



Department of Energy
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26 NOV 2003



Mr. Steve Zappe, WIPP Project Leader
Hazardous Waste Bureau
New Mexico Environment Department
2905 Rodeo Park Drive East, Bldg. 1
Santa Fe, NM 87505-6303

Subject: Transmittal of the Final Audit Report for the Savannah River Site (A-04-01)

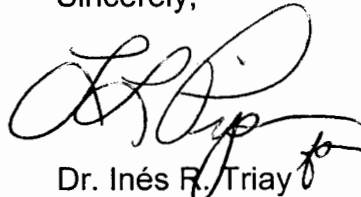
Dear Mr. Zappe:

This letter transmits the Savannah River Site Audit Report for the processes performed to characterize and certify waste as required by Section II.C.2.c of the Waste Isolation Pilot Plant (WIPP) Hazardous Waste Facility Permit. The report contains the results of the annual re-certification audit performed for the processes previously approved by the New Mexico Environment Department (NMED) for the characterization and certification of retrievably stored debris waste. The Audit was conducted October 21-24, 2003.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision according to 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 concerning this audit report, please contact Ms. Ava L. Holland at (505) 234-7423.

Sincerely,



Dr. Inés R. Triay
Manager

Enclosure



Mr. Steve Zappe

-2-

26 NOV 2003

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U.S. DEPARTMENT OF ENERGY
CARLSBAD FIELD OFFICE

FINAL AUDIT REPORT

OF THE

SAVANNAH RIVER SITE (SRS)

AIKEN, SOUTH CAROLINA

AUDIT NUMBER A-04-01

OCTOBER 21 – 24, 2003

FINAL AUDIT REPORT OF WASTE CHARACTERIZATION IN
ACCORDANCE WITH THE HAZARDOUS WASTE FACILITY PERMIT



Prepared by: *Charles L. Riggs*
Charles L. Riggs, CTAC
Audit Team Leader

Date: 11/25/03

Approved by: *Ava L. Holland*
Ava L. Holland, CBFO
Quality Assurance Manager

Date: 11/26/03

1.0 EXECUTIVE SUMMARY

Carlsbad Field Office (CBFO) Audit A-04-01 was conducted to evaluate the adequacy, implementation, and effectiveness of the Savannah River Site (SRS) transuranic (TRU) waste characterization activities performed by SRS or for SRS by the Central Characterization Project (CCP) for debris waste relative to the requirements detailed in the Waste Isolation Pilot Plant (WIPP) Hazardous Waste Facility Permit (HWFP).

The CCP was developed by Washington TRU Solutions (WTS) to provide TRU waste characterization, certification, and transportation services, including the necessary management and administrative functions to ensure the acceptability of these processes in accordance with regulatory and site requirements. The Westinghouse Savannah River Company (WSRC) utilized the characterization services of the CCP, including overall process management.

The scope of the audit included Summary Category Group S5000 debris waste, in particular, retrievably stored debris waste.

SRS had discontinued using their facilities to perform characterization activities (with the exception of visual examination (VE)) prior to the last recertification audit, A-03-01. The last SRS VE activity was on December 5, 2002. All characterization activities are presently being performed by SRS/CCP.

The annual recertification audit was conducted at the SRS facilities October 21-24, 2003. The audit team concluded that the SRS/CCP technical and quality assurance (QA) programs, as applicable to the audited activities, met requirements contained in the HWFP. The audit team concluded that the defined QA and technical processes for the audited activities were being implemented in accordance with the *CCP Transuranic Waste Quality Assurance Characterization Project Plan (CCP QAPjP)* and related SRS/CCP implementing procedures. The audited processes were found to be adequate, satisfactorily implemented, and effective.

The audit team did not identify any HWFP-related conditions adverse to quality necessitating the issuance of a CBFO corrective action report (CAR). Five deficiencies, isolated in nature and requiring only remedial corrective action, were corrected during the audit (CDA). No Observations were identified, and one Recommendation is being offered for SRS and CCP management consideration. The CDAs are described in Section 6.0 and the Recommendation is discussed in Section 7.0.

2.0 SCOPE AND PURPOSE

2.1 Scope

The audit team evaluated the adequacy, implementation, and effectiveness of the SRS/CCP TRU waste characterization processes for retrievably stored debris waste relative to the requirements contained in the WIPP HWFP, Attachments B through B6.

Continued compliance was documented by completing the Attachment B6 checklist for the applicable SRS/CCP activities.

