste: 10%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:
VENTED 1 GALLON 3/4 INCH THICK LEAD LINED SHIELD POT (OM) (IM)
MET MOUNT PIECES (IM) (OM) (P)
DEBRIS AND RUBBLE (IM) (OM)

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 8256

Prohibited Item(s) Summary	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH-72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
William H. Riley — Print Name
Will-H. R — Signature
10-10-12 — Date

Visual Examination Operator 2:
ERIC BOND — Print Name
Eric Bond — Signature
10-10-12 — Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 11-26-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 1029		Container or Package ID Number:	
Container Type: 7 GALLON CONTAINER		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: A E R H D M		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 85%	Percent Organic Waste: 100%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7 GALLON CONTAINER (EA)
SHIELD POT CENTERING RING (EA)
SHIELD POT # 8252

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1029

	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
[illegible]			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1: William H. Riley Print Name	Signature	11-26-12 Date
Visual Examination Operator 2: ERIC BONDS Print Name	Signature	11-26-12 Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 10-9-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 8252		Container or Package ID Number:	
Container Type: 1 GALLON SHIELD POT		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 60%	Percent Organic Waste: 10%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): VE COMPLETED ON 10-10-12			

Waste Description:
VENTED 1-GALLON 3/4 INCH THICK LEAD LINED SHIELD POT (OM) (IM)
DEBRIS AND RUBBLE (IM) (OM) (P)
MET MOUNT PIECES (IM) (OM) (P)
DISK FRAGMENTS (IM) (OM)

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 8252

Prohibited Item(s) Summary	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
William H. Riley — Print Name
Will H. Ri — Signature
10-10-12 — Date

Visual Examination Operator 2:
ERIC BOND — Print Name
Eric Bond — Signature
10-10-12 — Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL	
Examination Date: 01-30-13	Batch Number: NA
Procedure #: CCP-TP-500	Revision #: 11 / Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A	Recording Start: NA / Recording Stop: NA
Initial Container ☒ N/A	Final Container ☐ N/A
Container or Package ID Number:	Container or Package ID Number: 1180
Container Type:	Container Type: 30 gallon Container
Waste Matrix Code:	Waste Matrix Code: S 5400
Waste Stream:	Waste Stream: AE RH DM
	Rigid Liner: ☒Y ☐N Type: 140 mil / Rigid Liner Lid: ☐Y ☒N
	Rigid Liner Vented or Hole Size: NA
Percent Fill: / Percent Organic Waste:	Percent Fill: 85 / Percent Organic Waste: 0
Layers of Confinement: / Closure Method:	Layers of Confinement: 1 / Closure Method: Heat Sealed Filtered
Comments (e.g., filter information, NCRs): NA	

Waste Description:

Bottom Can #1087

Top Can #1092

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1180

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:		
Gary Redman	Gary Redman	01-30-13
Print Name	Signature	Date

Visual Examination Operator 2:		
GLORIA RUPPERT	Gloria Ruppert	01-30-13
Print Name	Signature	Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 11-28-12	Batch Number: NA		
Procedure #: CCP-TP-500	Revision #: 11	Video Number NA	
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A	Recording Start: NA	Recording Stop: NA	
Initial Container ☐ N/A	Final Container ☒N/A		
Container or Package ID Number: 1087	Container or Package ID Number:		
Container Type: 7-Gallon Container	Container Type:		
Waste Matrix Code: S5400	Waste Matrix Code:		
Waste Stream: AERHDM	Waste Stream:		
	Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N	
	Rigid Liner Vented or Hole Size:		
Percent Fill: 85% Percent Organic Waste: 0%	Percent Fill:	Percent Organic Waste:	
Layers of Confinement: C Closure Method: NA	Layers of Confinement:	Closure Method:	
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7-Gallon Container - (IM)

Shield Pot Centering Ring - (IM)

Shield Pot # 8254

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1087

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1: William H. Riley Print Name	Signature	11-28-12 Date
Visual Examination Operator 2: ERIC BOND Print Name	Signature	11-28-12 Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 11-20-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 8254		Container or Package ID Number:	
Container Type: 1GALLON SHIELD POT		Container Type:	
Waste Matrix Code: S54100		Waste Matrix Code:	
Waste Stream: AERADM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 70%	Percent Organic Waste: 0%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description: VENTED 1 GALLON 3/4" INCH THICK LEAD LINED SHIELD POT (OM) (IM)

CLADDING AND FUEL PIECES (OM) (IM)

TMI GRAB SAMPLE DEBRIS (OM) (IM)

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 8254

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:

Print Name	Signature	Date
ERIC BOND	Eric Bond	11-20-12

Visual Examination Operator 2:

Print Name	Signature	Date
William H. Riley	Will. H. Ri	11-20-12

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 11-28-12		Batch Number: NA	
Procedure #CCP-TP-500		Revision #: 11	Video Number NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒N/A	
Container or Package ID Number: 1092		Container or Package ID Number:	
Container Type: 7-Gallon Container		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 85%	Percent Organic Waste: 0%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7-Gallon Container - (IM)
Shield Pot Centering Ring - (IM)
Shield Pot # 8259

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1092

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1: William H. Riley Print Name	Signature	11-28-12 Date
Visual Examination Operator 2: ERIC ISOWD Print Name	Signature	11-28-12 Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 11-20-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 8257		Container or Package ID Number:	
Container Type: 1 GALLON SHIELD POT		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 60% Percent Organic Waste: 0%		Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description: VENTED 1 GALLON "3/4" INCH THICK LEAD LINED SHIELD POT (OM) (IM)

CLADDING AND FUEL PIECES (OM) (IM)

TMI GRAB SAMPLE DEBRIS (OM) (IM)

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 8259

	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
William H. Riley — Print Name
Will. H. Ri — Signature
11-20-12 — Date

Visual Examination Operator 2:
ERIC BOND — Print Name
Eric Bond — Signature
11-20-12 — Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 01-30-13		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☒ N/A		Final Container ☐ N/A	
Container or Package ID Number:		Container or Package ID Number: 1182	
Container Type:		Container Type: 30 gallon Container	
Waste Matrix Code:		Waste Matrix Code: S 5400	
Waste Stream:		Waste Stream: AERHDM	
		Rigid Liner: ☒Y ☐N Type: 140 Mil	Rigid Liner Lid: ☐ Y ☒N
		Rigid Liner Vented or Hole Size: NA	
Percent Fill:	Percent Organic Waste:	Percent Fill: 85	Percent Organic Waste: 0
Layers of Confinement:	Closure Method:	Layers of Confinement: 1	Closure Method: Heat Sealed Filtered
Comments (e.g., filter information, NCRs): NA			

Waste Description:

Bottom Can: 1091

Top Can: 1086

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1182

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:
Gary Redman — Print Name
Gary Redman — Signature
01-30-13 — Date

Visual Examination Operator 2:
GLORIA RUPPERT — Print Name
Gloria Ruppert — Signature
01-30-13 — Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 12-06-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒N/A	
Container or Package ID Number: 1091		Container or Package ID Number:	
Container Type: 7 Gallon Container		Container Type:	
Waste Matrix Code: S 5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 85	Percent Organic Waste: 0	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7 Gallon Container (IM)
Shield Pot Centering Ring (IM)
Shield Pot# 8263

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1091

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:

Print Name	Signature	Date
Gary Redman	Gary Redman	12-06-12

Visual Examination Operator 2:

Print Name	Signature	Date
ERIC BOND	Eric Bond	12-6-12

Attachment 1 – Visual Examination Data Form

Site ID: RHANL	
Examination Date: 11-21-12	Batch Number: NA
Procedure #: CCP-TP-500	Revision #: 11 / Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A	Recording Start: NA / Recording Stop: NA
Initial Container ☐ N/A	**Final Container** ☒ N/A
Container or Package ID Number: 8263	Container or Package ID Number:
Container Type: 1-Gallon Shield Pot	Container Type:
Waste Matrix Code: S5400	Waste Matrix Code:
Waste Stream: AERHDM	Waste Stream:
	Rigid Liner: ☐Y ☐N Type: / Rigid Liner Lid: ☐Y ☐N
	Rigid Liner Vented or Hole Size:
Percent Fill: 90% / Percent Organic Waste: 0%	Percent Fill: / Percent Organic Waste:
Layers of Confinement: 0 / Closure Method: NA	Layers of Confinement: / Closure Method:
Comments (e.g., filter information, NCRs): EB 11-26-12 ~~NA~~	CB 11-26-12 VE COMPLETED 11-26-12

Waste Description:

Vented 1-Gallon 3/4-INCH Thick Lead Lined Shield Pot-(OM)(IM)

FUEL AND CLADDING DEBRIS-(OM)(IM)

LOOP SECTION FRAGMENTS-(OM)(IM)

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 8263

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1: William H. Riley Print Name William H. Riley	Signature Will. H. Riley Will. H. Riley	Date 11-21-12 11-26-12
Visual Examination Operator 2: ERIC BOND Print Name ERIC BOND	Signature Eric Bond Eric Bond	Date 11-21-12 11-26-12

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 11-28-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒N/A	
Container or Package ID Number: 1086		Container or Package ID Number:	
Container Type: 7-Gallon Container		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 85%	Percent Organic Waste: 0%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description:

7-Gallon Container-(IM)
Shield Pot Centering Ring-(IM)
Shield Pot # 8265

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 1086

Prohibited Item(s) Summary			
	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH 72B Criteria			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1: William H. Riley Print Name	Signature	11-28-12 Date
Visual Examination Operator 2: ERIC BOWD Print Name	Signature	11-28-12 Date

Attachment 1 – Visual Examination Data Form

Site ID: RHANL			
Examination Date: 11-26-12		Batch Number: NA	
Procedure #: CCP-TP-500		Revision #: 11	Video Number: NA
Recording Equipment Check: ☐SAT ☐UNSAT ☒N/A		Recording Start: NA	Recording Stop: NA
Initial Container ☐ N/A		Final Container ☒ N/A	
Container or Package ID Number: 8265		Container or Package ID Number:	
Container Type: 1 GALLON SHIELD POT		Container Type:	
Waste Matrix Code: S5400		Waste Matrix Code:	
Waste Stream: AERHDM		Waste Stream:	
		Rigid Liner: ☐Y ☐N Type:	Rigid Liner Lid: ☐ Y ☐N
		Rigid Liner Vented or Hole Size:	
Percent Fill: 70%	Percent Organic Waste: 0%	Percent Fill:	Percent Organic Waste:
Layers of Confinement: 0	Closure Method: NA	Layers of Confinement:	Closure Method:
Comments (e.g., filter information, NCRs): NA			

Waste Description: VENTED 1 GALLON "3/4" INCH THICK LEAD LINED SHIELD POT (OM) (IM)

FUEL AND CLADDING (OM) (IM) FRAGMENTS

Attachment 1 – Visual Examination Data Form (continued)

Container or Package ID Number 8265

	YES	NO	N/A
Does the container have observable liquid equal to or greater than 1 percent by volume of the outermost container at the time of RTR or VE?	☐	☒	
Does the container have observable liquid more than 60 milliliters or 3 percent by volume, whichever is greater in an internal container?	☐	☒	
Does the container have observable liquid with an EPA hazardous waste number (HWN) U134 assigned?	☐	☒	
Does the container have observable liquid containing PCBs?	☐	☒	
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☒	
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☒	
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does **NOT** match Table of Allowable Materials for RH-TRU Waste in the RH-TRAMPAC)?	☐	☒	
Is there an indication of wastes containing explosives or compressed gases?	☐	☒	
Is there an indication of polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☒	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☒	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☒	
RH-72B Shipping			
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☒	
Are there sealed containers GREATER than 4 liters or heat sealed bags **NOT** defined in the applicable TRUCON Code?	☐	☒	
Are there indications of inadequate protection (blocked or braced) for heavy and/or sharp objects?	☐	☒	
Is the waste consistent with the TRUCON Code?	☒	☐	

Comments: NA

Visual Examination Operator 1:

Print Name	Signature	Date
ERIC BONDS	Eric Bond	11-26-12

Visual Examination Operator 2:

