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Carlsbad Field Office
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DATE: FEB 11 2014
 REPLY TO
 ATTN OF: CBFO:OQA:MPN:MAG:14-1037:UFC 2300.00
 SUBJECT: Transmittal of Interim Audit Report A-14-03, ORNL/CCP TRU Waste Characterization and Certification
 TO: William G. McMillan, Jr./DOE-OR

NMED
Hazardous Waste Bureau



The Carlsbad Field Office (CBFO) conducted Audit A-14-03 of the Oak Ridge National Laboratory/ Central Characterization Program (ORNL/CCP) Transuranic (TRU) Waste Characterization and Certification on January 14-16, 2014. The Interim Audit Report is attached. The audit team concluded that, overall, the ORNL/CCP programs evaluated are adequate relative to the flow-down of requirements, and the technical activities evaluated are satisfactorily implemented and effective in all areas, with one exception documented in the audit report.

As a result of the audit, one CBFO Corrective Action Report (CAR 14-009) was issued and transmitted under separate cover. Additionally, the audit team identified two Conditions Adverse to Quality (CAQs) which were corrected during the audit, and offered two Recommendations to ORNL/CCP management for consideration.

If you have any questions concerning the attached Interim Audit Report, please contact me at (575) 234-7483.

Martin P. Navarrete
 Senior Quality Assurance Specialist

Attachment

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J. Hoff, NWP/QA	ED	Site Documents	ED
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U.S. DEPARTMENT OF ENERGY
CARLSBAD FIELD OFFICE

INTERNAL AUDIT REPORT

OF THE

OAK RIDGE NATIONAL LABORATORY
CENTRAL CHARACTERIZATION PROGRAM

FOR

WASTE CHARACTERIZATION ACTIVITIES IN ACCORDANCE WITH
THE HAZARDOUS WASTE FACILITY PERMIT

OAK RIDGE, TENNESSEE
and CARLSBAD, NEW MEXICO

AUDIT NUMBER A-14-03

JANUARY 14 – 16, 2014



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Berry D. Pace, CTAC
Audit Team Leader

Date: 2/11/14

Approved by: Michael R. Brown
Michael R. Brown, Director
CBFO Office of Quality Assurance

Date: 2/11/14

1.0 EXECUTIVE SUMMARY

U.S. Department of Energy (DOE) Carlsbad Field Office (CBFO) Audit A-14-03 was performed to evaluate the adequacy, implementation, and effectiveness of established programs for transuranic (TRU) waste characterization activities performed for the Oak Ridge National Laboratory (ORNL) by the Nuclear Waste Partnership LLC (NWP) Central Characterization Program (CCP). The audit team evaluated the programs, procedures, and processes for characterizing contact-handled (CH) Summary Category Groups (SCGs) S3000 solids, S4000 soils/gravel, and S5000 debris wastes, and remote-handled (RH) SCG S5000 debris waste. The audit was conducted relative to the requirements of the Waste Isolation Pilot Plant (WIPP) Hazardous Waste Facility Permit (HWFP), the *CBFO Quality Assurance Program Document (QAPD)*, the *Transuranic Waste Acceptance Criteria for the Waste Isolation Pilot Plant (WAC)*, and the *Remote-Handled TRU Waste Characterization Program Implementation Plan (WCPIP)*.

Audit activities were conducted at ORNL TRU Waste Processing Center (TWPC) facilities in Oak Ridge, Tennessee, and at the Skeen-Whitlock Building in Carlsbad, New Mexico, January 14 – 16, 2014. Overall, the audit team concluded that the ORNL/CCP technical and quality assurance (QA) programs evaluated were adequately established for compliance with applicable upper-tier requirements, satisfactorily implemented, and effective in achieving the desired results.

The audit team identified five concerns during the audit. One concern dealt with a departure from a requirement for document control observed during the evaluation of visual examination activities, which resulted in the issuance of CBFO Corrective Action Report (CAR) 14-003 (see section 6.1). The remaining concerns were in the areas of project-level data validation and verification and real-time radiography, which resulted in two minor isolated deficiencies that were corrected during the audit (CDA) (see section 6.2) and two recommendations submitted for management consideration (see section 6.4).