The audit team evaluated the following program elements in accordance with the HWFP:

General

Results of previous audits
Changes in programs or operations
New programs or activities being implemented
Changes in key personnel

Quality

Nonconformances/Corrective Action
Personnel Qualification and Training
Documents and Records
Sample Control

Technical

Acceptable Knowledge (AK)
Headspace Gas (HSG) and Gas Volatile Organic Compounds (VOCs) Sampling and Analysis
Real-Time Radiography (RTR)
Visual Examination (VE)
Data Generation-Level Verification and Validation (V&V)
Project-Level V&V
WIPP Waste Information System (WWIS) Data Entry
Waste Stream Profile Form (WSPF)

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

Waste Isolation Pilot Plant Hazardous Waste Facility Permit

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

CCP Transuranic Waste Quality Assurance Characterization Project Plan (QAPjP), CCP-PO-001

CCP Transuranic Waste Certification Plan, CCP-PO-002

Related SRS/CCP technical and quality assurance implementing procedures.

2.2 Purpose

Audit A-04-01 was conducted to assess the continued compliance of SRS/CCP debris waste characterization and certification activities with the WIPP HWFP.

3.0 AUDIT TEAM AND OBSERVERS

AUDITORS/TECHNICAL SPECIALISTS

Charlie Riggs	Audit Team Leader, CBFO Technical Assistance Contractor (CTAC)
Steve Calvert	Auditor, CTAC
Jack Walsh	Auditor, CTAC
Jimmy Wilburn	Auditor, CTAC
Tammy Bowden	Auditor, CTAC
Prissy Dugger	Auditor, CTAC
Jim Schuetz	Auditor, CTAC
Chet Wright	Auditor, CTAC
Norman Frank	Auditor, CTAC
Annabelle, Axinn	Auditor, CTAC
Dee Scott	Auditor/Technical Specialist, CTAC
Dick Blauvelt	Technical Specialist, CTAC
Patrick Kelly	Technical Specialist, CTAC
Karen Gaydosh	Technical Specialist, CTAC
Dorothy Gill	Technical Specialist, CTAC
Jim Eide	Technical Specialist, CTAC
Joe Willis	Technical Specialist, WTS
Todd Sellmer	Technical Specialist, WTS

OBSERVERS

Steve Zappe	New Mexico Environment Department (NMED)
Kevin Krause	NMED
Steve Holmes	NMED
June Dreith	NMED Contractor
Scott Webb	Environmental Evaluation Group (EEG)
Ava Holland	CBFO QA
Dennis Miehl	CBFO QA
Martin Navarrete	CBFO QA

4.0 AUDIT PARTICIPANTS

SRS and SRS/CCP individuals involved in the audit process are identified in Attachment 1. A preaudit meeting was held in SRS Building 766H, Room 1003, on October 21, 2003. Daily meetings were held with SRS and SRS/CCP management and staff to discuss issues and potential deficiencies. The audit was concluded with a postaudit meeting held in Building 766H, Room 1003, on October 24, 2003.

5.0 SUMMARY OF AUDIT RESULTS

5.1 Program Adequacy and Implementation

This audit was performed to assess the ability to characterize retrievably stored debris waste from Summary Category Group S5000 to the requirements specified in the WIPP Waste Analysis Plan (WAP). The characterization methods assessed were HSG sampling and analysis, AK, RTR, and VE. Data review, validation, DQO reconciliation, WWIS data entry, and the preparation of the WSPFs were also assessed. Newly generated waste streams and waste streams from Summary Category Group S3000 and S4000 will require an additional audit because the requirements specific to these areas were not included in the scope of Audit A-04-01.

The audit team concluded that the applicable TRU waste characterization activities, as described in the associated SRS/CCP implementing procedures, satisfactorily meet the requirements contained in the HWFP. The deficiencies identified in Section 6.0 have been corrected. The supporting documentation for the closure of the CDAs is contained in Attachment 2. Details of audit activities, including specific objective evidence reviewed, are described below and are documented in the attached B6 checklist. The B6 checklist identifies the SRS/CCP program documents and procedures in which the WAP requirements are met. Attachment 3 contains examples of the objective evidence reviewed during the audit.

A list of SRS/CCP procedures evaluated during the audit is provided in Attachment 4.

5.2 Technical Activities

Each 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 WAP is cited briefly (and in detail on the checklist), and the result of the assessment is provided.

Objective evidence to evaluate the implementation of the associated characterization activities was selected and reviewed. Batch data reports, sampling records, and training documentation for TRU Waste Characterization Program (TWCP) personnel were included in the evaluation. The audit included direct observation and/or a demonstrated walk-through of waste characterization activities (such as gas sampling and analysis, RTR, and WWIS data entry). Each characterization process involves:

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

Each checklist question that could not be satisfactorily answered resulted in an audit deficiency. All items were adequately addressed during the audit. Deficiencies that were corrected during the audit (CDA) are discussed in Section 6.2.