Print Name	Signature	Date
William H. Riley	William H. Riley	11-26-12

Attachment 2 – Visual Examination Independent Technical Reviewer Checklist

Batch Data Report No.: ANLRHVE13002

1. Were data generation and reduction conducted in a technically correct manner in accordance with the methods (procedure) used?	☐ NO	☒ YES	☐ N/A
2. Was the correct revision of the operating procedure used?	☐ NO	☒ YES	☐ N/A
3. Were all the transcription errors corrected?	☐ NO	☐ YES	☒ N/A
4. Are BDR contents complete and match the Visual Examination Batch Data report Table of Contents?	☐ NO	☒ YES	☐ N/A
5. Does the BDR include VE for no more than 20 containers?	☐ NO	☒ YES	☐ N/A
6. Is all data recorded signed and dated in reproducible ink?	☐ NO	☒ YES	☐ N/A
7. Is all raw data recorded clearly, legibly, and accurately?	☐ NO	☒ YES	☐ N/A
8. Are all changes to original data lined out, initialed and dated by the individual making the changes or an individual authorized to make the change?	☐ NO	☒ YES	☐ N/A
9. Is there an adequate written description of the contents?	☐ NO	☒ YES	☐ N/A
10. Were the recording equipment checks satisfactory?	☐ NO	☐ YES	☒ N/A
11. Has each container in this BDR been evaluated for the presence of prohibited wastes?	☐ NO	☒ YES	☐ N/A
12. Has the physical waste form in each container in this BDR been evaluated against the Waste Stream Description and the Waste Matrix Code?	☐ NO	☒ YES	☐ N/A
13. Have the RH Quality Assurance Objectives (QAOs) for VE been met?	☐ NO	☒ YES	☐ N/A
Precision – reconciled discrepancies between operators or between the operator and ITR.	☐	☒	☐
Accuracy – trained operators	☐	☒	☐
Representativeness – description of container contents	☐	☒	☐
Completeness – completed data form and/or recording	☐	☒	☐
Comparability – proper training and adequate AK source documents are available for unopened containers.	☐	☒	☐
14. Were NCRs generated included in the BDR?	☐ NO	☐ YES	☒ N/A

Comments:

NA

Independent Technical Reviewer:

Monty Harris — Printed Name

Monty Harris — Signature

2-8-13 — Date

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Not part of page count

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523 or 575-234-7431

Fax Number: 575-234-7033

[X] Original Record [ ] Copy
[ ] Fax Record
[ ] Electronic Record

Attn:	Sheri Punchios	From:	Wes Root
Ship to:	S. M. Stoller WIPP Rec. Mgmt. Govt.	Site:	ANL-E
	CCP Records	Company:	Nuclear Waste Partnership LLC
	4021 National Parks Hwy	Telephone Number:	630-252-8306
	Carlsbad, NM 88220	Date Sent:	2-8-13
Telephone Number:	575-234-7095		

Document Number	Title / Description	Record Date	Total Pages
ANLRHVE13002	Batch Data Report – Waste Container ID Numbers: 1172, 1174, 1176, 1178, 1180 and 1182.	02-07-13	63

Comments

None

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

	Signature	Printed Name	Date
Records Accepted [✓]	Linda Martin	LINDA MARTIN	2.12.13
Records Rejected [ ]			

Reason for Rejection:

Re-submittal:

Signature	Printed Name	Date

```
**********************
***   TX REPORT   ***
**********************

TRANSMISSION OK

TX/RX NO                3004
DESTINATION TEL #       916302526706
DESTINATION ID          WES ROOT
ST. TIME                02/12 07:48
TIME USE                00'18
PAGES SENT                1
RESULT                  OK
```


Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523 or 575-234-7431

Fax Number: 575-234-7033

[X] Original Record [ ] Copy
[ ] Fax Record
[ ] Electronic Record

Attn:	Sheri Punchios	From:	Wes Root
Ship to:	S. M. Stoller WIPP Rec. Mgmt. Govt.	Site:	ANL-E
	CCP Records	Company:	Nuclear Waste Partnership LLC
	4021 National Parks Hwy	Telephone Number:	630-252-8306
	Carlsbad, NM 88220	Date Sent:	2-8-13
Telephone Number:	575-234-7095		

Document Number	Title / Description	Record Date	Total Pages
ANLRHVE13002	Batch Data Report – Waste Container ID Numbers: 1172, 1174, 1176, 1178, 1180 and 1182.	02-07-13	63

Comments

None

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

Records Accepted [✓]	Linda Martin	LINDA MARTIN	2.12.13
	Signature	Printed Name	Date
Records Rejected [ ]			
	Signature	Printed Name	Date

Reason for Rejection:

Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523 or 575-234-7431

Fax Number: 575-234-7033

[ ] Original Record [ ] Copy
[ ] Fax Record
[x] Electronic Record

Attn:	Linda Martin	From:	Laura Nelson
Ship to:	CCP Records	Site:	Denver
	4021 National Parks Hwy	Company:	WTS
	MS:GSA:212	Telephone Number:	303-843-2269
	Carlsbad, NM 88220	Date Sent:	2-13-13
Telephone Number:	575-234-7523		

Document Number	Title / Description	Record Date	Total Pages
ANLRHVE13002	SPM Checklist	2-13-13	1
	NA		

Comments

NA

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

Records Accepted [✓]	Linda Martin	LINDA MARTIN	2.14.13
	Signature	Printed Name	Date
Records Rejected [ ]			
	Signature	Printed Name	Date

Reason for Rejection:

Re-submittal:

Signature	Printed Name	Date

```
*********************
***   TX REPORT   ***
*********************

TRANSMISSION OK

TX/RX NO                3066
DESTINATION TEL #       913038432208
DESTINATION ID          DENVER
ST. TIME                02/14 08:09
TIME USE                00'20
PAGES SENT                1
RESULT                  OK
```


Attachment 2 – CCP Records Transmittal/Receiving Form

CCP Records / Records Custodian, 4021 National Parks Highway - MS: GSA 212, Carlsbad, New Mexico 88220

Telephone Number: 575-234-7523 or 575-234-7431

Fax Number: 575-234-7033

[ ] Original Record [ ] Copy
[ ] Fax Record
[x] Electronic Record

Attn:	Linda Martin	From:	Laura Nelson
Ship to:	CCP Records	Site:	Denver
	4021 National Parks Hwy	Company:	WTS
	MS:GSA:212	Telephone Number:	303-843-2269
	Carlsbad, NM 88220	Date Sent:	2-13-13
Telephone Number:	575-234-7523		

Document Number	Title / Description	Record Date	Total Pages
ANLRHVE13002	SPM Checklist	2-13-13	1
	NA		

Comments

NA

(When the Record accepted line has been completed, the rest of the page below may be left blank.)
Acceptance/Rejection Signature and Date

VE2

VE2

Visual Examination (VE) Operator/Independent Technical Reviewer (ITR) for Remote-Handled (RH) Waste Qualification Card

Name: Gloria Ruppert

Email Address: [redacted]

Job Specific Training

☐ **Initial Qualification** ☑ **Requalification** ☐ **Full Requalification**

Qualification Limit	**This qualification is valid for two (2) years.** If necessary, additional training may be required by the CCP Lead Site Project Manager (SPM) or the CCP Manager Responsible for Training. Unsatisfactory performance will result in disqualification by the CCP Manager Responsible for Training. The candidate must successfully complete the entire CCP qualification card to reestablish qualification.
Requalification Requirements	Items required for requalification are identified by text.

Indoctrination

(Required at initial qualification and full requalification)

Initial/Indoctrination Reading:

1. DOE/WIPP 02-3214, *Remote-Handled TRU Waste Characterization Program Implementation Plan*
2. CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*
3. CCP-PO-002, *CCP Transuranic Waste Certification Plan*
4. CCP-PO-505, *CCP Remote-Handled Transuranic Waste Authorized Methods for Payload Control(CCP RH-TRAMPAC)*
5. CCP-QP-002, *CCP Training and Qualification Plan*
6. CCP-QP-004, *CCP Corrective Action Management*
7. CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control*
8. CCP-QP-006, *CCP Corrective Action Reporting and Control*
9. CCP-QP-008, *CCP Records Management*
10. CCP-QP-010, *CCP Document Preparation Approval and Control*
11. CCP-QP-016, *CCP Control of Measuring, Testing, and Data Collection Equipment*
12. CCP-QP-023, *CCP Handling, Storage, and Shipping*
13. CCP-TP-163, *CCP Standard VE of Records*
14. CCP-TP-500, *CCP Remote-Handled Waste Visual Examination*
15. CCP-TP-513, *CCP Procedure for Radiological Documentation Package for Dimensional or Gravimetric Radiological Characterization for Remote-Handled Transuranic Waste*

I have read the listed initial/indoctrination reading and understand my responsibilities as applicable to the procedures above.	Gloria A. Ruppert Trainee	05-01-12 Date

Visual Examination (VE) Operator/Independent Technical Reviewer (ITR) for Remote-Handled (RH) Waste Qualification Card

Name: Gloria Ruppert

Email Address: [redacted]

Additional Training Requirements	
1. WAP/QAPjP Briefing and Test. *(One-time requirement)*	Michele Billett 5/22/12 CCP Training Date
2. Visual Examination (VE) TRU Waste Characterization Briefing for Contact-Handled (CH) & Remote-Handled (RH) Waste *(Required at initial and each requalification)*	Michele Billett 5/22/12 CCP Training Date
3. CCP VE Comprehensive Exam (score 80% or higher) administered by CCP Training. *(To be administered at initial and each requalification)*	Michele Billett 5/22/12 CCP Training Date

Formal Training	On-the-Job Training (OJT) Knowledge Requirements *(Required at initial qualification and full requalification)*	Visual Examination Expert (VEE) Subject Matter Expert (SME)/OJT Signature/Date
CCP-PO-001	1. List the VE Quality Assurance Objectives (QAOs) per the WAP.	
	2. List the VE Data Quality Objectives (DQOs) per the WAP.	
DOE/WIPP 02-3214	3. List the VE QAOs per the PIP.	
	4. List the VE DQOs per the PIP.	
CCP-QP-002	5. State the purpose of the List of Qualified Individuals (LOQI).	N A
CCP-QP-005	6. State when a nonconformance report (NCR) should be prepared and who is responsible to initiate it.	
	7. Describe how nonconforming items are documented.	
	8. Describe how nonconforming items are controlled to prevent their use.	
	9. State who has the responsibility to validate the NCR once initiated.	
	10. Describe how to revise a NCR.	
	11. Describe how to void a NCR.	
CCP-QP-006	12. Describe the purpose of the corrective action report (CAR) process.	

Visual Examination (VE) Operator/Independent Technical Reviewer (ITR) for Remote-Handled (RH) Waste Qualification Card

Name: Gloria Ruppert

Email Address: [redacted]

	13. State the person responsible for originating a CAR.	
	14. Describe how corrective actions are documented.	
	15. State who has the responsibility to validate the CAR once initiated.	
	16. Describe actions CCP personnel may take when conditions adverse to quality are discovered.	
CCP-QP-008	17. List the responsibilities of record generators.	
	18. State the storage and control requirements for CCP records.	
	19. Explain the process and proper method to make corrections or revisions to CCP records.	
CCP-QP-010	20. State the importance of using approved documents.	
	21. State when to verify a document revision.	N/A
CCP-QP-016	22. List the Measuring & Testing Equipment (M&TE) items used during VE.	
CCP-TP-500/ CCP-VE-101 Briefing	23. Explain the purpose of VE and the roles and responsibilities of the VE Operator.	
	24. Identify who is responsible for overall direction and implementation of the VE of that facility.	
	25. Define the two phases of VE technique for remote-handled waste.	
	26. State the number of waste containers allowed per Batch Data Report (BDR).	
	27. Define "layers of confinement."	
	28. State the authorized methods to close a liner bag.	
	29. State the action to be taken if a condition adverse to quality arises.	
	30. State the waste material parameters (WMP).	
	31. Describe the information that should be recorded when describing waste items.	