2.0 SCOPE AND PURPOSE

2.1 Scope

The scope of the audit included evaluations for the adequacy, implementation, and effectiveness of the technical and QA activities performed by NWP CCP at ORNL for characterization and certification of CH and RH SCG S5000 debris wastes, CH SCG S3000 solids waste, and CH SCG S4000 soils/gravel waste. Transportation evaluations were limited to flammable gas analysis, since these were the only transportation related activities being conducted. The following areas 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

- Acceptable Knowledge (AK) (including waste certification, e.g., Waste Stream Profile Form)
- Project-Level Data Validation and Verification (V&V)
- Real-time Radiography (RTR)
- Visual Examination (VE)
- Nondestructive Assay (NDA)
- Radiological Characterization (Dose-to-Curie)
- Container Management
- Flammable Gas Analysis (FGA)
- WIPP Waste Information System (WWIS)/Waste Data System (WDS)

The evaluation of the adequacy of ORNL/CCP documents was based on current versions of the following documents:

Waste Isolation Pilot Plant Hazardous Waste Facility Permit NM4890139088-TSDF

Quality Assurance Program Document (QAPD), DOE/CBFO-94-1012

Transuranic Waste Acceptance Criteria for the Waste Isolation Pilot Plant (WAC), DOE/WIPP-02-3122

Remote-Handled TRU Waste Characterization Program Implementation Plan (WCIPI), DOE/WIPP-02-3214

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

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

CCP Transuranic Waste Certification Plan, CCP-PO-002

Related CCP QA and technical implementing procedures

2.2 Purpose

Audit A-14-03 was conducted to determine the degree of adequacy and effective implementation of program requirements for the characterization and certification of CH and RH SCG S5000 debris wastes, CH SCG S3000 solids waste, and CH SCG S4000 soils/gravel waste at the ORNL.

3.0 AUDIT TEAM AND OBSERVERS

AUDITORS/TECHNICAL SPECIALISTS

Martin Navarrete	Management Representative, CBFO Office of Quality Assurance
Dennis Miehls	QA Representative, CBFO
Berry Pace	Audit Team Leader, CBFO Technical Assistance Contractor (CTAC)
Rick Castillo	Audit Team Co-Leader, CTAC
Cindi Castillo	Auditor, CTAC
Greg Knox	Auditor, CTAC
Katie Martin	Auditor, CTAC
Prissy Martinez	Auditor, CTAC
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James Oliver	Technical Specialist, CTAC
Charleen Roberts	Technical Specialist, CTAC
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OBSERVERS

Trais Kliphuis	New Mexico Environment Department (NMED)
Steve Holmes	NMED
Connie Walker	NMED Contractor
Tom Morgan	CBFO Office of the National TRU Program (NTP)
Norma Castaneda	CBFO NTP
Kenneth Licklitter	CBFO NTP
Patsy Gilbert	Los Alamos National Laboratory (LANL)

4.0 AUDIT PARTICIPANTS

The ORNL/CCP individuals involved in the audit process are identified in Attachment 1. A pre-audit meeting was held on January 14, 2014, at the TWPC in Oak Ridge, Tennessee, and at the Skeen-Whitlock Building in Carlsbad, New Mexico. Daily management briefings were held to update ORNL/CCP management and staff on audit progress and identified concerns. A post-audit meeting was held on January 16, 2014, at the TWPC in Oak Ridge, Tennessee, and at the Skeen-Whitlock Building in Carlsbad, New Mexico.

Attachment 2 contains a summary table of audit results. Attachment 3 contains a list of ORNL/CCP documents audited. Attachment 4 lists the processes and equipment

evaluated during the audit. Audit activities, including objective evidence reviewed, are described below.

5.0 SUMMARY OF AUDIT RESULTS

5.1 Program Adequacy, Implementation, and Effectiveness

This audit was performed to assess the capability of ORNL/CCP to characterize and certify CH and RH SCG S5000 debris wastes, CH SCG S3000 solids waste, and CH SCG S4000 soils/gravel waste for compliance with the requirements specified in the WIPP HWFP Waste Analysis Plan (WAP), the WIPP WAC, the QAPD, and the RH TRU WCPIP. The characterization methods assessed were AK, VE, RTR, NDA, dose-to-curie (DTC), and FGA. Other areas evaluated were data generation and project-level data V&V, WWIS/WDS data entry, data quality objective (DQO) reconciliation, container management, and the preparation of Waste Stream Profile Forms (WSPFs).

The audit team concluded that, based on personnel interviews, observance of operations, and review of associated documentation and records, the ORNL/CCP TRU waste characterization program and activities for certifying CH and RH SCG S5000 debris wastes, CH SCG S3000 solids waste, and CH SCG S4000 soils/gravel waste are adequately established, satisfactorily implemented, and effective in achieving the desired results.