5.2.1 Table B6-1 WAP Checklist

The B6-1 WAP checklist addresses program requirements from an overall management perspective and the validation of the data at the site project level. It documents the verification that the waste characterization strategy, as defined in the WAP, is implemented by using controlled procedures. In addition, Table B6-1 documents the site project-level reviews of the data collected as a result of the waste characterization implementing procedures. This audit was performed to assess SRS/CCP's continued ability to characterize Summary Category Group S5000 debris waste. Objective evidence was reviewed as part of this assessment and utilized in the completion of this table. The objective evidence included completed batch reports (completed through the SPO review) for RTR, HSG, and VE. In addition, procedures and objective evidence were reviewed to ensure that SRS/CCP could adequately perform data reconciliation and properly prepare a WSPF.

Objective evidence was reviewed to make a determination of the adequacy of the SPO V&V procedures. Evidence included batch data reports from each of the waste characterization activities.

The flow of data from the point of generation to inclusion in the WSPF for each characterization technique was reviewed to ensure that all applicable requirements were captured in the site operating procedures. The material in this section is also addressed in more detail in the following checklists, where the specific procedures audited and the objective evidence reviewed are identified.

Compliance with the characterization requirements of the WAP was demonstrated through documentation and by demonstrating the characterization activities. The project-level data V&V process was evaluated by reviewing the following batch data reports:

Real-Time Radiography

SRRTR0504

SRRTR0189

SRRTR0505

SRRTR0408

Visual Examination

SR03-VECCCP-001

SR03-VECCCP-004

Headspace Gas

LL010303B

020303A

051303B

051403B

Copies of these batch data reports are included in Attachment 3.

AK and the auditable record were reviewed in detail for Summary Category Group S5000 waste streams. The AK record was reviewed to demonstrate that the required information was present and correctly interpreted. The batch data reports cited above were used to demonstrate confirmation of AK, reconcile DQOs, prepare a WSPF, and transmit data to WIPP using the WWIS.

WSPFs SR-W027-221H-HET and SR-W027-FB-Pre86-C and the summarized characterization information related to them were reviewed to establish the objective evidence for reporting waste characterization information to WIPP. The form was completed using information from current characterization processes. As required, an actual WSPF was prepared and submitted to CBFO prior to waste shipment. The form was reviewed and approved by the CBFO when the waste stream had been fully characterized and the site was approved to ship waste.

5.2.2 Table B6-2 Solids and Soils/Gravel Sampling Checklist

No solids or soils/gravel waste streams are currently being processed at SRS. These areas were not audited, therefore, no SRS S3000 or S4000 waste will be accepted for disposal at WIPP until the procedures and processes have been audited and accepted by CBFO and a final audit report for those processes has been approved by NMED.

5.2.3 Table B6-3 Acceptable Knowledge Checklist

This audit was performed to assess the ability of SRS/CCP to characterize Summary Category Group S5000 retrievably stored debris waste streams. Items on the AK checklist are intended to ensure that SRS/CCP has an AK process in place to:

- Train data collection personnel
- Assemble data into a coherent narrative that describes the waste generation process and constituents of the waste
- Segregate the waste into like waste streams
- Provide Resource Conservation and Recovery Act (RCRA) characterization for the waste streams
- Confirm characterizations using testing and sampling and analysis
- Provide an auditable set of records to support the characterization

The audit team reviewed AK summary reports CCP-AK-SRS-4 (for waste stream SR-W027-221H-HET, SR-W026-221H-HET-A, SR-W026-221H-HET-B), and CCP-AK-SRS-1 (for waste stream SR-W026-772F-HET).

The following AK procedures were evaluated:

- CCP-TP-002, *CCP Reconciliation of DQOs and Reporting Characterization Data*
- CCP-TP-005, *CCP Acceptable Knowledge Documentation*
- CCP-TP-030, *CCP TRU Waste Certification and WWIS Data Entry*

The audit team reviewed AK Summary documentation contained in the auditable record and container-specific information. Traceability of the AK documentation was accomplished by a review of CCP-AK-SRS-4 and CCP-AK-SRS-5. The summary documents and supporting documentation identify the waste stream and point of generation for the containers.

Several of the references were selected to ensure that they are included in the auditable record and to ascertain if the source documents support AK determinations. These sources include such items as published reports, process flow diagrams, interviews with site personnel concerning the use of hazardous materials, and reports of previous waste characterization sampling and analysis efforts. The review of these references resulted in a determination that limitations of the AK documentation have been documented as required by the WAP.

The AK process was evaluated by reviewing AK Summaries CCP-AK-SRS-4 and CCP-AK-SRS-5. The auditable record was searched to ensure that the cited references were available and that the reviewer could reach the same hazardous waste determination as presented in the AK summary. Information from the debris waste stream was selected and the AK information was traced from the summary through the AK source document reviews to the original records. The information for containers SR164766, SR175522, SR100527, and SR164774 was traced to verify characterization as determined by the AK. The information was available in the record files and supported the AK determination. The AK process includes provisions to identify and resolve any waste stream information that conflicts with what is expected (confirmation processes).