Visual Examination (VE) Operator/Independent Technical Reviewer (ITR) for Remote-Handled (RH) Waste Qualification Card

Name: Gloria Ruppert

Email Address: [redacted]

	32. State five (5) examples of prohibited items.			
	33. Describe how a non-transparent container is handled when liquid is suspected.			
	34. State the acceptable liquid limits in a characterized container.			
	35. Explain the responsibilities and functions of the Independent Technical Review (ITR).			N A
	36. Define layers of confinement.			
	37. Describe how to determine Volume Utilization Percentage (VUP).			
	38. State the allowable fill percent increments.			
Formal Training	**OJT Practical Requirements[1]** *(Required at initial qualification, requalification, and full requalification)* *(This section must be performed in the presence of a VEE for initial and requalification)*			**VEE SME/OJT Signature/Date**
CCP-TP-500	1. Prepare the recording equipment. *(This activity is at the discretion of the SME instructor)*	P	S	N/A
	2. Complete CCP-TP-500 Attachment 1.	(P)	S	J. Wesley Root 5-2-12
	3. Prepare a BDR.	(P)	S	J. Wesley Root 5-4-12
	4. Determine the VUP.	(P)	S	J. Wesley Root 5-2-12
	5. Complete an ITR.	(P)	S	J. Wesley Root 5-4-12
	6. Determine Waste Material Parameter (WMP).	(P)	S	J. Wesley Root 5-2-12
	7. Verify the physical form of the waste matches the waste stream ID.	(P)	S	J. Wesley Root 5-2-12
CCP-TP-513	8. Perform a dimensional or gravimetric measurement and determine the measurement acceptability[2].	(P)	S	J. Wesley Root 5-7-12

[1] For simulated steps that involve the recording of information, the steps can be satisfied by the trainee's ability to identify the specific location in the correct record form where actual data would be entered, and explain where the information would be obtained. All required calculations will actually be performed: for simulations, representative data will be used in lieu of actual data. Circle "P" if actually performed or "S" if requirement was simulated.

[2] Procedure CCP-TP-513 is not applicable at all sites. The OJT Practical Requirement for this procedure is only required if the procedure is invoked.

Visual Examination (VE) Operator/Independent Technical Reviewer (ITR) for Remote-Handled (RH) Waste Qualification Card

Name: Gloria Ruppert

Email Address: [redacted]

Approvals	
I have completed formal training and received OJT for this position. I fully understand my responsibilities as a RH VE Operator/ITR.	GLORIA RUPPERT Gloria Ruppert 5-11-12 Trainee *(printed name and signature)* Date
I have monitored the training of this individual and believe they are ready to perform the duties of a RH VE Operator/ITR. *(Validation by the RH VEE SME/OJT instructor(s) involved in the training of this individual).*	F. Wesley Root F. Wesley Root 05-16-12 RH VEE SME/OJT Instructor *(printed name and signature)* Date N/A RH VEE SME/OJT Instructor *(printed name and signature)* Date
I approve this employee to perform the duties of a RH VE Operator/ITR.	Mark Peavey Mark Peavey 5/22/2012 CCP Lead or Alternate RH SPM *(printed name and signature)* Date

Approved for Content & Format:	**Wes Root (Approval on file)** RH VEE SME/OJT	**4/9/2012** Date
Approved for Content & Format:	**Andrew Stallings (Approval on file)** Cognizant Engineer	**4/9/2012** Date
Approved for Content:	**Irene Quintana (Approval on file)** CCP Lead or Alternate RH SPM	**4/9/2012** Date
Approved for Use:	**AJ Fisher (Approval on file)** CCP Manager Responsible for Training	**4/9/2012** Date

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Visual Examination (VE) Operator/Independent Technical Reviewer (ITR) for Remote-Handled (RH) Waste Qualification Card

Name: Eric Bond	**Badge Number:** [redacted]
Email Address: [redacted]	

Job Specific Training	
☐ Initial Qualification	☒ Requalification
Qualification Limit	**This qualification is valid for two (2) years.** If necessary, additional training may be required by the CCP Lead Site Project Manager (SPM) or the CCP Manager Responsible for Training. Unsatisfactory performance will result in disqualification by the CCP Manager Responsible for Training. The candidate must successfully complete the entire CCP qualification card to reestablish qualification.
Requalification Requirements	Items required for requalification are identified by text.

Indoctrination

(Required at initial qualification, or in the event of requalification after disqualification only.)

Initial/Indoctrination Reading:

1. DOE/WIPP 02-3214, *Remote-Handled TRU Waste Characterization Program Implementation Plan*
2. CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*
3. CCP-PO-002, *CCP Transuranic Waste Certification Plan*
4. CCP-PO-505, *CCP Remote-Handled Transuranic Waste Authorized Methods for Payload Control(CCP RH-TRAMPAC)*
5. CCP-QP-002, *CCP Training and Qualification Plan*
6. CCP-QP-004, *CCP Corrective Action Management*
7. CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control*
8. CCP-QP-006, *CCP Corrective Action Reporting and Control*
9. CCP-QP-008, *CCP Records Management*
10. CCP-QP-010, *CCP Document Preparation Approval and Control*
11. CCP-QP-016, *CCP Control of Measuring, Testing, and Data Collection Equipment*
12. CCP-QP-023, *CCP Handling, Storage, and Shipping*
13. CCP-TP-163, *CCP Standard VE of Records*
14. CCP-TP-500, *CCP Remote-Handled Waste Visual Examination*
15. CCP-TP-513, *CCP Procedure for Radiological Documentation Package for Dimensional or Gravimetric Radiological Characterization for Remote-Handled Transuranic Waste*

I have read the listed initial/indoctrination reading and understand my responsibilities as applicable to the procedures above.	Eric Bond Trainee	11-8-11 Date

Visual Examination (VE) Operator/Independent Technical Reviewer (ITR) for Remote-Handled (RH) Waste Qualification Card

Name: Eric Bond	**Badge Number:** [redacted]
Email Address: [redacted]	

Additional Training Requirements		
1. WAP/QAPjP Briefing and Test. *(One-time requirement)*	CCP Training	11/30/11 Date
2. Visual Examination (VE) TRU Waste Characterization Briefing for Contact-Handled (CH) & Remote-Handled (RH) Waste *(Required at initial and each requalification)*	CCP Training	11/30/11 Date
3. CCP VE Comprehensive Exam (score 80% or higher) administered by CCP Training. *(To be administered at initial and each requalification)*	CCP Training	11/30/11 Date

Formal Training	On-the-Job Training (OJT) Knowledge Requirements *(Required at initial qualification or in the event of requalification after disqualification only)*	Visual Examination Expert (VEE) Subject Matter Expert (SME)/OJT Signature/Date
CCP-PO-001	1. List the VE Quality Assurance Objectives (QAOs) per the WAP.	F. Wesley Root 11-9-11
	2. List the VE Data Quality Objectives (DQOs) per the WAP.	F. Wesley Root 11-9-11
DOE/WIPP 02-3214	3. List the VE QAOs per the PIP.	F. Wesley Root 11-9-11
	4. List the VE DQOs per the PIP.	F. Wesley Root 11-9-11
CCP-QP-002	5. State the purpose of the List of Qualified Individuals (LOQI).	F. Wesley Root 11-9-11
CCP-QP-005	6. State when a nonconformance report (NCR) should be prepared and who is responsible to initiate it.	F. Wesley Root 11-9-11
	7. Describe how nonconforming items are documented.	F. Wesley Root 11-9-11
	8. Describe how nonconforming items are controlled to prevent their use.	F. Wesley Root 11-9-11
	9. State who has the responsibility to validate the NCR once initiated.	F. Wesley Root 11-9-11
	10. Describe how to revise a NCR.	F. Wesley Root 11-9-11
	11. Describe how to void a NCR.	F. Wesley Root 11-9-11

Visual Examination (VE) Operator/Independent Technical Reviewer (ITR) for Remote-Handled (RH) Waste Qualification Card

Name: Eric Bond	**Badge Number:** [redacted]
Email Address: [redacted]	

CCP-QP-006	12. Describe the purpose of the corrective action report (CAR) process.	J. Wesley Root 11-9-11
	13. State the person responsible for originating a CAR.	J. Wesley Root 11-9-11
	14. Describe how corrective actions are documented.	J. Wesley Root 11-9-11
	15. State who has the responsibility to validate the CAR once initiated.	J. Wesley Root 11-9-11
	16. Describe actions CCP personnel may take when conditions adverse to quality are discovered.	J. Wesley Root 11-9-11
CCP-QP-008	17. List the responsibilities of record generators.	J. Wesley Root 11-10-11
	18. State the storage and control requirements for CCP records.	J. Wesley Root 11-10-11
	19. Explain the process and proper method to make corrections or revisions to CCP records.	J. Wesley Root 11-10-11
CCP-QP-010	20. State the importance of using approved documents.	J. Wesley Root 11-10-11
	21. State when to verify a document revision.	J. Wesley Root 11-10-11
CCP-QP-016	22. List the Measuring & Testing Equipment (M&TE) items used during VE.	J. Wesley Root 11-14-11
CCP-TP-500/ CCP-VE-101 Briefing	23. Explain the purpose of VE and the roles and responsibilities of the VE Operator.	J. Wesley Root 11-14-11
	24. Identify who is responsible for overall direction and implementation of the VE of that facility.	J. Wesley Root 11-14-11
	25. Define the two phases of VE technique for remote-handled waste.	J. Wesley Root 11-14-11
	26. State the number of waste containers allowed per Batch Data Report (BDR).	J. Wesley Root 11-14-11
	27. Define "layers of confinement."	J. Wesley Root 11-14-11
	28. State the authorized methods to close a liner bag.	J. Wesley Root 11-14-11
	29. State the action to be taken if a condition adverse to quality arises.	J. Wesley Root 11-14-11
	30. State the waste material parameters (WMP).	J. Wesley Root 11-14-11

Visual Examination (VE) Operator/Independent Technical Reviewer (ITR) for Remote-Handled (RH) Waste Qualification Card

Name: Eric Bond | **Badge Number:** [redacted]

Email Address: [redacted]

	31. Describe the information that should be recorded when describing waste items.			J. Wesley Root 11-14-11
	32. State five (5) examples of prohibited items.			J. Wesley Root 11-14-11
	33. Describe how a non-transparent container is handled when liquid is suspected.			J. Wesley Root 11-14-11
	34. State the acceptable liquid limits in a characterized container.			J. Wesley Root 11-14-11
	35. Explain the responsibilities and functions of the Independent Technical Review (ITR).			J. Wesley Root 11-14-11
	36. Define layers of confinement.			J. Wesley Root 11-14-11
	37. Describe how to determine Volume Utilization Percentage (VUP).			J. Wesley Root 11-14-11
	38. State the allowable fill percent increments.			J. Wesley Root 11-14-11
Formal Training	**OJT Practical Requirements[1]** *(Required at initial qualification and at requalification)* *(This section must be performed in the presence of a VEE for initial and requalification)*			**VEE SME/OJT Signature/Date**
CCP-TP-500	1. Prepare the recording equipment. *(This activity is at the discretion of the SME instructor)*	P	(S)	J. Wesley Root 11-17-11
	2. Complete CCP-TP-500 Attachment 1.	(P)	S	J. Wesley Root 11-17-11
	3. Prepare a BDR.	(P)	S	J. Wesley Root 11-17-11
	4. Determine the VUP.	(P)	S	J. Wesley Root 11-17-11
	5. Complete an ITR.	(P)	S	J. Wesley Root 11-17-11
	6. Determine Waste Material Parameter (WMP).	(P)	S	J. Wesley Root 11-17-11
	7. Verify the physical form of the waste matches the waste stream ID.	(P)	S	J. Wesley Root 11-17-11
CCP-TP-513	8. Perform a dimensional or gravimetric measurement and determine the measurement acceptability[2].	(P)	S	J. Wesley Root 11-17-11

[1] For simulated steps that involve the recording of information, the steps can be satisfied by the trainee's ability to identify the specific location in the correct record form where actual data would be entered, and explain where the information would be obtained. All required calculations will actually be performed; for simulations, representative data will be used in lieu of actual data. Circle "P" if actually performed or "S" if requirement was simulated.

[2] Procedure CCP-TP-513 is not applicable at all sites. The OJT Practical Requirement for this procedure is only required if the procedure is invoked.