5.2 General

5.2.1 Results of Previous Audits

The audit team examined the results of the previous CBFO audit of the ORNL/CCP (A-13-12). The audit team verified that no waste characterization activities had been performed. Accordingly, since no concerns were identified, the need to conduct follow-up evaluations was deemed unnecessary.

5.2.2 Changes in Programs or Operations

No waste characterization activities have been performed by the ORNL/CCP since the previous audit. The most significant change in programs and operations for characterization at ORNL was the elimination of chemical sampling and analysis with the modification of the HWFP on March 13, 2013. Additionally, ORNL/CCP has added RTR Unit #7 for performing RTR, which was evaluated during this audit.

5.2.3 New Programs or Activities Being Implemented

At the request of NTP, this audit evaluated programs and processes for the characterization and certification of CH SCG S3000 solids waste.

5.2.4 Changes in Key Personnel

Changes in key personnel included the appointment of Mr. Andrew Stallings as the Vendor Project Manager (VPM) and Ms. Beverly Schrock as the Site Project Manager (SPM).

5.3 Quality Assurance Activities

The audit team evaluated the QA elements for personnel qualification and training, nonconformances, and records for compliance with requirements in the HWFP WAP. The evaluation results for each area audited are described below.

5.3.1 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. Results of the review indicate that the procedure adequately addresses upper-tier requirements.

Personnel training records associated with VE, RTR, NDA, FGA, AK, and SPMs were examined to verify compliance with associated requirements and to confirm that personnel were appropriately trained/qualified. Record reviews included qualification cards and other pertinent qualification documentation, including attendance sheets/briefings on newly-revised AK summaries for RTR and VE operators, capability demonstration tests and training container documentation, VE expert (VEE) appointment letters, and eye exams.

The procedures reviewed and objective evidence assembled provided evidence to confirm that the applicable requirements for personnel qualification and training were adequately established for compliance with upper-tier requirements, satisfactorily implemented, and effective in achieving the desired results. No concerns were identified.

5.3.2 Nonconformances

The audit team reviewed implementing procedure CCP-QP-005, Rev. 23, *CCP TRU Nonconforming Item Reporting and Control*, to determine the degree to which the procedure adequately addresses upper-tier requirements. Results of the review indicate that the procedure adequately addresses upper-tier requirements.

The audit team interviewed the CCP Carlsbad project office QA engineer and randomly selected the following nonconformance reports (NCRs) for review.

NCR-ORNL-0838-13	NCR-ORNL-0249-14
NCR-ORNL-0843-13	NCR-ORNL-0250-14
NCR-ORNL-0845-13	NCR-ORNL-0251-14
NCR-ORNL-0846-13	NCR-ORNL-0252-14

NCR-ORNL-0872-13	NCR-ORNL-0253-14
NCR-ORNL-0898-13	NCR-ORNL-0254-14
NCR-ORNL-0903-13	NCR-ORNL-0255-14
NCR-ORNL-0904-13	NCR-ORNL-0256-14

The team concluded that deficiencies are being appropriately documented and tracked through resolution as required. Two of the NCRs selected (NCR-ORNL-0903-13 and NCR-ORNL-0904-13) documented non-administrative deficiencies first identified at the SPM level. These NCRs were verified as having been reported to the Permittees within seven days, as required by the Permit. All the NCRs examined were verified to have been entered, managed, and tracked in both the CCP Integrated Data Center (IDC) and the NCR 2013 and 2014 Logs, and through the required reconciliation reporting mechanism.

The procedures reviewed and objective evidence assembled provided evidence to confirm that the applicable requirements for nonconformances are adequately established for compliance with upper-tier requirements, satisfactorily implemented, and effective in achieving the desired results. No concerns were identified.

5.3.3 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 audit team reviewed procedures CCP-QP-008, Rev. 21, *CCP Records Management*, and CCP-QP- 028, Rev. 15, *CCP Records Filing, Inventorying, Scheduling, and Dispositioning*. Results of the review indicate that the procedures adequately address upper-tier requirements.

Control of records was verified through review of the CH Records Inventory and Disposition Schedule (RIDS) dated August 1, 2013, and the RH RIDS dated 7/23/2013.