Additional documentation supporting AK summary documents and AK source document review summaries are contained in Attachment 3 to support the entries in Table B6-3.

WSPFs SR-W027-221H-HET and SR-W027-FB-Pre86-C and the information related to them were reviewed as objective evidence of the process for reporting characterization information to WIPP. Procedure *CCP Reconciliation of DQOs and Reporting Characterization Data* was evaluated during the audit.

The cited procedures are used to assemble, evaluate, document, and reconcile testing and sampling and analysis results. The audit team reviewed the procedures for adequacy during the audit and assessed their implementation.

Reports and records used to document the basis of the AK process were evaluated and copies of pages used for objective evidence are included in Attachment 3. The reports were determined to be satisfactory and the QA records properly maintained. The AK documentation reviewed is included in Attachment 3.

Three conditions adverse to quality (CDAs 1, 2, and 3) were identified by the audit team: 1) There were several errors and/or inconsistencies in AK Summary Report CCP-AK-SRS-4; 2) Attachment 5 for waste stream SR-W027-221H-HET is not consistent

with the text in the AK summary report regarding the expectation of polychlorinated biphenyls (PCBs) in this waste stream; and 3) Attachment 7, the list of radionuclides for waste stream SR-W027-221H-HET, is not consistent with a corresponding table in the AK summary report. The CDAs are described in detail in Section 6.2.

The audit team concluded that the SRS/CCP AK process is adequate and satisfactorily implemented, and effective.

5.2.4 B6-4 Headspace Gas Checklist

The CCP procedures governing on-line sampling and analysis activities and data review and validation included:

CCP-TP-007, CCP Single Sample Manifold Headspace Gas Sampling and Analysis Procedure

CCP-TP-009, CCP Single Sample Manifold Data Handling Procedure

CCP-TP-029, CCP Single-Sample Manifold Headspace Gas Sampling and Analysis Methods and Equipment Calibration

CCP-TP-032, CCP Single Sample Manifold Data Validation Procedure

HSG sampling and analysis activities were evaluated by reviewing the sampling equipment, observing sampling and analysis activities, and reviewing available HSG batch data reports. Sampling and analytical batch data reports are combined into a single report. Batch data reports were reviewed to evaluate sampling and analysis results against WAP requirements.

Documentation specific to these activities (e.g., calibration records, maintenance logbooks, and instrument logbooks) was reviewed to ensure that the mobile operations met QA requirements, as specified in the WAP.

The SRS/CCP HSG sampling is being accomplished using a single-sample manifold system. The system automatically penetrates the drum using a specially designed, self-drilling, self-tapping hollow-core filter vent. The filter or plug is installed in a socket inside the glovebox powerhead prior to drum processing. Samples are collected when the powerhead assembly bores through the drum lid and lowers the filter to sample depth. At sample depth, a flow path is created from inside the plastic drum liner and the annular space, through a hollow, fluted filter vent stem, and into the seal housing inlet port of the sample manifold. The system utilizes a photoionization detector (PID) (to determine cleanliness), purge gas (pure nitrogen), and calibrated pressure/vacuum gauges. Additional detail describing the sampling system is included in the CCP QAPjP and procedure CCP-TP-007, *CCP Single Sample Manifold Headspace Gas Sampling and Analysis Procedure*.

Sample collection is assessed by collecting QC samples and evaluating the data against specific quality assurance objectives (QAOs). Sample collection and analysis is controlled by procedure CCP-TP-007. The review of the results to ensure they meet program QAOs is controlled by procedure CCP-TP-032, *CCP Single Sample Manifold*

Data Validation Procedure. Sampling QAOs are assessed after the QC samples have been analyzed and are documented in the analytical batch data report.

A review of the batch data report verified compliance with the WIPP WAP requirements and that the SRS/CCP plans and procedures successfully implement requirements in both the technical and QA areas. Pages from the batch data report that serve as objective evidence for implementation of activities required by the B6-4 checklist are provided in Attachment 3.

Three concerns were identified during the audit: relative retention times (RRT) were not performed, and the On-Line Headspace Gas Sampling and Analysis Project Level Validation Checklist and Summary had incorrect information (CDAs 4 and 5). In addition, one Recommendation was offered for SRS/CCP management consideration (Recommendation 1). The CDAs and Recommendation are presented in Sections 6.2 and 7.2, respectively.

The audit team concluded that the SRS/CCP HSG sampling and analysis processes are adequate, satisfactorily implemented, and effective.

