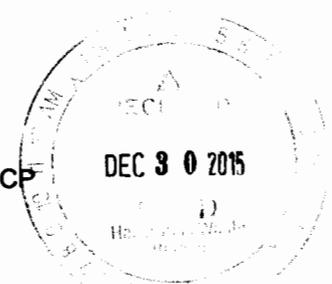




United States Government

Department of Energy

# memorandum

 Carlsbad Field Office  
 Carlsbad, New Mexico 88221


DATE: DEC 30 2015

REPLY TO  
ATTN OF: CBFO:OQA:DSM:BA:15-2607:UFC 2300.00

SUBJECT: Transmittal of the Interim Audit Report for Recertification Audit A-16-02 of the SRS/CCP

TO: Mr. Dan Ferguson, DOE-SR

The Carlsbad Field Office (CBFO) conducted Recertification Audit A-16-02 of the Savannah River Site Central Characterization Program (SRS/CCP) December 3 - 4, 2015. The CBFO Interim Audit Report is attached.

The audit team concluded that SRS/CCP implementing procedures are adequate relative to the flow-down of requirements, and that the SRS/CCP quality assurance and technical requirement activities evaluated are satisfactorily implemented and effective in the areas evaluated.

No concerns were issued as a result of this audit.

If you have any questions or comments concerning the report, please contact me at (575) 234-7491.

Dennis S. Miehl  
Senior Quality Assurance Specialist

## Attachment

cc: w/attachment

S. Ross, EM-43 \*ED  
 T. Shrader, CBFO ED  
 D.C. Gadbury, CBFO ED  
 M. Brown, CBFO ED  
 M. Navarrete, CBFO ED  
 M. Hernandez, CBFO ED  
 J.R. Stroble, CBFO ED  
 G. Birge, CBFO ED  
 T. Carver, CBFO ED  
 N. Castaneda, CBFO ED  
 P. Briedenbach, NWP ED  
 J. Blankenhorn, NWP ED  
 J. Britain, NWP ED  
 F. Sharif, NWP ED  
 D.E. Gulbransen, NWP ED  
 R. Reeves, NWP ED  
 A.J. Fisher, NWP ED  
 I. Joo, NWP ED  
 J. Carter, NWP ED  
 V. Cannon, NWP ED  
 B. Allen, NWP ED  
 S. Punchios, NWP ED

A. Boyea, NWP ED  
 T. Peake, EPA ED  
 L. Bender, EPA ED  
 E. Feltcorn, EPA ED  
 R. Joglekar, EPA ED  
 J. Kieling, NMED ED  
 S. Holmes, NMED ED  
 R. Maestas, NMED ED  
 C. Smith, NMED ED  
 D. Winters, DNFSB ED  
 V. Daub, CTAC ED  
 P. Martinez, CTAC ED  
 B. Pace, CTAC ED  
 R. Allen, CTAC ED  
 P. Y. Martinez, CTAC ED  
 D. Harvill, CTAC ED  
 G. White, CTAC ED  
 Site Documents ED  
 WWIS Database Admin ED  
 CBFO QA File  
 CBFO M&RC

\*ED denotes electronic distribution

151218



U.S. DEPARTMENT OF ENERGY  
CARLSBAD FIELD OFFICE

INTERIM AUDIT REPORT  
OF THE  
SAVANNAH RIVER SITE  
CENTRAL CHARACTERIZATION PROGRAM

FOR  
WASTE CHARACTERIZATION ACTIVITIES IN ACCORDANCE WITH  
THE WASTE ISOLATION PILOT PLANT HAZARDOUS WASTE  
FACILITY PERMIT

CARLSBAD, NEW MEXICO

AUDIT NUMBER A-16-02

DECEMBER 3 – 4, 2015



Prepared by:

*Priscilla Y. Martinez*

Priscilla Y. Martinez, CTAC  
Audit Team Leader

Date:

12-30-15

Approved by:

*Michael R. Brown*

Michael R. Brown, Director  
CBFO Office of Quality Assurance

Date:

12/30/2015

## **1.0 EXECUTIVE SUMMARY**

U.S. Department of Energy (DOE) Carlsbad Field Office (CBFO) Recertification Audit A-16-02 was performed to evaluate the adequacy, implementation, and effectiveness of Savannah River Site (SRS) transuranic (TRU) waste characterization activities performed by the Nuclear Waste Partnership LLC (NWP), Central Characterization Program (CCP) for contact-handled (CH) Summary Category Groups (SCGs) S3000 homogeneous solids waste, S4000 soils/gravel waste, and S5000 debris waste, and remote-handled (RH) SCG S5000 debris waste. The audit was based on requirements relative to the Waste Isolation Pilot Plant (WIPP) Hazardous Waste Facility Permit (HWFP), the *Transuranic Waste Acceptance Criteria for the Waste Isolation Pilot Plant (WAC)*, and the *CBFO Quality Assurance Program Document (QAPD)*. The audit was performed in the Skeen-Whitlock Building in Carlsbad, New Mexico, December 3 – 4, 2015.

TRU waste characterization activities at the SRS have been suspended and no characterization field activities have occurred since the previous recertification audit (A-15-02, conducted November 4 – 6, 2014). The results of this audit have confirmed that CCP operations at the SRS continue to be in a state of suspension. The activities performed after the previous recertification audit involved revisions to documents relative to radiological characteristics of waste.

Due to the limited scope of this audit and inactivity since Audit A-15-02, the audit team was unable to determine the overall adequacy, implementation, and effectiveness of SRS/CCP waste characterization activities.

However, the audit team reviewed document revisions made since the last audit (A-15-02) relative to acceptable knowledge and dose-to-curie associated with radiological characteristics of waste. Additionally, WAP-specified quality assurance (QA) elements established for the control of personnel qualification and training, documents and records, and nonconformance reporting were examined.

Once waste characterization field activities resume at the SRS, CBFO will conduct a recertification audit as a basis for reinstating authority to perform waste characterization activities and resume waste shipments from SRS to the WIPP.

## 2.0 SCOPE AND PURPOSE

### 2.1 Scope

The audit team evaluated documentation to verify adequacy, implementation, and effectiveness of the SRS/CCP TRU waste characterization and certification activities for CH SCGs S3000 homogeneous solids waste, S4000 soils/gravel waste, and S5000 debris waste, and RH SCG S5000 debris waste. The following elements, as applicable to the activities performed, were evaluated:

#### General

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

#### Quality Assurance

Personnel Qualification and Training  
Nonconformances  
Records

#### Technical

Project-Level Data Validation and Verification (PL V&V)  
Acceptable Knowledge (AK)  
Real-time Radiography (RTR)  
Visual Examination (VE)  
Nondestructive Assay (NDA)  
Dose-to-Curie (DTC)  
WIPP Waste Information System/Waste Data System (WWIS/WDS)

The evaluation of the adequacy of SRS/CCP documents was based on current revisions of the following documents:

- Waste Isolation Pilot Plant Hazardous Waste Facility Permit NM4890139088-TSDF
- *CBFO Quality Assurance Program Document*, DOE/CBFO-94-1012

Programmatic and technical checklists were developed from the current revisions of the following documents:

- *CCP Transuranic Waste Characterization Quality Assurance Project Plan*, CCP-PO-001
- *CCP Transuranic Waste Certification Plan*, CCP-PO-002
- Related technical and quality assurance (QA) implementing procedures

## **2.2 Purpose**

This audit was conducted to assess the SRS/CCP level of compliance to the requirements of the WIPP HWFP and the CBFO QAPD in performing waste characterization and certification activities for CH SCGs S3000 homogeneous solids waste, S4000 soils/gravel waste, S5000 debris waste, and RH SCG S5000 debris waste, as applicable to the activities performed.

## **3.0 AUDIT TEAM**

|                       |  |
|-----------------------|--|
| Dennis Miehl          | CBFO Quality Assurance Management Representative               |
| Priscilla Y. Martinez | Audit Team Leader, CBFO Technical Assistance Contractor (CTAC) |
| Richard Blauvelt      | Technical Specialist, CTAC                                     |
| Jim Oliver            | Technical Specialist, CTAC                                     |
| Judith Stewart        | Technical Specialist, CTAC                                     |

## **4.0 AUDIT PARTICIPANTS**

The individuals contacted during the audit are identified in Attachment 1. A pre-audit meeting was held in room T-224 at the Skeen-Whitlock Building in Carlsbad, New Mexico, on December 3, 2015. The audit was concluded with a post-audit meeting held in room T-224 at the Skeen-Whitlock Building in Carlsbad, New Mexico, on December 4, 2015.