Visual Examination (VE) Operator/Independent Technical Reviewer (ITR) for Remote-Handled (RH) Waste Qualification Card

Name: Eric Bond	**Badge Number:** [redacted]
Email Address: [redacted]	

Approvals		
I have completed formal training and received OJT for this position. I fully understand my responsibilities as a RH VE Operator/ITR.	ERIC BOND Eric Bond Trainee *(printed name and signature)*	11-30-11 Date
I have monitored the training of this individual and believe they are ready to perform the duties of a RH VE Operator/ITR. *(Validation by the RH VEE SME/OJT instructor(s) involved in the training of this individual).*	F. Wesley Root F. Wesley Root RH VEE SME/OJT Instructor *(printed name and signature)*	11-30-11 Date
	N/A RH VEE SME/OJT Instructor *(printed name and signature)*	Date
I approve this employee to perform the duties of a RH VE Operator/ITR.	Irene Quintana Irene Quintana CCP Lead or Alternate RH SPM *(printed name and signature)*	11/30/11 Date

Approved for Content & Format:	**Wes Root (Approval on file)** RH VEE SME/OJT	**10/5/11** Date
Approved for Content & Format:	**Andrew Stallings (Approval on file)** Cognizant Engineer	**10/5/11** Date
Approved for Content:	**Irene Quintana (Approval on file)** CCP Lead or Alternate RH SPM	**10/5/11** Date
Approved for Use:	**AJ Fisher (Approval on file)** CCP Manager Responsible for Training	**10/5/11** Date

Visual Examination (VE) Operator/Independent Technical Reviewer (ITR) for Remote-Handled (RH) Waste Qualification Card

Name: Eric Bond	**Badge Number:** [redacted]
Email Address: [redacted]	

Site: Argonne National Laboratory (ANLE)

List of Applicable Waste Streams *(based on applicable Acceptable Knowledge Reports read)*:*	

EB 11-30-11

**For use with Initial and Additional Sites (To be completed for each site the trainee is qualifying for)*

I have read the applicable Acceptable Knowledge Reports for this site. I understand my responsibilities regarding the waste streams listed above.

ERIC BOND [signature] — Trainee *(Printed Name and Signature)*

11-30-11 — Date

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Visual Examination (VE) Operator/Independent Technical Reviewer (ITR) for Remote-Handled (RH) Waste Qualification Card

Name: William Riley	**Badge Number:** [redacted]
Email Address: [redacted]	

Job Specific Training	
☐ **Initial Qualification**	☒ **Requalification**
Qualification Limit	**This qualification is valid for two (2) years.** If necessary, additional training may be required by the CCP Lead Site Project Manager (SPM) or the CCP Manager Responsible for Training. Unsatisfactory performance will result in disqualification by the CCP Manager Responsible for Training. The candidate must successfully complete the entire CCP qualification card to reestablish qualification.
Requalification Requirements	Items required for requalification are identified by text.

Indoctrination

(Required at initial qualification, or in the event of requalification after disqualification only.)

Initial/Indoctrination Reading:

1. DOE/WIPP 02-3214, *Remote-Handled TRU Waste Characterization Program Implementation Plan*
2. CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*
3. CCP-PO-002, *CCP Transuranic Waste Certification Plan*
4. CCP-PO-505, *CCP Remote-Handled Transuranic Waste Authorized Methods for Payload Control(CCP RH-TRAMPAC)*
5. CCP-QP-002, *CCP Training and Qualification Plan*
6. CCP-QP-004, *CCP Corrective Action Management*
7. CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control*
8. CCP-QP-006, *CCP Corrective Action Reporting and Control*
9. CCP-QP-008, *CCP Records Management*
10. CCP-QP-010, *CCP Document Preparation Approval and Control*
11. CCP-QP-016, *CCP Control of Measuring, Testing, and Data Collection Equipment*
12. CCP-QP-023, *CCP Handling, Storage, and Shipping*
13. CCP-TP-163, *CCP Standard VE of Records*
14. CCP-TP-500, *CCP Remote-Handled Waste Visual Examination*
15. CCP-TP-513, *CCP Procedure for Radiological Documentation Package for Dimensional or Gravimetric Radiological Characterization for Remote-Handled Transuranic Waste*

I have read the listed initial/indoctrination reading and understand my responsibilities as applicable to the procedures above.	William R. Riley Trainee	11-09-11 Date

Visual Examination (VE) Operator/Independent Technical Reviewer (ITR) for Remote-Handled (RH) Waste Qualification Card

Name: William Riley	**Badge Number:** [redacted]
Email Address: [redacted]	

Additional Training Requirements		
1. WAP/QAPjP Briefing and Test. *(One-time requirement)*	CCP Training	11/30/11 Date
2. Visual Examination (VE) TRU Waste Characterization Briefing for Contact-Handled (CH) & Remote-Handled (RH) Waste *(Required at initial and each requalification)*	CCP Training	11/30/11 Date
3. CCP VE Comprehensive Exam (score 80% or higher) administered by CCP Training. *(To be administered at initial and each requalification)*	CCP Training	11/30/11 Date

Formal Training	On-the-Job Training (OJT) Knowledge Requirements *(Required at initial qualification or in the event of requalification after disqualification only)*	Visual Examination Expert (VEE) Subject Matter Expert (SME)/OJT Signature/Date
CCP-PO-001	1. List the VE Quality Assurance Objectives (QAOs) per the WAP.	J. Wesley Root 11-9-11
	2. List the VE Data Quality Objectives (DQOs) per the WAP.	J. Wesley Root 11-9-11
DOE/WIPP 02-3214	3. List the VE QAOs per the PIP.	J. Wesley Root 11-9-11
	4. List the VE DQOs per the PIP.	J. Wesley Root 11-9-11
CCP-QP-002	5. State the purpose of the List of Qualified Individuals (LOQI).	J. Wesley Root 11-9-11
CCP-QP-005	6. State when a nonconformance report (NCR) should be prepared and who is responsible to initiate it.	J. Wesley Root 11-9-11
	7. Describe how nonconforming items are documented.	J. Wesley Root 11-9-11
	8. Describe how nonconforming items are controlled to prevent their use.	J. Wesley Root 11-9-11
	9. State who has the responsibility to validate the NCR once initiated.	J. Wesley Root 11-9-11
	10. Describe how to revise a NCR.	J. Wesley Root 11-9-11
	11. Describe how to void a NCR.	J. Wesley Root 11-9-11

Visual Examination (VE) Operator/Independent Technical Reviewer (ITR) for Remote-Handled (RH) Waste Qualification Card

Name: William Riley	**Badge Number:** [redacted]
Email Address: [redacted]	

CCP-QP-006	12. Describe the purpose of the corrective action report (CAR) process.	J. Wesley Root 11-9-11
	13. State the person responsible for originating a CAR.	J. Wesley Root 11-9-11
	14. Describe how corrective actions are documented.	J. Wesley Root 11-9-11
	15. State who has the responsibility to validate the CAR once initiated.	J. Wesley Root 11-9-11
	16. Describe actions CCP personnel may take when conditions adverse to quality are discovered.	J. Wesley Root 11-9-11
CCP-QP-008	17. List the responsibilities of record generators.	J. Wesley Root 11-10-11
	18. State the storage and control requirements for CCP records.	J. Wesley Root 11-10-11
	19. Explain the process and proper method to make corrections or revisions to CCP records.	J. Wesley Root 11-10-11
CCP-QP-010	20. State the importance of using approved documents.	J. Wesley Root 11-10-11
	21. State when to verify a document revision.	J. Wesley Root 11-10-11
CCP-QP-016	22. List the Measuring & Testing Equipment (M&TE) items used during VE.	J. Wesley Root 11-14-11
CCP-TP-500/ CCP-VE-101 Briefing	23. Explain the purpose of VE and the roles and responsibilities of the VE Operator.	J. Wesley Root 11-14-11
	24. Identify who is responsible for overall direction and implementation of the VE of that facility.	J. Wesley Root 11-14-11
	25. Define the two phases of VE technique for remote-handled waste.	J. Wesley Root 11-14-11
	26. State the number of waste containers allowed per Batch Data Report (BDR).	J. Wesley Root 11-14-11
	27. Define "layers of confinement."	J. Wesley Root 11-14-11
	28. State the authorized methods to close a liner bag.	J. Wesley Root 11-14-11
	29. State the action to be taken if a condition adverse to quality arises.	J. Wesley Root 11-14-11
	30. State the waste material parameters (WMP).	J. Wesley Root 11-14-11

Visual Examination (VE) Operator/Independent Technical Reviewer (ITR) for Remote-Handled (RH) Waste Qualification Card

Name: William Riley	**Badge Number:** [redacted]
Email Address: [redacted]	

	31. Describe the information that should be recorded when describing waste items.			J. Wesley Root 11-15-11
	32. State five (5) examples of prohibited items.			J. Wesley Root 11-15-11
	33. Describe how a non-transparent container is handled when liquid is suspected.			J. Wesley Root 11-15-11
	34. State the acceptable liquid limits in a characterized container.			J. Wesley Root 11-15-11
	35. Explain the responsibilities and functions of the Independent Technical Review (ITR).			J. Wesley Root 11-15-11
	36. Define layers of confinement.			J. Wesley Root 11-15-11
	37. Describe how to determine Volume Utilization Percentage (VUP).			J. Wesley Root 11-15-11
	38. State the allowable fill percent increments.			J. Wesley Root 11-15-11
Formal Training	**OJT Practical Requirements[1]** *(Required at initial qualification and at requalification)* *(This section must be performed in the presence of a VEE for initial and requalification)*			**VEE SME/OJT Signature/Date**
CCP-TP-500	1. Prepare the recording equipment. *(This activity is at the discretion of the SME instructor)*	P	(S)	J. Wesley Root 11-16-11
	2. Complete CCP-TP-500 Attachment 1.	(P)	S	J. Wesley Root 11-29-11
	3. Prepare a BDR.	(P)	S	J. Wesley Root 11-29-11
	4. Determine the VUP.	(P)	S	J. Wesley Root 11-29-11
	5. Complete an ITR.	(P)	S	J. Wesley Root 11-29-11
	6. Determine Waste Material Parameter (WMP).	(P)	S	J. Wesley Root 11-29-11
	7. Verify the physical form of the waste matches the waste stream ID.	(P)	S	J. Wesley Root 11-29-11
CCP-TP-513	8. Perform a dimensional or gravimetric measurement and determine the measurement acceptability[2].	(P)	S	J. Wesley Root 11-30-11

[1] For simulated steps that involve the recording of information, the steps can be satisfied by the trainee's ability to identify the specific location in the correct record form where actual data would be entered, and explain where the information would be obtained. All required calculations will actually be performed; for simulations, representative data will be used in lieu of actual data. Circle "P" if actually performed or "S" if requirement was simulated.

[2] Procedure CCP-TP-513 is not applicable at all sites. The OJT Practical Requirement for this procedure is only required if the procedure is invoked.

Visual Examination (VE) Operator/Independent Technical Reviewer (ITR) for Remote-Handled (RH) Waste Qualification Card

Name: William Riley	**Badge Number:** [redacted]
Email Address: [redacted]	

Approvals	
I have completed formal training and received OJT for this position. I fully understand my responsibilities as a RH VE Operator/ITR.	William H. Riley Will H. Riley 11-30-11 Trainee *(printed name and signature)* Date
I have monitored the training of this individual and believe they are ready to perform the duties of a RH VE Operator/ITR. *(Validation by the RH VEE SME/OJT Instructor(s) involved in the training of this individual).*	F. Wesley Root F. Wesley Root 11-30-11 RH VEE SME/OJT Instructor *(printed name and signature)* Date N/A RH VEE SME/OJT Instructor *(printed name and signature)* Date
I approve this employee to perform the duties of a RH VE Operator/ITR.	Irene Quintana Irene Quintana 11/30/11 CCP Lead or Alternate RH SPM *(printed name and signature)* Date

Approved for Content & Format:	**Wes Root (Approval on file)** RH VEE SME/OJT	**10/5/11** Date
Approved for Content & Format:	**Andrew Stallings (Approval on file)** Cognizant Engineer	**10/5/11** Date
Approved for Content:	**Irene Quintana (Approval on file)** CCP Lead or Alternate RH SPM	**10/5/11** Date
Approved for Use:	**AJ Fisher (Approval on file)** CCP Manager Responsible for Training	**10/5/11** Date

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
for Remote-Handled (RH) Waste
Qualification Card

Name: William Riley	**Badge Number:** [redacted]
Email Address: [redacted]	

Site: Argonne National Laboratory (ANLE)

List of Applicable Waste Streams *(based on applicable Acceptable Knowledge Reports read)*:*	

WHR 11-30-11

**For use with Initial and Additional Sites (To be completed for each site the trainee is qualifying for)*

I have read the applicable Acceptable Knowledge Reports for this site. I understand my responsibilities regarding the waste streams listed above.