5.2.5 Table B6-5 Radiography Checklist

This audit was performed to assess the ability of SRS/CCP to characterize Summary Category Group S5000 retrievably stored debris waste. SRS/CCP radiography operations are performed using a real-time system, which meets the system specifications identified in the WAP. SRS/CCP has controls to allow the operator to enhance the image quality of the radiograph, provide narration with the video, rotate the drum as it is imaged, enlarge the image, and pan up and down the container. The system allows personnel to view drums while recording the examination on an audio/videotape.

The Table B6-5, Radiography Checklist, was completed by assessing the following operating procedures:

- CCP-TP-0011, *CCP Radiography Inspection Operating Procedure*
- CCP-TP-028, *CCP Radiographic Test and Training Drum Requirements*

During audit team activities, RTR operations were observed, videotapes were reviewed, the RTR of drum number SR118889A was observed, and the documentation resulting from these activities was evaluated. Batch data reports SRRT0533, SRRT0590, SRRT0602 and SRRT0688, were reviewed and are included in Attachment 3.

The batch data reports were reviewed to evaluate SRS/CCP's compliance with CCP-TP-011, *CCP Radiography Inspection Operating Procedure*. The procedure controls the data generation-level independent technical review, the technical supervisor review, and the QA officer review. The batch data report reviews conducted to the

requirements of the procedure were found to be in compliance with the WAP requirements for data generation level review.

Training course materials and the RTR test drums (no specific drum numbers) were reviewed to ensure they are in accordance with WAP requirements. Training files were reviewed for operators to verify that individuals responsible for performing the radiography of drums have been properly trained and qualified.

Radiography equipment maintenance and daily checks were evaluated in accordance with WAP requirements and the RTR procedures and were concluded to be properly implemented. Radiographic results are being properly reported on standard forms and reviewed, as required by the WAP. Copies of the forms are included in the batch data reports in Attachment 3.

The audit team concluded that the SRS/CCP radiography processes are adequate, satisfactorily implemented, and effective.

5.2.6 Table B6-6 Visual Examination Checklist

This audit was performed to assess the ability to characterize Summary Category Group S5000 retrievably stored debris waste streams. The SRS/CCP VE process was evaluated to determine the effectiveness of VE as a confirmation of the RTR process and as a characterization method that can be used in lieu of RTR. VE performed as a confirmation of RTR or in lieu of RTR is recorded on audio/videotape and the results are documented on standard forms in accordance with the following procedures:

- CCP-TP-003, *CCP Sampling Design and Data Analysis for RCRA Characterization*
- CCP-TP-084, *CCP Removal of Prohibited Items Within transuranic Visual Examination Facility*
- CCP-TP-085, *CCP TVEF Facility Operations*
- CCP-TP-087, *CCP Scale Operations*
- CCP-TP-088, *CCP Disposal Program Data Generation Level review for VE*

SRS/CCP VE activities were evaluated by observing operations, reviewing audio/videotapes, evaluating VE batch data reports, and interviewing VE personnel. The audio/videotapes of the VE for drum numbers SR202749, SR100527, and SR257814 were reviewed by the audit team. Batch data reports SR03-VECCP-002, SR-03-VECCP-004, and SR03-VECCP-005 were also reviewed and are included in Attachment 3.

VE operations at the TRU Visual Examination Facility were evaluated in accordance with CCP-TP-085. Data generated from these VE activities are compiled and reviewed

in accordance with CCP-TP-088. The batch data reports were reviewed to ensure that the information collected using the VE procedure meet the WAP requirements. In addition, the batch data reports were reviewed to verify that the independent technical review, the technical specialist review, and the QA officer review were conducted as defined in Procedure CCP-TP-088. The procedures were found to be adequate in meeting WAP requirements.

The audit team evaluated CCP-TP-003, which is used to randomly select drums to confirm radiography results. It was confirmed that the selection of the drums for VE was random and the drums were selected from the available drum population in accordance with the WAP requirements.

The training course content for operators and VE experts was reviewed to verify that all WAP requirements were included. SRS/CCP VE training requirements are contained in CCP-TP-085. Training files were reviewed for VE experts and operators to verify that individuals responsible for performing the visual examination of drums have been properly trained and qualified.

The VE technique used to characterize waste at the time of packaging or repackaging is currently not being employed by SRS/CCP. This technique was not audited. Waste requiring characterization using the VE technique will not be accepted for disposal at WIPP until the procedures and processes have been audited and accepted by CBFO and a final audit report for those processes has been approved by NMED.

The audit team concluded that the SRS/CCP VE processes are adequate, satisfactorily implemented, and effective.

5.4 General

Results of Previous Audits

The Observations and CARs resulting from SRS/CCP Recertification Audit A-03-01 and Audit A-03-16 (New IQ3 NDA Unit) were examined and it was determined that the conditions identified in the audits had been corrected.