Attachment 2 provides the current status of the SRS/CCP waste characterization processes and equipment list. Audit activities are described below.

## **5.0 SUMMARY OF AUDIT RESULTS**

### **5.1 Program Adequacy, Implementation, and Effectiveness**

This audit was performed to assess the ability of SRS/CCP to characterize CH SCGs S3000 homogeneous solids waste, S4000 soils/gravel waste, S5000 debris waste, and RH SCG S5000 debris waste to the requirements specified in the WIPP HWFP WAP and the CBFO QAPD. The scope of the audit included the evaluation of the following waste characterization methods: AK, RTR, VE, DTC, and NDA. Other areas evaluated were PL V&V and WWIS/WDS data entry.

The audit team concluded that no waste characterization field activities for CH SCGs S3000 homogeneous solids waste, S4000 soils/gravel waste, S5000 debris waste, and RH SCG S5000 debris waste have been performed by SRS/CCP during the past year; thus, all waste characterization field activities have been deemed indeterminate.

## **5.2 General**

### **5.2.1 Results of Previous Audits**

The results of CBFO Recertification Audit A-15-02 of SRS/CCP were examined. The audit team verified that no waste characterization field activities have been performed by SRS/CCP since the previous audit. Therefore, the adequacy, implementation, and effectiveness of all waste characterization field activities at the SRS remain indeterminate.

### **5.2.2 Changes in Programs or Operations**

No waste characterization field activities have been performed by SRS/CCP since the previous audit; therefore, there have been no changes in programs or operations.

As reported in the previous audit report (A-15-02), "CCP has suspended operations at SRS for an indefinite period. As a result of interviews, RTR Unit #4 and both FGA units will be shipped off-site and likely used elsewhere in the complex, and host site owned equipment, such as the NDA Box Neutron Assay System (BNAS) and the Large Container Non-Destructive Examination (LCNDE) unit will be placed out-of-service and in a safe configuration."

The BNAS and LCNDE units were returned to SRS (the equipment owner) in October 2014. The flammable gas analysis (FGA) units were disassembled and shipped off site, and the RTR Unit #4 was returned to the vendor (VJ Technologies).

### **5.2.3 New Programs or Activities Being Implemented**

No waste characterization field activities have been performed by SRS/CCP since the previous audit; therefore, there have been no new programs or activities implemented.

### **5.2.4 Changes in Key Personnel**

No waste characterization field activities have been performed by SRS/CCP since the previous audit; therefore, there have been no changes in key personnel.

## **5.3 WAP-Related Quality Assurance Activities**

The scope of the audit included the evaluation of QA elements for personnel qualification and training, QA records, and control of nonconformances to requirements applicable to the WIPP HWFP WAP and the CBFO QAPD. The evaluation results for each area audited are described below.

### 5.3.1 Nonconformances

The audit team conducted interviews with responsible personnel and verified no waste characterization field activities have been performed by SRS/CCP since the previous audit.

The audit team verified that the SRS/CCP complies with the requirements of CBFO QAPD Section 1.3, Quality Improvement. The audit team conducted interviews with the resident QA Engineer and reviewed implementing procedure CCP-QP-005, Rev. 25, *CCP TRU Nonconforming Item Reporting and Control*, to determine the degree to which the procedure adequately addresses upper-tier requirements. The results of the review indicate that the referenced procedure adequately addresses upper-tier requirements.

The team interviewed the project office QA Engineer and examined two nonconformance reports (NCRs) documented since the last audit (A-15-02):

NCR-SRS-0329-15, R0

NCR-SRS-0380-14, R1

The team concluded that deficiencies are being appropriately documented and tracked through resolution, as required. The NCRs documented deficiencies applicable to Drum Age Criteria (DAC) values. These NCRs were verified as not reportable to the Permittee within seven days, as required by the Permit.

No nonconformance concerns were identified. The procedures reviewed and objective evidence assembled and evaluated during the audit indicate that the applicable requirements for nonconformance reporting are adequately established for compliance with upper-tier requirements, satisfactory in the implementation of these requirements, and effective in achieving the desired results for the activities performed since the previous audit (A-15-02).

### 5.3.2 Personnel Qualification and Training

The audit team conducted interviews with responsible personnel and verified no waste characterization field activities have been performed by SRS/CCP since the previous audit.