William H. Riley Will. He. Ri — Trainee *(Printed Name and Signature)*

11-30-11 — Date

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Visual Examination (VE) Operator/Independent Technical Reviewer (ITR) for Remote-Handled (RH) Waste Qualification Card

Name: Gary Redman

Email Address: [redacted]

Job Specific Training

☐ Initial Qualification ☑ Requalification ☐ Full Requalification

Qualification Limit	**This qualification is valid for two (2) years.** If necessary, additional training may be required by the CCP Lead Site Project Manager (SPM) or the CCP Manager Responsible for Training. Unsatisfactory performance will result in disqualification by the CCP Manager Responsible for Training. The candidate must successfully complete the entire CCP qualification card to reestablish qualification.
Requalification Requirements	Items required for requalification are identified by text.

Indoctrination

(Required at initial qualification and full requalification)

Initial/Indoctrination Reading:

1. DOE/WIPP 02-3214, *Remote-Handled TRU Waste Characterization Program Implementation Plan*
2. CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*
3. CCP-PO-002, *CCP Transuranic Waste Certification Plan*
4. CCP-PO-505, *CCP Remote-Handled Transuranic Waste Authorized Methods for Payload Control(CCP RH-TRAMPAC)*
5. CCP-QP-002, *CCP Training and Qualification Plan*
6. CCP-QP-004, *CCP Corrective Action Management*
7. CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control*
8. CCP-QP-006, *CCP Corrective Action Reporting and Control*
9. CCP-QP-008, *CCP Records Management*
10. CCP-QP-010, *CCP Document Preparation Approval and Control*
11. CCP-QP-016, *CCP Control of Measuring, Testing, and Data Collection Equipment*
12. CCP-QP-023, *CCP Handling, Storage, and Shipping*
13. CCP-TP-163, *CCP Standard VE of Records*
14. CCP-TP-500, *CCP Remote-Handled Waste Visual Examination*
15. CCP-TP-513, *CCP Procedure for Radiological Documentation Package for Dimensional or Gravimetric Radiological Characterization for Remote-Handled Transuranic Waste*

I have read the listed initial/indoctrination reading and understand my responsibilities as applicable to the procedures above.	N/A Trainee Date

Visual Examination (VE) Operator/Independent Technical Reviewer (ITR) for Remote-Handled (RH) Waste Qualification Card

Name: Gary Redman

Email Address: [redacted]

Additional Training Requirements		
1. WAP/QAPjP Briefing and Test. *(One-time requirement)*	Michele Billett 5/22/12 N/A MB 5-22-12	CCP Training / Date
2. Visual Examination (VE) TRU Waste Characterization Briefing for Contact-Handled (CH) & Remote-Handled (RH) Waste *(Required at initial and each requalification)*	Michele Billett 5/22/12	CCP Training / Date
3. CCP VE Comprehensive Exam (score 80% or higher) administered by CCP Training. *(To be administered at initial and each requalification)*	Michele Billett 5/22/12	CCP Training / Date

Formal Training	On-the-Job Training (OJT) Knowledge Requirements *(Required at initial qualification and full requalification)*	Visual Examination Expert (VEE) Subject Matter Expert (SME)/OJT Signature/Date
CCP-PO-001	1. List the VE Quality Assurance Objectives (QAOs) per the WAP.	N/A
	2. List the VE Data Quality Objectives (DQOs) per the WAP.	
DOE/WIPP 02-3214	3. List the VE QAOs per the PIP.	
	4. List the VE DQOs per the PIP.	
CCP-QP-002	5. State the purpose of the List of Qualified Individuals (LOQI).	
CCP-QP-005	6. State when a nonconformance report (NCR) should be prepared and who is responsible to initiate it.	
	7. Describe how nonconforming items are documented.	
	8. Describe how nonconforming items are controlled to prevent their use.	
	9. State who has the responsibility to validate the NCR once initiated.	
	10. Describe how to revise a NCR.	
	11. Describe how to void a NCR.	
CCP-QP-006	12. Describe the purpose of the corrective action report (CAR) process.	

Visual Examination (VE) Operator/Independent Technical Reviewer (ITR) for Remote-Handled (RH) Waste Qualification Card

Name: Gary Redman

Email Address: [redacted]

	13. State the person responsible for originating a CAR.	
	14. Describe how corrective actions are documented.	
	15. State who has the responsibility to validate the CAR once initiated.	
	16. Describe actions CCP personnel may take when conditions adverse to quality are discovered.	
CCP-QP-008	17. List the responsibilities of record generators.	
	18. State the storage and control requirements for CCP records.	
	19. Explain the process and proper method to make corrections or revisions to CCP records.	
CCP-QP-010	20. State the importance of using approved documents.	
	21. State when to verify a document revision.	N
CCP-QP-016	22. List the Measuring & Testing Equipment (M&TE) items used during VE.	A
CCP-TP-500/ CCP-VE-101 Briefing	23. Explain the purpose of VE and the roles and responsibilities of the VE Operator.	
	24. Identify who is responsible for overall direction and implementation of the VE of that facility.	
	25. Define the two phases of VE technique for remote-handled waste.	
	26. State the number of waste containers allowed per Batch Data Report (BDR).	
	27. Define "layers of confinement."	
	28. State the authorized methods to close a liner bag.	
	29. State the action to be taken if a condition adverse to quality arises.	
	30. State the waste material parameters (WMP).	
	31. Describe the information that should be recorded when describing waste items.	

Visual Examination (VE) Operator/Independent Technical Reviewer (ITR) for Remote-Handled (RH) Waste Qualification Card

Name: Gary Redman

Email Address: [redacted]

	32. State five (5) examples of prohibited items.	N/A
	33. Describe how a non-transparent container is handled when liquid is suspected.	
	34. State the acceptable liquid limits in a characterized container.	
	35. Explain the responsibilities and functions of the Independent Technical Review (ITR).	
	36. Define layers of confinement.	
	37. Describe how to determine Volume Utilization Percentage (VUP).	
	38. State the allowable fill percent increments.	

Formal Training	OJT Practical Requirements[1] *(Required at initial qualification, requalification, and full requalification)* *(This section must be performed in the presence of a VEE for initial and requalification)*			VEE SME/OJT Signature/Date
CCP-TP-500	1. Prepare the recording equipment. *(This activity is at the discretion of the SME instructor)*	P	S	N/A
	2. Complete CCP-TP-500 Attachment 1.	(P)	S	[signature] 4/25/12
	3. Prepare a BDR.	(P)	S	[signature] 4/25/12
	4. Determine the VUP.	(P)	S	[signature] 4/25/12
	5. Complete an ITR.	(P)	S	[signature] 4/25/12
	6. Determine Waste Material Parameter (WMP).	(P)	S	[signature] 4/25/12
	7. Verify the physical form of the waste matches the waste stream ID.	(P)	S	[signature] 4/25/12
CCP-TP-513	8. Perform a dimensional or gravimetric measurement and determine the measurement acceptability[2].	(P)	S	[signature] 4/25/12

[1] For simulated steps that involve the recording of information, the steps can be satisfied by the trainee's ability to identify the specific location in the correct record form where actual data would be entered, and explain where the information would be obtained. All required calculations will actually be performed: for simulations, representative data will be used in lieu of actual data. Circle "P" if actually performed or "S" if requirement was simulated.

[2] Procedure CCP-TP-513 is not applicable at all sites. The OJT Practical Requirement for this procedure is only required if the procedure is invoked.

Visual Examination (VE) Operator/Independent Technical Reviewer (ITR) for Remote-Handled (RH) Waste Qualification Card

Name: Gary Redman

Email Address: [redacted]

Approvals	
I have completed formal training and received OJT for this position. I fully understand my responsibilities as a RH VE Operator/ITR.	Gary Redman / Gary Redman 04/30/12 Trainee *(printed name and signature)* Date
I have monitored the training of this individual and believe they are ready to perform the duties of a RH VE Operator/ITR. *(Validation by the RH VEE SME/OJT instructor(s) involved in the training of this individual).*	Spencer Pattee 04/30/12 RH VEE SME/OJT Instructor *(printed name and signature)* Date F. Wesley Root F. Wesley Root 5-4-12 ~~N/A~~ WR 5-4-12 RH VEE SME/OJT Instructor *(printed name and signature)* Date
I approve this employee to perform the duties of a RH VE Operator/ITR.	Mark Pearcy Mark Pearcy 5/22/2012 CCP Lead or Alternate RH SPM *(printed name and signature)* Date

Approved for Content & Format:	**Wes Root (Approval on file)** RH VEE SME/OJT	**4/9/2012** Date
Approved for Content & Format:	**Andrew Stallings (Approval on file)** Cognizant Engineer	**4/9/2012** Date
Approved for Content:	**Irene Quintana (Approval on file)** CCP Lead or Alternate RH SPM	**4/9/2012** Date
Approved for Use:	**AJ Fisher (Approval on file)** CCP Manager Responsible for Training	**4/9/2012** Date

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Visual Examination (VE) Operator/Independent Technical Reviewer (ITR) for Remote-Handled (RH) Waste Qualification Card

Name: Patrick Beallis

Email Address: [redacted]

Job Specific Training

☐ **Initial Qualification** ☒ **Requalification** ☐ **Full Requalification**

Qualification Limit	**This qualification is valid for two (2) years.** If necessary, additional training may be required by the CCP Lead Site Project Manager (SPM) or the CCP Manager Responsible for Training. Unsatisfactory performance will result in disqualification by the CCP Manager Responsible for Training. The candidate must successfully complete the entire CCP qualification card to reestablish qualification.
Requalification Requirements	Items required for requalification are identified by text.

Indoctrination

(Required at initial qualification and full requalification)

Initial/Indoctrination Reading:

1. DOE/WIPP 02-3214, *Remote-Handled TRU Waste Characterization Program Implementation Plan*
2. CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*
3. CCP-PO-002, *CCP Transuranic Waste Certification Plan*
4. CCP-PO-505, *CCP Remote-Handled Transuranic Waste Authorized Methods for Payload Control(CCP RH-TRAMPAC)*
5. CCP-QP-002, *CCP Training and Qualification Plan*
6. CCP-QP-004, *CCP Corrective Action Management*
7. CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control*
8. CCP-QP-006, *CCP Corrective Action Reporting and Control*
9. CCP-QP-008, *CCP Records Management*
10. CCP-QP-010, *CCP Document Preparation Approval and Control*
11. CCP-QP-016, *CCP Control of Measuring, Testing, and Data Collection Equipment*
12. CCP-QP-023, *CCP Handling, Storage, and Shipping*
13. CCP-TP-163, *CCP Standard VE of Records*
14. CCP-TP-500, *CCP Remote-Handled Waste Visual Examination*
15. CCP-TP-513, *CCP Procedure for Radiological Documentation Package for Dimensional or Gravimetric Radiological Characterization for Remote-Handled Transuranic Waste*

I have read the listed initial/indoctrination reading and understand my responsibilities as applicable to the procedures above.	Pat Beallis Trainee	05-02-12 Date

Visual Examination (VE) Operator/Independent Technical Reviewer (ITR) for Remote-Handled (RH) Waste Qualification Card

Name: Patrick Beallis

Email Address: [redacted]

Additional Training Requirements	
1. WAP/QAPjP Briefing and Test. *(One-time requirement)*	Michele Billett 5/22/12 CCP Training Date
2. Visual Examination (VE) TRU Waste Characterization Briefing for Contact-Handled (CH) & Remote-Handled (RH) Waste *(Required at initial and each requalification)*	Michele Billett 5/22/12 CCP Training Date
3. CCP VE Comprehensive Exam (score 80% or higher) administered by CCP Training. *(To be administered at initial and each requalification)*	Michele Billett 5/22/12 CCP Training Date

Formal Training	On-the-Job Training (OJT) Knowledge Requirements *(Required at initial qualification and full requalification)*	Visual Examination Expert (VEE) Subject Matter Expert (SME)/OJT Signature/Date
CCP-PO-001	1. List the VE Quality Assurance Objectives (QAOs) per the WAP.	
	2. List the VE Data Quality Objectives (DQOs) per the WAP.	
DOE/WIPP 02-3214	3. List the VE QAOs per the PIP.	
	4. List the VE DQOs per the PIP.	
CCP-QP-002	5. State the purpose of the List of Qualified Individuals (LOQI).	
CCP-QP-005	6. State when a nonconformance report (NCR) should be prepared and who is responsible to initiate it.	N/A
	7. Describe how nonconforming items are documented.	
	8. Describe how nonconforming items are controlled to prevent their use.	
	9. State who has the responsibility to validate the NCR once initiated.	
	10. Describe how to revise a NCR.	
	11. Describe how to void a NCR.	
CCP-QP-006	12. Describe the purpose of the corrective action report (CAR) process.	