Changes in Programs or Operations

The HWFP portions of the audit were performed in accordance with the latest B6 checklists, which incorporate all the Class 1, Class 2, and Class 3 modifications to the HWFP. SRS had discontinued using their facilities to perform characterization activities (with the exception of VE) prior to the last recertification audit, A-03-01. The last VE activity was on December 5, 2002. All characterization activities are presently being performed by SRS/CCP.

New Programs or Activities Being Implemented

Since the last recertification audit, SRS/CCP has taken over operation of the VE Facility. SRS personnel are performing the actual operations under SRS/CCP direction, using SRS/CCP procedures.

Changes in Key Personnel

No changes in SRS/CCP key personnel have occurred since the last recertification audit. SRS/CCP has certified additional personnel as alternates for the key positions.

6.0 SUMMARY OF DEFICIENCIES

6.1 Corrective Action Reports

During the audit, the audit team may identify Conditions Adverse to Quality (CAQ) and document such conditions on Corrective Action Reports (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 Quality Assurance (QA) program.

No WAP related CARs were initiated during the audit.

6.2 Deficiencies Corrected During the Audit

During the audit, the audit team may identify CAQs. Using the following definitions, the audit team members and the Audit Team Leader (ATL) evaluate the CAQs to determine if they are significant:

CAQ – Term used in reference to failures, malfunctions, deficiencies, defective items, and nonconformances.

Significant CAQ –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 Quality Assurance (QA) program.

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 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 definition below.

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.

The audit team identified five WAP-related CDAs as a result of this audit. They are described in the following paragraphs.

CDA 1

There are several errors and/or inconsistencies in the AK Summary Report CCP-AK-SRS-4:

- Captions for Tables B-1 and B-4 in the table of contents are incorrect.
- Information on expectation for PCBs in waste is inconsistent (p. 60 and p. 82).
- The statement regarding segregation of Mound commercial and defense HSG Pu is incorrect (p. 18).
- Paragraph 3, p. 18, is missing text.
- The report should clarify greater confinement disposal (GCD) inventory (p. 21).

The following changes were made to CCP-AK-SRS-4, Rev. 3, to correct these deficiencies:

- List of Tables: Change Table 8-1 to "...SR-T001-221H-HEPA" and Table 8-4 to "...SR-T001-221H-HEPA."
- Last paragraph in Section 2.0, page 3, delete the words "fiberglass-reinforced."
- In Paragraph 1, Section 4.1.2.1, delete "for National Aeronautics and Space Administration (NASA) programs."
- In Paragraph 3, Section 4.1.4, reword to read "...and then to Idaho, Mound, and LANL, where they were used to fabricate generators."
- Insert following new paragraph in Section 4.2, after the list of three items: "It should be noted that the plan to use GCD for disposal of 10-100 nCi/g waste was not implemented. The waste disposed in GCD was low-level waste and was not managed as TRU waste (References C134, C163, D020)."
- In Table 5-5, for PCBs, change Suspect Present to "N."
- In Section 5.4.3, delete the entire paragraph discussing Non HB-Line Specific Chemical Information.

- In Section 5.5.4, delete “NFT-013 thereafter refer to AK Tracking Spreadsheet (Reference M066)” from the table.
- In Table 7-4, recalculate Cs-137 radionuclide distribution and revise the table (after Cs-137 result for drum HB00048 is corrected).

CDA 2

Attachment 5 for waste stream SR-W027-221H-Het is not consistent with the text in the AK summary report regarding the expectation of PCBs in this waste stream.

SRS/CCP revised Attachment 5 for waste stream SR-W027-221H-HET for consistency with the text in the AK summary report regarding the expectation of PCBs in this waste stream.

CDA 3

In Attachment 7, the list of radionuclides for waste stream SR-W027-221H-Het, is not consistent with a corresponding table in the AK summary report.

SRS/CCP revised Attachment 7 for waste stream SR-W027-221H-HET for consistency with the corresponding table in the AK summary report.

CDA 4

Procedure CCP-TP-029, *CCP Single-Sample Manifold Headspace Gas Sampling and Analysis Methods and Equipment Calibration*, Section 4.9.1 [A.5], states that relative retention times (RRT) will be verified. The operators do not perform this verification, nor is it performed during data validation.

CCP Procedure CCP-TP-032, Revision 11, Draft N, *CCP Single Sample Manifold Data Validation Procedure* (step 55) was added to reflect the following: “Verify RRT is plus or minus 0.06 RT (retention time) units.”