The audit team verified that the SRS/CCP complies with the requirements of CBFO QAPD Section 1.2, Personnel Qualification and Training. The audit team conducted interviews with responsible personnel and reviewed implementing procedure CCP-QP-002, Rev. 39, *CCP Training and Qualification Plan*. The results of the review indicate that the referenced procedure adequately addresses upper-tier requirements.

Personnel qualification and training records for the following applicable positions were reviewed: CH waste and RH waste Acceptable Knowledge Expert (AKE), Site Project Manager (SPM), and DTC Operator/Independent Technical Reviewer. The results of the review indicate that the referenced personnel are adequately trained to accomplish their respective tasks.

No personnel qualification and training concerns were identified. The procedures reviewed and objective evidence assembled and evaluated during the audit indicate that the applicable requirements for personnel qualification and training are adequately established for compliance with upper-tier requirements, satisfactory in the implementation of these requirements, and effective in achieving the desired results for the activities performed since the previous audit (A-15-02).

### **5.3.3 Records**

The audit team conducted interviews with responsible personnel and verified no waste characterization field activities have been performed by SRS/CCP since the previous audit.

The audit team verified that the SRS/CCP complies with the requirements of CBFO QAPD Section 1.5, Records. The audit team conducted interviews with responsible personnel and reviewed implementing procedures CCP-QP-008, Rev. 23, *CCP Records Management*, and CCP-QP-028, Rev. 16, *CCP Records Filing, Inventorying, Scheduling, and Dispositioning*, regarding control and administration of QA records. The results of the review indicate that the referenced procedures adequately address upper-tier requirements.

The audit team verified that the records evaluated were retrievable, legible, accurate, and properly completed and maintained. Record changes were appropriately performed with a single line-out, entering the change, and initialing and dating each change. Records are maintained in fire-rated filing cabinets and electronically on designated CCP servers. Control of QA records was verified through review of the CH Records Inventory and Disposition Schedule (RIDS) dated 07/30/2015, and the RH RIDS dated 07/16/2015.

No records concerns were identified during the audit. The procedures reviewed and objective evidence assembled and evaluated during the audit indicate that the applicable requirements for records are adequately established for compliance with upper-tier requirements, satisfactory in the implementation of these requirements, and effective in achieving the desired results for the activities performed since the previous audit (A-15-02).

### **5.4 Technical Activities**

The scope of the audit included the evaluation of technical elements for characterizing CH SCGs S3000 homogeneous solids waste, S4000 soils/gravel waste, and S5000 debris waste, and RH SCG S5000 debris waste in accordance with applicable requirements in the WIPP HWFP WAP and the CBFO QAPD. The evaluation results for each area audited are described below.

#### **5.4.1 Project-Level Data Validation and Verification**

The audit team conducted interviews with responsible personnel and verified no waste characterization field activities have been performed by SRS/CCP since the previous audit. Accordingly, the applicable requirements for generation and project-level data validation and verification were deemed indeterminate and will require a full evaluation as part of a recertification audit before waste characterization and certification activities resume at the SRS.

#### **5.4.2 Acceptable Knowledge**

The audit team conducted interviews with responsible personnel and verified no waste characterization field activities have been performed by SRS/CCP since the previous audit.

The audit team reviewed documentation for CH TRU mixed waste in SCG S5000 debris during this audit. Only two waste streams required revisions to the AK summary reports, and no waste characterization has occurred since the last recertification audit; therefore, CH TRU mixed waste in SCGs S3000 solids and S4000 soils/gravel, as well as the RH TRU mixed waste for SCG S5000 debris, were not evaluated. In both cases, the revisions made were to the radiological characteristics of the waste stream based upon the certified NDA results. AK audit staff specifically addressed the WAP requirements listed on the C6-1 and C6-2 checklists. Objective evidence was reviewed and compiled to demonstrate compliance with each of the applicable requirements on these checklists. The team also reviewed the AK record with respect to relevant requirements of the CH WAC, as documented in the CCP AK procedure CCP-TP-005, *CCP Acceptable Knowledge Documentation*, Rev. 26. A WAC checklist was used to document the objective evidence reviewed and compiled to demonstrate compliance with the WAC requirements.