Visual Examination (VE) Operator/Independent Technical Reviewer (ITR) for Remote-Handled (RH) Waste Qualification Card

Name: Patrick Beallis

Email Address: [redacted]

	13. State the person responsible for originating a CAR.	
	14. Describe how corrective actions are documented.	
	15. State who has the responsibility to validate the CAR once initiated.	
	16. Describe actions CCP personnel may take when conditions adverse to quality are discovered.	
CCP-QP-008	17. List the responsibilities of record generators.	
	18. State the storage and control requirements for CCP records.	
	19. Explain the process and proper method to make corrections or revisions to CCP records.	
CCP-QP-010	20. State the importance of using approved documents.	
	21. State when to verify a document revision.	
CCP-QP-016	22. List the Measuring & Testing Equipment (M&TE) items used during VE.	
CCP-TP-500/ CCP-VE-101 Briefing	23. Explain the purpose of VE and the roles and responsibilities of the VE Operator.	N/A
	24. Identify who is responsible for overall direction and implementation of the VE of that facility.	
	25. Define the two phases of VE technique for remote-handled waste.	
	26. State the number of waste containers allowed per Batch Data Report (BDR).	
	27. Define "layers of confinement."	
	28. State the authorized methods to close a liner bag.	
	29. State the action to be taken if a condition adverse to quality arises.	
	30. State the waste material parameters (WMP).	
	31. Describe the information that should be recorded when describing waste items.	

Visual Examination (VE) Operator/Independent Technical Reviewer (ITR) for Remote-Handled (RH) Waste Qualification Card

Name: Patrick Beallis

Email Address: [redacted]

	32. State five (5) examples of prohibited items.			
	33. Describe how a non-transparent container is handled when liquid is suspected.			
	34. State the acceptable liquid limits in a characterized container.			
	35. Explain the responsibilities and functions of the Independent Technical Review (ITR).			N/A
	36. Define layers of confinement.			
	37. Describe how to determine Volume Utilization Percentage (VUP).			
	38. State the allowable fill percent increments.			
Formal Training	**OJT Practical Requirements[1]** *(Required at initial qualification, requalification, and full requalification)* *(This section must be performed in the presence of a VEE for initial and requalification)*			**VEE SME/OJT Signature/Date**
CCP-TP-500	1. Prepare the recording equipment. *(This activity is at the discretion of the SME instructor)*	P	S	N/A
	2. Complete CCP-TP-500 Attachment 1.	(P)	S	J. Wesley Root 5-2-12
	3. Prepare a BDR.	(P)	S	J. Wesley Root 5-3-12
	4. Determine the VUP.	(P)	S	J. Wesley Root 5-2-12
	5. Complete an ITR.	(P)	S	J. Wesley Root 5-4-12
	6. Determine Waste Material Parameter (WMP).	(P)	S	J. Wesley Root 5-2-12
	7. Verify the physical form of the waste matches the waste stream ID.	(P)	S	J. Wesley Root 5-2-12
CCP-TP-513	8. Perform a dimensional or gravimetric measurement and determine the measurement acceptability[2].	(P)	S	J. Wesley Root 5-15-12

[1] For simulated steps that involve the recording of information, the steps can be satisfied by the trainee's ability to identify the specific location in the correct record form where actual data would be entered, and explain where the information would be obtained. All required calculations will actually be performed: for simulations, representative data will be used in lieu of actual data. Circle "P" if actually performed or "S" if requirement was simulated.

[2] Procedure CCP-TP-513 is not applicable at all sites. The OJT Practical Requirement for this procedure is only required if the procedure is invoked.

Visual Examination (VE) Operator/Independent Technical Reviewer (ITR) for Remote-Handled (RH) Waste Qualification Card

Name: Patrick Beallis

Email Address: [redacted]

Approvals	
I have completed formal training and received OJT for this position. I fully understand my responsibilities as a RH VE Operator/ITR.	Pat Beallis Pat Beallis 05-15-12 Trainee *(printed name and signature)* Date
I have monitored the training of this individual and believe they are ready to perform the duties of a RH VE Operator/ITR. *(Validation by the RH VEE SME/OJT instructor(s) involved in the training of this individual).*	F. Wesley Root F. Wesley Root 05-15-12 RH VEE SME/OJT Instructor *(printed name and signature)* Date
	N/A RH VEE SME/OJT Instructor *(printed name and signature)* Date
I approve this employee to perform the duties of a RH VE Operator/ITR.	Mark Pearcy Mark Pearcy 5/22/2012 CCP Lead or Alternate RH SPM *(printed name and signature)* Date

Approved for Content & Format: **Wes Root (Approval on file)** **4/9/2012**
RH VEE SME/OJT — Date

Approved for Content & Format: **Andrew Stallings (Approval on file)** **4/9/2012**
Cognizant Engineer — Date

Approved for Content: **Irene Quintana (Approval on file)** **4/9/2012**
CCP Lead or Alternate RH SPM — Date

Approved for Use: **AJ Fisher (Approval on file)** **4/9/2012**
CCP Manager Responsible for Training — Date

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VE3

Visual Examination (VE) Operator/Independent Technical Reviewer (ITR) for Remote-Handled (RH) Waste Qualification Card

Name: Wes Root	**Badge Number:** [redacted]
Email Address: [redacted]	

Job Specific Training	
☐ **Initial Qualification**	☒ **Requalification**
Qualification Limit	**This qualification is valid for two (2) years.** If necessary, additional training may be required by the CCP Lead Site Project Manager (SPM) or the CCP Manager Responsible for Training. Unsatisfactory performance will result in disqualification by the CCP Manager responsible for Training. The candidate must successfully complete the entire CCP qualification card to reestablish qualification.
Requalification Requirements	Items required for requalification are identified by text.

Indoctrination

(Required at initial qualification, or in the event of requalification after disqualification only.)

Initial/Indoctrination Reading:

1. DOE/WIPP 02-3214, *Remote-Handled TRU Waste Characterization Program Implementation Plan*
2. CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*
3. CCP-PO-002, *CCP Transuranic Waste Certification Plan*
4. CCP-PO-505, *CCP Remote-Handled Transuranic Waste Authorized Methods for Payload Control(CCP RH-TRAMPAC)*
5. CCP-QP-002, *CCP Training and Qualification Plan*
6. CCP-QP-004, *CCP Corrective Action Management*
7. CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control*
8. CCP-QP-006, *CCP Corrective Action Reporting and Control*
9. CCP-QP-008, *CCP Records Management*
10. CCP-QP-010, *CCP Document Preparation Approval and Control*
11. CCP-QP-016, *CCP Control of Measuring, Testing, and Data Collection Equipment*
12. CCP-QP-023, *CCP Handling, Storage, and Shipping*
13. CCP-TP-163, *CCP Standard VE of Records*
14. CCP-TP-500, *CCP Remote-Handled Waste Visual Examination*
15. CCP-TP-513, *CCP Procedure for Radiological Documentation Package for Dimensional or Gravimetric Radiological Characterization for Remote-Handled Transuranic Waste*

I have read the listed initial/indoctrination reading and understand my responsibilities as applicable to the procedures above.	F. Wesley Root Trainee	02-18-11 Date

Visual Examination (VE) Operator/Independent Technical Reviewer (ITR) for Remote-Handled (RH) Waste Qualification Card

Name: Wes Root	**Badge Number:** [redacted]
Email Address: [redacted]	

Additional Training Requirements		
1. WAP/QAPjP Briefing and Test. *(One-time requirement)*	CCP Training	8/23/11 Date
2. Visual Examination (VE) TRU Waste Characterization Briefing for Contact-Handled (CH) & Remote-Handled (RH) Waste *(Required at each requalification)*	CCP Training	8/23/11 Date
3. CCP RH VE Comprehensive Exam (score 80% or higher) administered by CCP Training. *(To be administered at each requalification.)*	CCP Training	8/23/11 Date

Formal Training	On-the-Job Training (OJT) Knowledge Requirements *(Required at initial qualification or in the event of requalification after disqualification only.)*	Visual Examination Expert (VEE)/ Subject Matter Expert (SME) Signature/Date
CCP-PO-001	1. List the VE Quality Assurance Objectives (QAOs) per the WAP.	7-27-11
	2. List the VE Data Quality Objectives (DQOs) per the WAP.	7-27-11
DOE/WIPP 02-3214	3. List the VE QAOs per the PIP.	7-27-11
	4. List the VE DQOs per the PIP.	7-27-11
CCP-QP-002	5. State the purpose of the List of Qualified Individuals (LOQI).	7-27-11
CCP-QP-005	6. State when a nonconformance report (NCR) should be prepared and who is responsible to initiate it.	7-27-11
	7. Describe how nonconforming items are documented.	7-27-11
	8. Describe how nonconforming items are controlled to prevent their use.	7-27-11
	9. State who has the responsibility to validate the NCR once initiated.	7-27-11
	10. Describe how to revise a NCR.	7-27-11
	11. Describe how to void a NCR.	7-27-11

Visual Examination (VE) Operator/Independent Technical Reviewer (ITR) for Remote-Handled (RH) Waste Qualification Card

Name: Wes Root	Badge Number: [redacted]
Email Address: [redacted]	

CCP-QP-006	12. Describe the purpose of the corrective action report (CAR) process.	7-28-11
	13. State the person responsible for originating a CAR.	7-28-11
	14. Describe how corrective actions are documented.	7-28-11
	15. State who has the responsibility to validate the CAR once initiated.	7-28-11
	16. Describe actions CCP personnel may take when conditions adverse to quality are discovered.	7-28-11
CCP-QP-008	17. List the responsibilities of record generators.	7-28-11
	18. State the storage and control requirements for CCP records.	7-28-11
	19. Explain the process and proper method to make corrections or revisions to CCP records.	7-28-11
CCP-QP-010	20. State the importance of using approved documents.	7-28-11
	21. State when to verify a document revision.	7-28-11
CCP-QP-016	22. List the Measuring & Testing Equipment (M&TE) items used during VE.	8-1-11
CCP-TP-500/ CCP-VE-101 Briefing	23. Explain the purpose of VE and the roles and responsibilities of the VE Operator.	8-1-11
	24. Identify who is responsible for overall direction and implementation of the VE of that facility.	8-1-11
	25. Define the two phases of VE technique for remote-handled waste.	8-1-11
	26. State the number of waste containers allowed per Batch Data Report (BDR).	8-1-11
	27. Define "layers of confinement."	8-1-11
	28. State the authorized methods to close a liner bag.	8-1-11
	29. State the action to be taken if a condition adverse to quality arises.	8-1-11
	30. State the waste material parameters (WMP).	8-1-11

Visual Examination (VE) Operator/Independent Technical Reviewer (ITR) for Remote-Handled (RH) Waste Qualification Card

Name: Wes Root | **Badge Number:** [redacted]

Email Address: [redacted]

	31. Describe the information that should be recorded when describing waste items.	8-3-11
	32. State five (5) examples of prohibited items.	8-3-11
	33. Describe how a non-transparent container is handled when liquid is suspected.	8-3-11
	34. State the acceptable liquid limits in a characterized container.	8-3-11
	35. Explain the responsibilities and functions of the Independent Technical Review (ITR).	8-3-11
	36. Define layers of confinement.	8-3-11
	37. Describe how to determine Volume Utilization Percentage (VUP).	8-3-11
	38. State the allowable fill percent increments.	8-3-11

Formal Training	OJT Practical Requirements[1] *(This section must be performed in the presence of a VEE for initial and requalification)*			VEE/SME Signature/Date
CCP-TP-500	1. Prepare the recording equipment. *(This activity is at the discretion of the SME instructor.)*	P	(S)	8-4-11
	2. Complete CCP-TP-500 Attachment 1.	(P)	S	8-4-11
	3. Prepare a BDR.	P	(S)	8-4-11
	4. Determine the VUP.	(P)	S	8-4-11
	5. Complete an ITR.	P	(S)	8-4-11
	6. Determine Waste Material Parameter (WMP).	(P)	S	8-4-11
	7. Verify the physical form of the waste matches the waste stream ID.	(P)	S	8-4-11
CCP-TP-513	8. Perform a dimensional or gravimetric measurement and determine the measurement acceptability[2].	(P)	S	8-4-11

[1] Actual performance of this requirement may not be possible at the time of qualification. Simulation of this requirement is acceptable where the option is given on the qualification card. Circle "P" if actually performed or "S" if requirement was simulated.
[2] Procedure CCP-TP-513 is not applicable at all sites. The OJT Practical Requirement for this procedure is only required if the procedure is invoked.