CDA 5

- The Site Project Manager Data Validation Summary checklist (CCP-TP-001-A5), 10th bullet, states: “E flags other than those with J-flags are not allowed.” This statement is incorrect.
- CCP On-Line Headspace Gas Sampling and Analysis Project Level Validation Checklist and Summary, CCP-TP-001, A4, #1, bullet 3, requires verification that a PID calibration was performed; however, what is actually checked is the PID calibration verification.
- CCP On-Line Headspace Gas Sampling and Analysis Project Level Validation Checklist and Summary, CCP-TP-001, A4, makes reference to WAP Table B3-5 throughout the checklist; however, the requirements for HSG are contained in Table B3-3.

SRS/CCP made the following changes to their documents:

- CCP-TP-001-A5, Rev. 2, Draft A, 9th bullet (page 1 of 9) was verified revised to delete the statement “E flags other than those with J flags are not allowed.”
- CCP-TP-001-A4, Rev. 1 Draft A, Headspace Gas Sampling and Analysis Project Level Validation Checklist and Summary, A4, # 1, 3rd bullet (page 1 of 7) was revised to state “was the PID verification acceptable for each drum in the batch.”
- CCP-TP-001-A4, Rev. 1 Draft A, CCP On-line Headspace Gas Sampling and Analysis Project Level Validation Checklist and Summary (pages 1 and 2 of 7) provided as objective evidence), “WAP Reference: Table B3-5” was changed to “WAP reference: Section B3-5.”

7.0 SUMMARY OF OBSERVATIONS AND RECOMMENDATIONS

During the audit, the audit team may identify potential problems or 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 Observations or Recommendations using the following definitions:

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

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

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

7.1 Observations

No WAP-related Observations were provided to SRS and CCP management as a result of the audit.

7.2 Recommendations

The WAP-related Recommendation provided to SRS and CCP management during the audit is discussed below:

Recommendation 1

Recoveries for the On-Line Control Standard (OCS) duplicate are consistently lower than those for the OCS. Since no QC samples are run at the end of each batch, it is recommended that this apparent instrument drift be evaluated.

8.0 LIST OF ATTACHMENTS

- Attachment 1: Personnel Contacted During the Audit and the List of Procedures Audited
- Attachment 2: Corrective Action Supporting Documentation
- Attachment 3: Objective Evidence
- Attachment 4: Audited SRS Implementing Procedures Listing

PERSONNEL CONTACTED DURING THE AUDIT

PERSONNEL CONTACTED DURING AUDIT A-04-01				
NAME	TITLE/ORG	PREAUDIT MEETING	CONTACTED DURING AUDIT	POST AUDIT MEETING
Barlow, John	NFT; VE Operator		X	
Bickerstaff, Sheila	CCP/L&M; Lead Records Custodian	X	X	X
Bolland, Brian	NFT; VE Operator		X	
Carter, Mitch	SWI/Ops; Eng & Tech Support Specialist		X	
Crapse, Bert	DOE-SR; TRU Program Manager	X		X
Fisher, Albert J.	CCP QA Manager	X	X	X
Fleissner, John	MCS; Tech Dir	X	X	
Fox, Lee	SRS; STR	X	X	X
Freeze, Deborah	WTS/CCP; Training Specialist	X	X	X
Fuller, Gaylon	CAST/Transportation; Manager		X	
Fussell, George (Buddy)	CCP/NFT; VPM	X		X
Galle, Lane	National Certification; MLU Ops		X	
Haar, Dave	CCP Program Manager		X	
Harrison, Jeff	Wastren/CCP; AKE		X	
Hunt, Paul	SWD Deputy Ops. Manager	X		X
Kelly, Artis	SWO; Pad #3 First Line Manager		X	
Kokovich, Mark	SWI/Ops; Ops. Manager	X	X	
Lavallee, Leah	SWO; TCO		X	

PERSONNEL CONTACTED DURING AUDIT A-04-01				
NAME	TITLE/ORG	PREAUDIT MEETING	CONTACTED DURING AUDIT	POST AUDIT MEETING
Ledbetter, Linda	NFT; VE Operator		X	
Leschak, William	BNFL/SWQA/SWD; SPQAO		X	
Mackmull, Steve	DOE SR; SR Program Manager	X		X
McCants, Natasha	NFT/CCP; HSG Supervisor	X	X	
McTaggart, Jerri	LANL/CCP; AKE		X	
Melton, Jessie	WTS/CCP; CCP HSG SME	X		X
Mobley, James C.	NFT; VEE	X	X	
Muse, Steve	CCP/WTS; SPQAO	X	X	
Mussman, Karen Tracy	MCS/CCP; Records Custodian		X	
Pennala, Eric	CCP/MCS GM	X		
Peterman, Sue	CCP/WTS; SPM		X	X
Peters, Kevin	Tech Specs/CCP; AKE		X	
Peterson, Tom	CCP; NDA Tech Support	X	X	
Redd, Jennifer	NFT/CCP; HSG TS/FQAO		X	
Redmond, Robert S (Steve)	NFT; RCO		X	
Rivas, Chris	SWO; Pad 3 Manager		X	
Sharif, Farok	WTS; NTP Manager	X	X	
Shepley, Todd	MCS; GM	X	X	
Simpson, Alan	BNFL/CCP; NDA Tech Support		X	
Smith, Barry L.	MCS/CCP; NDA Operator		X	