The audit team reviewed the latest revision to the AK summary reports for two waste streams representing SCG S5000. The AK summary reports and respective waste stream designations are CCP-AK-SRS-12 for waste stream SR-SWMF-HET-B, and CCP-AK-SRS-13 for waste stream SR-SDD-HET-A. Several AK source documents were reviewed to establish support for the waste stream descriptions and parameters noted in the AK summaries. The audit team also reviewed information in the AK summary reports and AK source documents that addressed the eight WAP TRU waste programmatic requirements, the twelve TRU waste stream-specific requirements, and examples of additional AK compiled as required.

The audit team also examined the respective AK documentation from the following CCP-TP-005 attachments: AK Documentation Checklist - Attachment 1; the AK Information Lists - Attachment 4; the AK Hazardous Constituents Lists - Attachment 5; the respective AK Waste Form, Waste Material Parameters, Prohibited Items and Packaging - Attachment 6, along with the justification memoranda for waste material parameter weight estimates; the Radionuclides List - Attachment 7, and AK/NDA memoranda for the CH waste streams; and the AK Waste Container Lists -

Attachment 8, along with applicable add-container memoranda that document the examination of waste container contents before the drum is added to the target waste stream.

Examples of the resolution of AK discrepancies in the AK record and discrepancy resolution at characterization, along with AK re-evaluation forms, were also reviewed and added to the AK objective evidence. Particular attention was given to the impact of AK reevaluations on the AK accuracy reports for the applicable waste stream.

With regard to non-compliant waste containers, the auditors examined several NCRs dealing with prohibited items and compiled objective evidence of container inspection prior to the start of CCP characterization. The WAP-required container traceability exercise was not conducted by the AK audit team as no waste has been characterized since the previous recertification audit. Several Waste Stream Characterization Checklists and supporting data were also examined and compiled.

QA requirements of the AK process and AK records were reviewed by the designated team member. Training records for AKEs and SPMs, based upon names provided by the AK technical specialist, were examined and compiled. The AK NCR process was reviewed. In addition, document control was examined with respect to preparation, review, correction, approval, and maintenance. The AK quality assurance objective of precision was evaluated through the review of relevant internal surveillances.

No concerns were identified during the audit. The procedures reviewed and objective evidence assembled and evaluated during the audit provided evidence that the applicable requirements for the acceptable knowledge activities 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 Real-time Radiography**

The audit team conducted interviews with responsible personnel and verified no waste characterization field activities have been performed by SRS/CCP since the previous audit. Accordingly, the applicable requirements for real-time radiography were deemed indeterminate and will require a full evaluation as part of a recertification audit before waste characterization and certification activities resume at the SRS.

#### **5.4.4 Visual Examination**

The audit team conducted interviews with responsible personnel and verified no waste characterization field activities have been performed by SRS/CCP since the previous audit. Accordingly, the applicable requirements for visual examination were deemed indeterminate and will require a full evaluation as part of a recertification audit before waste characterization and certification activities resume at the SRS.

#### **5.4.5 Nondestructive Assay**

The audit team conducted interviews with responsible personnel and verified no waste characterization field activities have been performed by SRS/CCP since the previous audit. Accordingly, the applicable requirements for nondestructive assay were deemed indeterminate and will require a full evaluation as part of a recertification audit before waste characterization and certification activities resume at the SRS.

#### **5.4.6 Dose-to-Curie**

The audit team conducted interviews with responsible personnel and verified no waste characterization field activities have been performed by SRS/CCP since the previous audit. Accordingly, the applicable requirements for dose-to-curie were deemed indeterminate and will require a full evaluation as part of a recertification audit before waste characterization and certification activities resume at the SRS.

The audit team evaluated the adequacy, implementation, and effectiveness of the DTC method at SRS/CCP used to quantify RH TRU waste.

A total of 18 DTC batch data reports (BDRs) were examined during the audit. Two of these BDRs reflected dates since the previous audit in November 2014 (A-15-02). The remaining BDRs were examined due to changes or corrections resulting from the modification of the scaling factors and the disposition of associated NCRs.

The 2 BDRs reflecting dates since the previous audit included:

SRSRHDT14001  
SRSRHDT14002

The remaining 16 BDRs reflecting changes or corrections resulting from the disposition of NCRs included:

|              |              |
|--------------|--------------|
| SRSRHDT11003 | SRSRHDT12001 |
| SRSRHDT12002 | SRSRHDT12003 |
| SRSRHDT13001 | SRSRHDT13002 |
| SRSRHDT13003 | SRSRHDT13004 |
| SRSRHDT13005 | SRSRHDT13006 |
| SRSRHDT13007 | SRSRHDT13008 |
| SRSRHDT13009 | SRSRHDT13010 |
| SRSRHDT13011 | SRSRHDT13012 |

In total, the 18 BDRs documented the measurement controls, the measurement acquisition, and the subsequent conversion of the dose measurement into curie quantities of the radionuclides of interest for approximately 173 drums.