The audit team evaluated a sample of transmittal forms used to document submittal of records from the ORNL/CCP host site location to the records center in Carlsbad, New Mexico. The audit team determined that the completed forms adequately described the records being transmitted, and that the transmittal process was performed in accordance with procedure. The audit team verified the maintenance of records in paper files and in the electronic reference system. Records that are maintained in paper copy in the Carlsbad records center are placed in locked fire-resistant cabinets. Access to these file cabinets is controlled. Files that require control of access, such as those determined to be Unclassified Controlled Nuclear Information (UCNI), Official Use Only (OUO), Internal Use Only (IUO), and No Foreign National (NFORN) documents, are maintained on separate electronic servers where access is controlled by restriction of computer user access. Paper copies of these restricted access documents are stored separate from non-restricted documents. The audit team witnessed a demonstration of the electronic control of access performed by the National TRU

Program Certification (NTPC) Records Manager. The audit team determined that access to all records is adequately controlled.

The procedures reviewed and objective evidence assembled provided evidence that the applicable requirements for records are adequately established for compliance with upper-tier requirements, satisfactorily implemented, and effective in achieving the desired results. No concerns were identified.

5.4 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 HWFP is cited briefly, and the result of the assessment is provided.

5.4.1 Acceptable Knowledge

The audit team evaluated CH TRU mixed SCGs S4000 soils/gravel and S5000 debris wastes, and RH TRU mixed SCG S5000 debris waste. In addition, the audit team was asked to examine the assembled record for a CH TRU mixed SCG S3000 solids waste stream with the intent of receiving WIPP certification. The AK audit staff specifically addressed the WAP requirements listed in the C6-2 checklist along with portions of the C6-1 checklist. 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 and RH WAC and, specifically for the RH waste stream, the requirements of the RH TRU WCPIP, Rev 3.

The AK auditors reviewed the latest revisions to the AK summary reports for four distinct waste streams representing the four respective SCGs identified above. The AK summary reports and respective waste stream designations were as follows: CCP-AK-ORNL-001, Rev. 8, for CH SCG S3000 waste stream OR-NFS-CH-HOM-A and CH SCG S4000 waste stream OR-NFS-CH-SOIL; CCP-AK-ORNL-008, Rev. 1, for CH SCG S5000 waste stream OR-ISTP-CH-HET; and CCP-AK-ORNL-500, Rev. 3, for RH SCG S5000 RH waste stream OR-REDC-RH-HET. These AK summary reports were reviewed with respect to the information related to specific WAP and WAC requirements. In addition, WSPFs or draft WSPFs and attachments were examined for each audited waste stream. Numerous AK source documents were reviewed to establish support for the waste stream descriptions and parameters noted in the AK summaries, particularly with respect to the assignment of hazardous waste numbers and the historical management of the containers in the waste streams. The audit team also examined the respective AK documentation checklists from CCP-TP-005, *CCP Acceptable Knowledge Documentation*, consisting of Attachment 1, the AK Source Document 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, the justification memoranda for waste material parameter weight estimates, Attachment 7, the Radionuclides List, AK/NDA memoranda for the CH waste streams, and Attachment 8, the Waste Container Lists, and the Add-

Containers documentation that assures that the parameters of containers added to a waste stream are examined to assure that the assignment is appropriate.

Examples of the resolution of AK discrepancies in the AK record and discrepancy resolution at characterization along with AK reevaluation forms were reviewed and added to the AK objective evidence. WAP-compliant AK accuracy reports and the most recent internal surveillance were also collected and examined. Requisite training records were reviewed by the designated QA auditor for AK experts (AKEs) and SPMs based upon names provided by the AK auditors. 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 characterization activities. The WAP-required container traceability exercise was conducted by the AK audit team for a total of eight waste containers from the four waste streams. The drums selected provided batch data reports (BDRs) for RTR, VE, NDA and the DTC process. Additional traceability documentation was collected through IDC database screenshots, AK tracking spreadsheet data, waste container lists, and waste container input forms. Several waste stream characterization checklists and supporting data were also examined, reconciling the results of characterization with the AK record. The review of these checklists was coordinated with the traceability containers where possible.

For waste stream OR-REDC-RH-HET, the AK auditors also reviewed and compiled objective evidence that demonstrates compliance with the requirements of the WCPIP as noted above. Documents reviewed included WCPIP-compliant draft AK accuracy reports and draft and final characterization reconciliation reports, along with the examination of relevant AK source documents supporting WCPIP requirements.