PERSONNEL CONTACTED DURING AUDIT A-04-01				
NAME	TITLE/ORG	PREAUDIT MEETING	CONTACTED DURING AUDIT	POST AUDIT MEETING
Smith, E. Lee	CCP MCS RTR-TS/SME	X	X	
Smith, Susan	MCS/CCP/NDE		X	
Stepzinski, Chuck	CCP/L&M; Doc Services	X	X	X
Stoller-Hardy, Shauna	NFT/CCP; HSG Operator		X	
Stroble, J. R.	WTS/CCP; WCO	X	X	
Thomason, Rich	MCS; IQ3 TS and ETR		X	
Tillman, Richard	SRS/QA; Manager		X	
Trapp, Donald	SRTC/EESD; Level III Leak Test		X	
Webb, Marsha	WTS/CCP; SPQAO	X		
West, John	BNFL; NDA Expert Analyst		X	
Whitson, Ronald K.	MCS; NDA Operator		X	
Wooldridge, F. D.	SWI/Ops; TCO		X	

Personnel Contacted During the Audit by Area

Nonconformances	A. J. Fisher Steve Muse
Training	Deborah Freeze
Records	Sheila Biekerstaff Chuck Stepzinski Natasha Williams
Acceptable Knowledge	David Haar Jeff Harrison Jerri Metaggart Kevin Peters Farok Sharif Sue Peterman
Headspace Gas & Gas VOCs Sampling and Analysis	Natasha McCants Jennifer Redd Shauna Stotler-Hardy
Real-Time Radiography	Karen Tracy Mussman Susan J. Smith E. Lee Smith
Visual Examination	John Barlow Brian Bolland Linda Ledbetter James Mobley Robert S(Steve) Redmond
WIPP Waste Information System (WWIS Data Entry)	J. R. Stroble
Waste Certification/Project Level & Data Generation Level Data Validation & Verification	Sue Peterman A. J. Fisher

LISTING OF AUDITED DOCUMENTS

	Document No.	Document Title
1.	CCP-TP-001	CCP Project Level Data Validation and Verification
2.	CCP-TP-002	CCCP Reconciliation of DQOs and Reporting Characterization Data
3.	CCP-TP-003	CCP Sampling Design and Data Analysis for RCRA Characterization
4.	CCP-TP-005	CCP Acceptable Knowledge Documentation
5.	CCP-TP-007	CCP Single Sample Manifold Headspace Gas Sampling and Analysis Procedure
6.	CCP-TP-009	CCP Single Sample Manifold Data Handling Procedure
7.	CCP-TP-011	CCP Radiography Inspection Operating Procedure
8.	CCP-TP-028	CCP Radiographic Test and Training Drum Requirements
9.	CCP-TP-029	CCP Single-Sample Manifold Headspace Gas Sampling and Analysis Methods and Equipment Calibration
10.	CCP-TP-030	CCP TRU Waste Certification and WWIS Data Entry
11.	CCP-TP-032	CCP Single Sample Manifold Data Validation Procedure
12.	CCP-TP-035	CCP Container Management
13.	CCP-TP-084	CCP Removal of Prohibited Items Within Transuranic Visual Examination Facility
14.	CCP-TP-085	CCP TVEF Facility Operations
15.	CCP-TP-087	CCP Scale Operations
16.	CCP-TP-088	CCP Disposal Program Data Generation Level Review for VE
17.	CCP-PO-001	CCP Transuranic Waste Characterization Quality Assurance Project Plan
18.	CCP-PO-002	CCP Transuranic Waste Certification Plan
19.	CCP-PO-004	CCP/SRS Interface Document
20.	CCP-PO-005	CCP Central Characterization Project Remote Facility Conduct of Operations
21.	CCP-PO-008	CCP Quality Assurance Administrative Program
22.		Statement of Work IE8863 for Characterization of SRS TRU Waste
23.	CCP-QP-002	CCP Training and Qualification Plan
24.	CCP-QP-004	CCP Corrective Action Management
25.	CCP-QP-005	CCP TRU Nonconforming Item Reporting and Control
26.	CCP-QP-006	CCP Corrective Action Reporting and Control
27.	CCP-QP-008	CCP Records Management
28.	CCP-QP-028	CCP Records Filing, Inventorying, Scheduling, and Dispositioning