DTC measurements were not performed at SRS since the previous audit in November 2014 (A-15-02).

The audit team reviewed the following Radiological Characterization Technical Reports (including referenced and cited documents and calculation packages) for technical adequacy and compliance with upper tier documents such as the Remote-Handled TRU Waste Characterization Program Implementation Plan (WCPIP) (DOEWIPP-02-3214, Revision 3).

- *CCP-RC-SRS-601, Central Characterization Program Remote-Handled Transuranic Radiological Characterization Technical Report for Savannah River Site Remote-Handled Transuranic Debris Waste for WASTE STREAM: SR-RH-221H.01*
- *CCP-RC-SRS-551, Central Characterization Program Remote-Handled Transuranic Radiological Characterization Technical Report for Savannah River Site Remote-Handled Transuranic Debris Waste for WASTE STREAM: SR-RH-772F.01*
- *CCP-RC-SRS-571, Central Characterization Program Remote-Handled Transuranic Radiological Characterization Technical Report for Savannah River Site Remote-Handled Transuranic Debris Waste for WASTE STREAM: SR-RH-773A.01*
- *CCP-RC-SRS-641, Central Characterization Program Remote-Handled Transuranic Radiological Characterization Technical Report for Savannah River Site Solid Waste Management Facility for WASTE STREAM: SR-RH-SWD.01*
- *CCP-RC-SRS-621, Central Characterization Program Remote-Handled Transuranic Radiological Characterization Technical Report for Mound Site RH Transuranic Waste in Retrievable Storage at the Savannah River Site for WASTE STREAM: SR-RH-MNDPAD1.01*
- *CCP-RC-SRS-561, Central Characterization Program Remote-Handled Transuranic Radiological Characterization Technical Report for Savannah River Site Remote-Handled Transuranic Debris Waste for WASTE STREAM: SR-RH-235F.01*
- *CCP-AK-SRS-581, Central Characterization Program Remote-Handled Transuranic Radiological Characterization Technical Report for Savannah River Site Remote-Handled Transuranic Debris Waste for WASTE STREAM: SR-RH-FBL.01 and SR-RH-FBL.02*

The audit team was not able to interview operations personnel or observe equipment and operations at the SRS due to the suspension of characterization field activities.

The procedures reviewed and objective evidence assembled and evaluated during the audit provided evidence that the applicable requirements for DTC activities are adequately established for compliance with upper-tier requirements. However, due to

the suspension of characterization field activities at SRS, the implementation and effectiveness of requirements were deemed indeterminate.

#### **5.4.7 WIPP Waste Information System/Waste Data System**

The audit team conducted interviews with responsible personnel and verified no waste characterization field activities have been performed by SRS/CCP since the previous audit. Accordingly, the applicable requirements for WIPP Waste Information System/Waste Data System data entry were deemed indeterminate and will require a full evaluation as part of a recertification audit before waste characterization and certification activities resume at the SRS.

### **6.0 CORRECTIVE ACTIONS, OBSERVATIONS, AND RECOMMENDATIONS**

#### **6.1 Corrective Action Reports**

During the audit, the audit team may identify conditions adverse to quality (CAQs), as defined below, and document such conditions on a corrective action report (CAR).

Condition Adverse to Quality – 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 program.

No CARs were initiated during this audit.

#### **6.2 Deficiencies Corrected During the Audit**

During the audit, the audit team may identify CAQs. The audit team members and the Audit Team Leader (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. 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 corrected during the audit (CDA) according to the definition below.

Corrected During the Audit – Refers to correction of an isolated deficiency that does 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.

No CDAs were identified during 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 members, in conjunction with the ATL, evaluate these conditions and classify them as Observations using the following definition:

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

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

No Observations were identified during the audit.

### **6.4 Recommendations**

During the audit, the audit team may identify 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.

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

No Recommendations were provided to management during the audit.