Visual Examination (VE) Operator/Independent Technical Reviewer (ITR) for Remote-Handled (RH) Waste Qualification Card

Name: Wes Root	**Badge Number:** [redacted]
Email Address: [redacted]	

Approvals	
I have completed formal training and received on-the-job training for this position. I fully understand my responsibilities as a RH VE Operator/ITR.	F. Wesley Root F. Wesley Root 08-04-11 Trainee *(printed name and signature)* Date
I have monitored the training of this individual and believe they are ready to perform the duties of a RH VE Operator/ITR. *(Validation by the RH VEE SME/OJT instructor(s) involved in the training of this individual).*	Spencer Potter 8-4-11 RH VEE SME/OJT Instructor *(printed name and signature)* Date N/A RH VEE SME/OJT Instructor *(printed name and signature)* Date
I approve this employee to perform the duties of a RH VE Operator/ITR.	LAURA NELSON 8/23/11 CCP Lead or Alternate RH SPM *(printed name and signature)* Date

Approved for Content & Format: **Wes Root (Approval on File)** **12-13-2010**
RH VEE Subject Matter Expert *(printed name and signature)* Date

Approved for Content & Format: **Larry Porter (Approval on File)** **12-13-2010**
Cognizant Engineer *(printed name and signature)* Date

Approved for Content: **Irene Quintana (Approval on File)** **12-13-2010**
CCP Lead or Alternate RH SPM *(printed name and signature)* Date

Approved for Use: **A.J. Fisher (Approval on File)** **12-13-2010**
CCP Manager Responsible for Training *(printed name and signature)* Date

Visual Examination (VE) Operator/Independent Technical Reviewer (ITR) for Remote-Handled (RH) Waste Qualification Card

Name: Wes Root	**Badge Number:** [redacted]
Email Address: [redacted]	

Site: Argonne National Laboratory (ANL-E)

Acceptable Knowledge Briefings Received *(Listed by Waste Stream)*:*	

*For use with Initial and Additional Sites (To be completed for each site the trainee is qualifying for).

I have received and understand the listed AK Briefings: F. Wesley Root
F. Wesley Root — Trainee *(Printed Name and Signature)*

8-4-11 — Date

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From: Billett, Bob
To: Atwood, Alyca - Stoller; Billett, Michele - Stoller
Cc: Quintana, Irene; Sensibaugh, Mike; Root, Wes
Subject: ANL-E RH VEE APPOINTMENT
Date: Monday, August 31, 2009 5:55:11 PM

Alyca/Michele,

I am appointing Wes Root as Visual Examination Expert (VEE) for the CCP ANL-E Project at the Alpha-Gamma and Building 205 Hot Cells. Wes will be a VEE for RH waste. I have reviewed Wes Root's education, VE Operator qualification, experience, and performance. Wes has been a qualified VE Operator for over two years and understands the waste and processes used to perform VE in these areas. Please add the VEE designation for Wes on the ANL-E RH LOQI and place this Email in his training record.

Additionally, I am appointing Wes as a Subject Matter Expert for RH VE at ANL-E.

Please call me if you have any questions. Thanks!

Bob Billett

CCP Operations Manager

Office [redacted]

Cell [redacted]

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Visual Examination (VE) Operator/Independent Technical Reviewer (ITR) for Remote-Handled (RH) Waste Qualification Card

Name: Spencer Troy Pattee	**Badge Number:** [redacted]
Email Address: [redacted]	

Job Specific Training	
☐ **Initial Qualification**	X **Requalification**
Qualification Limit	**This qualification is valid for two (2) years.** If necessary, additional training may be required by the CCP Lead Site Project Manager (SPM) or the CCP Manager Responsible for Training. Unsatisfactory performance will result in disqualification by the CCP Manager responsible for Training. The candidate must successfully complete the entire CCP qualification card to reestablish qualification.
Requalification Requirements	Items required for requalification are identified by text.

Indoctrination

(Required at initial qualification, or in the event of requalification after disqualification only.)

Initial/Indoctrination Reading:

1. DOE/WIPP 02-3214, *Remote-Handled TRU Waste Characterization Program Implementation Plan*
2. CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*
3. CCP-PO-002, *CCP Transuranic Waste Certification Plan*
4. CCP-PO-505, *CCP Remote-Handled Transuranic Waste Authorized Methods for Payload Control(CCP RH-TRAMPAC)*
5. CCP-QP-002, *CCP Training and Qualification Plan*
6. CCP-QP-004, *CCP Corrective Action Management*
7. CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control*
8. CCP-QP-006, *CCP Corrective Action Reporting and Control*
9. CCP-QP-008, *CCP Records Management*
10. CCP-QP-010, *CCP Document Preparation Approval and Control*
11. CCP-QP-016, *CCP Control of Measuring, Testing, and Data Collection Equipment*
12. CCP-QP-023, *CCP Handling, Storage, and Shipping*
13. CCP-TP-163, *CCP Standard VE of Records*
14. CCP-TP-500, *CCP Remote-Handled Waste Visual Examination*
15. CCP-TP-513, *CCP Procedure for Radiological Documentation Package for Dimensional or Gravimetric Radiological Characterization for Remote-Handled Transuranic Waste*

I have read the listed initial/indoctrination reading and understand my responsibilities as applicable to the procedures above.	Spencer Pattee [signature] 7-18-11 Trainee Date

Visual Examination (VE) Operator/Independent Technical Reviewer (ITR) for Remote-Handled (RH) Waste Qualification Card

Name: Spencer Troy Pattee	**Badge Number:** [redacted]
Email Address: [redacted]	

Additional Training Requirements		
1. WAP/QAPjP Briefing and Test *(One-time requirement)* 8/25/10	Michele Billett CCP Training	7/22/11 Date
2. Visual Examination (VE) TRU Waste Characterization Briefing for Contact-Handled (CH) & Remote-Handled (RH) Waste *(Required at each requalification)* 7/14/11	Michele Billett CCP Training	7/22/11 Date
3. CCP RH VE Comprehensive Exam (score 80% or higher) administered by CCP Training. *(To be administered at each requalification.)*	Michele Billett CCP Training	7/22/11 Date

Formal Training	On-the-Job Training (OJT) Knowledge Requirements *(Required at initial qualification or in the event of requalification after disqualification only.)*	Visual Examination Expert (VEE)/ Subject Matter Expert (SME) Signature/Date
CCP-PO-001	1. List the VE Quality Assurance Objectives (QAOs) per the WAP.	F. Wesley Root 7-18-11
	2. List the VE Data Quality Objectives (DQOs) per the WAP.	F. Wesley Root 7-18-11
DOE/WIPP 02-3214	3. List the VE QAOs per the PIP.	F. Wesley Root 7-18-11
	4. List the VE DQOs per the PIP.	F. Wesley Root 7-18-11
CCP-QP-002	5. State the purpose of the List of Qualified Individuals (LOQI).	F. Wesley Root 7-19-11
CCP-QP-005	6. State when a nonconformance report (NCR) should be prepared and who is responsible to initiate it.	F. Wesley Root 7-19-11
	7. Describe how nonconforming items are documented.	F. Wesley Root 7-19-11
	8. Describe how nonconforming items are controlled to prevent their use.	F. Wesley Root 7-19-11
	9. State who has the responsibility to validate the NCR once initiated.	F. Wesley Root 7-19-11
	10. Describe how to revise a NCR.	F. Wesley Root 7-19-11
	11. Describe how to void a NCR.	F. Wesley Root 7-19-11

Visual Examination (VE) Operator/Independent Technical Reviewer (ITR) for Remote-Handled (RH) Waste Qualification Card

Name: Spencer Troy Pattee | **Badge Number:** [redacted]

Email Address: [redacted]

CCP-QP-006	12. Describe the purpose of the corrective action report (CAR) process.	F. Wesley Root 7-19-11
	13. State the person responsible for originating a CAR.	F. Wesley Root 7-19-11
	14. Describe how corrective actions are documented.	F. Wesley Root 7-19-11
	15. State who has the responsibility to validate the CAR once initiated.	F. Wesley Root 7-19-11
	16. Describe actions CCP personnel may take when conditions adverse to quality are discovered.	F. Wesley Root 7-19-11
CCP-QP-008	17. List the responsibilities of record generators.	F. Wesley Root 7-19-11
	18. State the storage and control requirements for CCP records.	F. Wesley Root 7-19-11
	19. Explain the process and proper method to make corrections or revisions to CCP records.	F. Wesley Root 7-19-11
CCP-QP-010	20. State the importance of using approved documents.	F. Wesley Root 7-19-11
	21. State when to verify a document revision.	F. Wesley Root 7-19-11
CCP-QP-016	22. List the Measuring & Testing Equipment (M&TE) items used during VE.	F. Wesley Root 7-19-11
CCP-TP-500/ CCP-VE-101 Briefing	23. Explain the purpose of VE and the roles and responsibilities of the VE Operator.	F. Wesley Root 7-19-11
	24. Identify who is responsible for overall direction and implementation of the VE of that facility.	F. Wesley Root 7-19-11
	25. Define the two phases of VE technique for remote-handled waste.	F. Wesley Root 7-19-11
	26. State the number of waste containers allowed per Batch Data Report (BDR).	F. Wesley Root 7-19-11
	27. Define "layers of confinement."	F. Wesley Root 7-19-11
	28. State the authorized methods to close a liner bag.	F. Wesley Root 7-19-11
	29. State the action to be taken if a condition adverse to quality arises.	F. Wesley Root 7-19-11
	30. State the waste material parameters (WMP).	F. Wesley Root 7-19-11

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
for Remote-Handled (RH) Waste
Qualification Card

Name: Spencer Troy Pattee | **Badge Number:** [redacted]

Email Address: [redacted]

	31. Describe the information that should be recorded when describing waste items.	J. Wesley Root 7-18-11
	32. State five (5) examples of prohibited items.	J. Wesley Root 7-18-11
	33. Describe how a non-transparent container is handled when liquid is suspected.	J. Wesley Root 7-19-11
	34. State the acceptable liquid limits in a characterized container.	J. Wesley Root 7-19-11
	35. Explain the responsibilities and functions of the Independent Technical Review (ITR).	J. Wesley Root 7-17-11
	36. Define layers of confinement.	J. Wesley Root 7-18-11
	37. Describe how to determine Volume Utilization Percentage (VUP).	J. Wesley Root 7-18-11
	38. State the allowable fill percent increments.	J. Wesley Root 7-18-11

Formal Training	OJT Practical Requirements[1] (This section must be performed in the presence of a VEE for initial and requalification)			VEE/SME Signature/Date
CCP-TP-500	1. Prepare the recording equipment. (This activity is at the discretion of the SME instructor.)	P	(S)	J. Wesley Root 7-18-11
	2. Complete CCP-TP-500 Attachment 1.	(P)	S	J. Wesley Root 7-18-11
	3. Prepare a BDR.	(P)	S	J. Wesley Root 7-21-11
	4. Determine the VUP.	(P)	S	J. Wesley Root 7-18-11
	5. Complete an ITR.	(P)	S	J. Wesley Root 7-19-11
	6. Determine Waste Material Parameter (WMP).	(P)	S	J. Wesley Root 7-18-11
	7. Verify the physical form of the waste matches the waste stream ID.	(P)	S	J. Wesley Root 7-18-11
CCP-TP-513	8. Perform a dimensional or gravimetric measurement and determine the measurement acceptability[2].	(P)	S	J. Wesley Root 7-18-11

[1] Actual performance of this requirement may not be possible at the time of qualification. Simulation of this requirement is acceptable where the option is given on the qualification card. Circle "P" if actually performed or "S" if requirement was simulated.
[2] Procedure CCP-TP-513 is not applicable at all sites. The OJT Practical Requirement for this procedure is only required if the procedure is invoked.