## **7.0 LIST OF ATTACHMENTS**

- Attachment 1: Personnel Contacted During Audit A-16-02
- Attachment 2: List of Processes and Equipment Reviewed
- Attachment 3: List of Audited Documents

| <b>PERSONNEL CONTACTED DURING AUDIT A-16-02</b> |  |                          |                               |                           |
|---|--|--------------------------|-------------------------------|---------------------------|
| <b>NAME</b>                                     | <b>ORG/TITLE</b>                       | <b>PRE-AUDIT MEETING</b> | <b>CONTACTED DURING AUDIT</b> | <b>POST-AUDIT MEETING</b> |
| A.J. Fisher                                     | NWP/CCP/Support Services               | X                        | X                             | X                         |
| D. Ferguson                                     | DOE-SR                                 | X                        |                               |                           |
| D. Miehl  | CBFO/QA/Sr. QA Specialist              | X                        | X                             | X                         |
| E. Gulbransen                                   | NWP/CCP/Manager                        |                          |                               | X                         |
| K. Lickliter                                    | CCP/AKE Technical Specialist           |                          | X                             | X                         |
| I Joo   | NWP/CCP/RH Projects Manager            | X                        | X                             |                           |
| J. Harvill                                      | NWP/CCP/Nondestructive Assay Expert    |                          | X                             |                           |
| J. Knox   | NWP/CCP/CH Site Project Manager        | X                        | X                             | X                         |
| L. Fox  | SRS                                    | X                        |                               |                           |
| L. Jones  | NWP/CCP/QA Engineer/NCRs               | X                        | X                             | X                         |
| M. Billett                                      | CCP/ Training Coordinator              |                          | X                             | X                         |
| M. Papp   | CCP/AKE Technical Specialist           | X                        | X                             |                           |
| M. Ramirez                                      | NWP/CCP/Manager                        |                          |                               | X                         |
| N. Castaneda                                    | CBFO/Waste Certification Manager       | X                        | X                             | X                         |
| R. Kantrowitz                                   | NWP/CCP/Site Project Manager           | X                        | X                             | X                         |
| R. Lee  | NWP/CCP/Waste Characterization Manager | X                        | X                             |                           |
| S. Percy  | NWP/CCP/Records Manager                | X                        | X                             |                           |
| S. Schaffer                                     | CCP/AKE/Technical Specialist           | X                        | X                             |                           |
| T. Carver                                       | CBFO/Waste Certification               | X                        | X                             | X                         |

**LIST OF PROCESSES AND EQUIPMENT REVIEWED**

| WIPP #  | Process/Equipment Description  | Applicable to the Following Waste Streams/Groups of Waste Streams | Currently Authorized by CBFO |
|---|--|---|------------------------------|
| <b>PREVIOUSLY APPROVED PROCESSES OR EQUIPMENT</b> |  |   |                              |
| 1NABC1  | Nondestructive Assay<br>Procedures – CCP-TP-189 and CCP-TP-191<br>Description – Box Segmented Gamma System (BSGS) and Box Neutron Assay System (BNAS), Five Foot Setback Configuration | Solids (S3000)<br>Soils/Gravel (S4000)<br>Debris (S5000)          | *YES                         |
| 1LCNDE  | Real-time Radiography<br>Procedure – CCP-TP-053 and CCP-TP-074<br>Description – Large Container Non-Destructive Examination (LCNDE) Unit – standard waste boxes (SWBs) and SLB2s       | Solids (S3000)<br>Soils/Gravel (S4000)<br>Debris (S5000)          | *YES                         |
| 1RR4  | Real-time Radiography<br>Procedure – CCP-TP-053 and CCP-TP-145<br>Description – RTR-4, 55-gallon drums and standard waste boxes (SWBs), Standard large box 2s (SLB2s)                  | Solids (S3000)<br>Soils/Gravel (S4000)<br>Debris (S5000)          | *YES                         |
| VISUAL  | Visual Examination<br>Procedure – CCP-TP-113 and CCP-TP-163<br>Description – VE QC Check for RTR, VE in lieu of RTR, VET for Retrievably Stored Waste                                  | Solids (S3000)<br>Soils/Gravel (S4000)<br>Debris (S5000)          | YES                          |
| 1RHVE1  | Visual Examination<br>Procedures – CCP-TP-163 and CCP-TP-500<br>Description – Visual Examination of Records for Remote-Handled for Waste Stream SR-RH-SDD.01 only                      | Debris (S5000)  | YES                          |
| 1DTC1   | Dose-to-Curie<br>Procedure – CCP-TP-504<br>Description – Radiological Characterization   | Debris (S5000)  | YES                          |
| 16311   | Dose-to-Curie (Sealed Sources)<br>Procedure – CCP-RC-SRS-631<br>Description – Radiological Characterization  | Debris (S5000)  | YES                          |

| WIPP #   | Process/Equipment Description                                       | Applicable to the Following Waste Streams/Groups of Waste Streams | Currently Authorized by CBFO |
|--|---|---|------------------------------|
| N/A  | Acceptable Knowledge (AK)   | Solids (S3000)<br>Soils/Gravel (S4000)<br>Debris (S5000)          | YES                          |
| N/A  | Data Generation and Project Level Validation and Verification (V&V) | Solids (S3000)<br>Soils/Gravel (S4000)<br>Debris (S5000)          | YES                          |
| N/A  | WIPP Waste Information System/Waste Data System (WWIS/WDS)          | Solids (S3000)<br>Soils/Gravel (S4000)<br>Debris (S5000)          | YES                          |
| N/A  | Quality Assurance Program   | Solids (S3000)<br>Soils/Gravel (S4000)<br>Debris (S5000)          | YES                          |
| <b>NEW PROCESSES OR EQUIPMENT</b>  |   |   |                              |
| Characterization field activities are currently suspended, therefore no new processes or equipment introduced. |   |   |                              |

\*CCP currently has no TRU waste characterization equipment at SRS, as discussed in Audit Report A-15-02 and confirmed in Audit Report A-16-02.

| <b>LIST OF AUDITED DOCUMENTS</b> |                     |                        |   |
|----------------------------------|---------------------|------------------------|---|
|                                  | <b>Document No.</b> | <b>Revision Number</b> | <b>Document Title</b>   |
| 1.                               | CCP-PO-001          | 21                     | CCP Transuranic Waste Characterization Quality Assurance Project Plan   |
| 2.                               | CCP-PO-002          | 27                     | CCP Transuranic Waste Certification Plan  |
| 3.                               | CCP-PO-004          | 35                     | CCP/SRS Interface Document  |
| 4.                               | CCP-QP-002          | 39                     | CCP Training and Qualification Plan   |
| 5.                               | CCP-QP-005          | 25                     | CCP TRU Nonconforming Item Reporting and Control  |
| 6.                               | CCP-QP-010          | 25                     | CCP Document Preparation, Approval, and Control   |
| 7.                               | CCP-QP-028          | 16                     | CCP Records Filing, Inventorying, Scheduling, and Dispositioning  |
| 8.                               | CCP-TP-002          | 26                     | CCP Reconciliation of DQOs and Reporting Characterization Data  |
| 9.                               | CCP-TP-005          | 26                     | CCP Acceptable Knowledge Documentation  |
| 10.                              | CCP-TP-058          | 6                      | CCP NDA Performance Demonstration Program   |
| 11.                              | CCP-TP-139          | 5                      | CCP in Situ Object Counting System Nondestructive Assay Operating Procedure   |
| 12.                              | CCP-TP-189          | 3                      | CCP Box Segmented Gamma System (BSGS) Operating Procedure   |
| 13.                              | CCP-TP-190          | 2                      | CCP Box Segmented Gamma System (BSGS) Calibration Procedure   |
| 14.                              | CCP-TP-191          | 2                      | CCP Box Neutron Assay System (BNAS) Operating Procedure   |
| 15.                              | CCP-TP-192          | 1                      | CCP Box Neutron Assay System (BNAS) Calibration Procedure   |
| 16.                              | CCP-TP-193          | 6                      | CCP Data Reviewing, Validating, and Reporting Procedure for the Nondestructive Assay Box Counters                   |
| 17.                              | CCP-TP-504          | 17                     | CCP Dose-to-Curie Survey Procedure for Remote-Handled Transuranic Waste   |
| 18.                              | CCP-TP-506          | 5                      | CCP Preparation of the Remote-Handled Transuranic Waste Acceptable Knowledge Characterization Reconciliation Report |
| 19.                              | DOEWIPP-02-3214     | 3                      | Remote Handled TRU Waste Characterization Program Implementation Plan   |
| 20.                              | WP 15-GM1002        | 4                      | Issues Management Processing WIPP Forms   |
| 21.                              | WP 13-QA.03         | 24                     | Quality Assurance Independent Assessment Program  |