Visual Examination (VE) Operator/Independent Technical Reviewer (ITR) for Remote-Handled (RH) Waste Qualification Card

Name: Spencer Troy Pattee	**Badge Number:** [redacted]
Email Address: [redacted]	

Approvals	
I have completed formal training and received on-the-job training for this position. I fully understand my responsibilities as a RH VE Operator/ITR.	Spencer Pattee [signature] 7-21-11 Trainee *(printed name and signature)* Date
I have monitored the training of this individual and believe they are ready to perform the duties of a RH VE Operator/ITR. *(Validation by the RH VEE SME/OJT instructor(s) involved in the training of this individual)*	F. Wesley Root F. Wesley Root 7-21-11 RH VEE SME/OJT Instructor *(printed name and signature)* Date
	N/A RH VEE SME/OJT Instructor *(printed name and signature)* Date
I approve this employee to perform the duties of a RH VE Operator/ITR.	Mark Pearcy Mark Pearcy 7/22/11 CCP Lead or Alternate RH SPM *(printed name and signature)* Date

Approved for Content & Format: **Wes Root (Approval on File)** **12-13-2010**
RH VEE Subject Matter Expert *(printed name and signature)* Date

Approved for Content & Format: **Larry Porter (Approval on File)** **12-13-2010**
Cognizant Engineer *(printed name and signature)* Date

Approved for Content: **Irene Quintana (Approval on File)** **12-13-2010**
CCP Lead or Alternate RH SPM *(printed name and signature)* Date

Approved for Use: **A.J. Fisher (Approval on File)** **12-13-2010**
CCP Manager Responsible for Training *(printed name and signature)* Date

Visual Examination (VE) Operator/Independent Technical Reviewer (ITR) for Remote-Handled (RH) Waste Qualification Card

Name: Spencer Troy Pattee	**Badge Number:** [redacted]
Email Address: [redacted]	

Site: Argonne National Laboratory (ANL-E)

Acceptable Knowledge Briefings Received *(Listed by Waste Stream)*:*	
	WR 7-21-11

*For use with Initial and Additional Sites (To be completed for each site the trainee is qualifying for).

I have received and understand the listed AK Briefings: Spencer Pattee [signature] 7-21-11
Trainee *(Printed Name and Signature)* Date

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Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
for Remote-Handled (RH) Waste
Qualification Card

Name: Spencer Troy Pattee

Education/Experience	
Resume documenting education and experience on file with National TRU Program Certification (NTPC) Training.	Michele Billett 6/17/13 NTPC Training Date

Job Specific Training

☐ **Initial Qualification** ☑ **Requalification** ☐ **Full Requalification**

Qualification Limit	**This qualification is valid for two (2) years.** If necessary, additional training may be required by the Site Project Manager (SPM) or the Manager Responsible for Training. Unsatisfactory performance will result in disqualification by the Manager Responsible for Training. The candidate must successfully complete the entire qualification card to reestablish qualification.
Requalification Requirements	Items required for requalification are identified by text.

Indoctrination
(Required at Initial Qualification and Full Requalification)

Initial/Indoctrination Reading:

1. DOE/WIPP 02-3214, *Remote-Handled TRU Waste Characterization Program Implementation Plan*
2. CCP-HSP-014, *Health and Safety Program Implementation for CCP*
3. CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*
4. CCP-PO-002, *CCP Transuranic Waste Certification Plan*
5. CCP-PO-505, *CCP Remote-Handled Transuranic Waste Authorized Methods for Payload Control (CCP RH-TRAMPAC)*
6. CCP-QP-002, *CCP Training and Qualification Plan*
7. CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control*
8. CCP-QP-008, *CCP Records Management*
9. CCP-QP-010, *CCP Document Preparation, Approval, and Control*
10. CCP-QP-016, *CCP Control of Measuring and Testing Equipment*
11. CCP-QP-023, *CCP Handling, Storage, and Shipping*
12. CCP-QP-029, *CCP Corrective Action Management*
13. CCP-TP-163, *CCP Evaluation of Waste Packaging Records for Visual Examination of Records*
14. CCP-TP-500, *CCP Remote-Handled Waste Visual Examination*
15. CCP-TP-513, *CCP Procedure for Dimensional or Gravimetric Measurements for Radiological Characterization of Remote-Handled Transuranic Waste*

I have read the listed Initial/Indoctrination Reading and understand my responsibilities as applicable to the procedures above.	N/A Trainee Date

Visual Examination (VE) Operator/Independent Technical Reviewer (ITR) for Remote-Handled (RH) Waste Qualification Card

Name: Spencer Troy Pattee

Additional Training Requirements	
1. WAP/QAPjP Briefing & Exam *(One-time Requirement)*	Michele Billett 6/17/13 NTPC Training Date
2. CCP-VE-101, *Visual Examination (VE) TRU Waste Characterization Briefing* *(Always Required)*	Michele Billett 6/17/13 NTPC Training Date
3. VE Comprehensive Exam *(Always Required)*	Michele Billett 6/17/13 NTPC Training Date

Formal Training	On-the-Job Training (OJT) Knowledge Requirements *(Required at Initial Qualification and Full Requalification)*	Visual Examination Expert (VEE) Subject Matter Expert (SME)/OJT Signature/Date
CCP-PO-001	1. List the VE Quality Assurance Objectives (QAOs) per the WAP.	
	2. List the VE Data Quality Objectives (DQOs) per the WAP.	
DOE/WIPP 02-3214	3. List the VE QAOs per the PIP.	
	4. List the VE DQOs per the PIP.	
CCP-QP-002	5. State the purpose of the List of Qualified Individuals (LOQI).	N A
CCP-QP-005	6. State when a nonconformance report (NCR) should be prepared and who is responsible to initiate it.	
	7. Describe how nonconforming items are documented.	
	8. Describe how nonconforming items are controlled to prevent their use.	
	9. State who has the responsibility to validate the NCR once initiated.	
	10. Describe how to revise a NCR.	
	11. Describe how to void a NCR.	
CCP-QP-029	12. Describe the purpose of the corrective action report (CAR) process.	

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Visual Examination (VE) Operator/Independent Technical Reviewer (ITR) for Remote-Handled (RH) Waste Qualification Card

Name: Spencer Troy Pattee

	13. State the person responsible for originating a CAR.	
	14. Describe how corrective actions are documented.	
	15. State who has the responsibility to validate the CAR once initiated.	
	16. Describe actions personnel may take when conditions adverse to quality are discovered.	
CCP-QP-008	17. List the responsibilities of record generators.	
	18. State the storage and control requirements for records.	
	19. Explain the process and proper method to make corrections or revisions to records.	
CCP-QP-010	20. State the importance of using approved documents.	
	21. State when to verify a document revision.	N A
CCP-QP-016	22. List the Measuring & Testing Equipment (M&TE) items used during VE.	
CCP-TP-500/ CCP-VE-101 Briefing	23. Explain the purpose of VE and the roles and responsibilities of the VE Operator.	
	24. Identify who is responsible for overall direction and implementation of the VE of that facility.	
	25. Define the two phases of VE technique for remote-handled waste	
	26. State the number of waste containers allowed per Batch Data Report (BDR).	
	27. Define "layers of confinement."	
	28. State the authorized methods to close a liner bag.	
	29. State the action to be taken if a condition adverse to quality arises.	
	30. State the waste material parameters (WMP).	
	31. Describe the information that should be recorded when describing waste items.	
	32. State five (5) examples of prohibited items.	

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Visual Examination (VE) Operator/Independent Technical Reviewer (ITR) for Remote-Handled (RH) Waste Qualification Card

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	33. Describe how a non-transparent container is handled when liquid is suspected.	N A
	34 State the acceptable liquid limits in a characterized container.	
	35. Explain the responsibilities and functions of the Independent Technical Review (ITR).	
	36. Define layers of confinement.	
	37. Describe how to determine Volume Utilization Percentage (VUP).	
	38. State the allowable fill percent increments.	

Formal Training	OJT Practical Requirements[1] *(This section must be performed in the presence of a VEE)* *(Always Required)*			VEE SME/OJT Signature/Date
CCP-TP-500	1. Prepare the recording equipment. *(This activity is at the discretion of the SME instructor)*	P	S	S.Pool 6-17-13
	2. Complete CCP-TP-500 Attachment 1.	P	S	S.Pool 6-17-13
	3. Prepare a BDR.	P	S	S.Pool 6-17-13
	4. Determine the VUP.	P	S	S.Pool 6-17-13
	5. Complete an ITR.	P	S	S.Pool 6-17-13
	6. Determine Waste Material Parameter (WMP).	P	S	S.Pool 6-17-13
	7. Verify the physical form of the waste matches the waste stream ID.	P	S	S.Pool 6-17-13
CCP-TP-513	8. Perform a dimensional or gravimetric measurement and determine the measurement acceptability[2].	P	S	S.Pool 6-17-13

[1] For simulated steps that involve the recording of information, the steps can be satisfied by the trainee's ability to identify the specific location in the correct record form where actual data would be entered, and explain where the information would be obtained. All required calculations will actually be performed: for simulations, representative data will be used in lieu of actual data. Circle "P" if actually performed or "S" if requirement was simulated

[2] Procedure CCP-TP-513 is not applicable at all sites. The OJT Practical Requirement for this procedure is only required if the procedure is invoked.

Visual Examination (VE)
Operator/Independent Technical Reviewer (ITR)
for Remote-Handled (RH) Waste
Qualification Card

Name: Spencer Troy Pattee

Approvals	
I have completed formal training and received OJT for this position. I fully understand my responsibilities as a RH VE Operator/ITR.	Spencer Pattee 6-17-13 Trainee *(printed name and signature)* Date
I have monitored the training of this individual and believe they are ready to perform the duties of a RH VE Operator/ITR. *(Validation by the RH VEE SME/OJT instructor(s) involved in the training of this individual).*	Jeffrey Poole 6-17-13 RH VEE SME/OJT Instructor *(printed name and signature)* Date
	N/A RH VEE SME/OJT Instructor *(printed name and signature)* Date
I approve this employee to perform the duties of a RH VE Operator/ITR.	Richard Kantrowitz 6/17/13 Irene Joo 6/17/13 SPM *(printed name and signature)* Date

Approved for Content & Format: **Wes Root** ***(Approval on File)*** **03/13/2013**
SME/OJT — Date

Approved for Applicability, Content & Format: **Andrew Stallings** ***(Approval on File)*** **03/13/2013**
Cognizant Engineer — Date

Approved for Content: **Irene Joo** ***(Approval on File)*** **03/13/2013**
SPM — Date

Approved for Applicability, Content, Format, & Use: **A.J. Fisher** ***(Approval on File)*** **03/13/2013**
Manager Responsible for Training — Date

DIVIDER

PAGE

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Billett, Michele - Stoller

From:	Quintana, Irene - WTS
Sent:	Wednesday, July 20, 2011 4:44 PM
To:	Billett, Michele - Stoller; Martin, Ryan - Stoller
Cc:	Root, Wes - ANL
Subject:	VEE appointment of Spencer Pattee - Argonne National Laboratory Alpha/Gamma hot cell and K-wing Building 205

Spencer Pattee is appointed as a Visual Examination Expert (VEE) at Argonne National Laboratory Alpha Gamma Hot Cell Facility and Buidling 205 K-Wing facility. Mr. Pattee has extensive experience performing VEE duties at numerous Remote-handled and Contact-handled sites.

Thank you,

Irene Quintana
RH PM
Washington TRU Solutions, LLC.
Contractor to the Department of Energy
720-982-7174
575-499-4579
irene.quintana@wipp.ws