The AK audit team offered one recommendation to add or modify text and tables for clarification and/or consistency in the three AK summaries reviewed (see Recommendation 1 in section 6.4).

The procedures reviewed and objective evidence assembled provided evidence that the applicable requirements for AK are adequately established for compliance with upper-tier requirements, satisfactorily implemented, and effective in achieving the desired results.

5.4.2 Project-Level Data Validation and Verification

The audit team conducted interviews with responsible personnel and reviewed implementing procedures CCP-TP-001, Rev. 21, *CCP Project Level Data Validation and Verification*; CCP-TP-002, Rev. 26, *CCP Reconciliation of DQOs and Reporting Characterization Data*; CCP-TP-500, Rev. 13, *CCP Remote-Handled Waste Visual Examination*; CCP-TP-504, Rev. 14, *CCP Dose-to-Curie Survey Procedure for Remote-Handled Transuranic Waste*; and CCP-TP-005, Rev. 26, *CCP Acceptable Knowledge Documentation*, to determine the degree to which the procedures address upper-tier requirements. Results of the review indicate that the procedures adequately address upper-tier requirements.

The audit team evaluated the following BDRs in support of both CH and RH waste characterization activities completed at the ORNL to verify that project-level data V&V activities are performed in compliance with applicable procedural requirements.

RTR

OR-RTR6-0438 OR-RTR7-0002 OR-RTR7-0009 OR-RTR6-0435

VE

ORNLRHVE13005 ORNLRHVE13006 ORNLRHVE13001

NDA/DTC

OR-IQ3-0224 OR-IQ3-0225 OR-IQ3-0228 ORRHDTTC13001

During review of BDRs, the audit team identified a concern (see CDA-2 in section 6.2). VE BDR #ORNLRHVE13006 (page 2) contained incorrect information (wrong BDR number). The VE operator lined out, initialed, dated, and entered the correct BDR number. Question #8 on the independent technical reviewer (ITR) checklist asks: "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?" The initial answer was checked as "N/A." The ITR checklist was not corrected and re-signed by the ITR after the correction was performed. During the audit, the BDR was returned to the ITR for corrections to the checklist. On question #8, the "N/A" was lined out, initialed and dated, and the "yes" box was checked. The ITR then re-signed the checklist and forwarded it to the SPM. The SPM also re-signed the checklist signifying review of the changes. The concern was determined to be isolated in nature and evidence confirming the correction was presented to the audit team and verified prior to the conclusion of the audit.

The audit team reviewed four WSPFs for the following waste streams: OR-NFS-CH-HET-A, OR-NFS-CH-SOIL, OR-REDC-RH-HET, and draft OR-NFS-CH-HOM-A. The WSPFs were properly completed with characterization information summaries (CISs).

ORNL did not start waste characterization activities until November 2013; therefore, quarterly repeat reviews for the last quarter of 2013 had not been completed at the time of the audit. Although container characterization data has been generated and reviewed since November 2013, there are currently no new approved CISs/Shipping Lots associated with the waste streams audited.

The procedures reviewed and objective evidence assembled and evaluated during the audit provided evidence that the applicable requirements for project-level data V&V activities are adequately established for compliance with upper-tier requirements, satisfactorily implemented, and effective in achieving the desired results.

5.4.3 Real-time Radiography

The audit team evaluated the adequacy, implementation, and effectiveness of ORNL/CCP's ability to characterize CH SCGs S3000 solids waste, S4000 soils/gravel waste, and S5000 debris waste using RTR Unit #6 and Unit #7.

The audit team evaluated the following RTR-related CCP procedures: CCP-QP-002, Rev. 35, *CCP Training and Qualification Plan*; CCP-TP-028, Rev. 8, *CCP Radiographic Test Drum and Training Container Construction*; CCP-TP-053, Rev. 14, *CCP Standard Real-Time Radiography (RTR) Inspection Procedure*; CCP-TP-164, Rev. 0, *CCP Real-Time Radiography #7 Operating Procedure*; and CCP-TP-165, Rev. 3, *CCP Real-Time Radiography #6 Operating Procedure*. Results of the review indicate that the procedures adequately address upper-tier requirements.

The audit team examined the following CH RTR BDRs generated by characterizing waste in RTR Unit #6 and Unit #7:

OR-RTR6-0433
OR-RTR6-0437
OR-RTR6-0439
OR-RTR6-0440
OR-RTR7-0001
OR-RTR7-0003
OR-RTR7-0008
OR-RTR7-0009

During the review of the referenced BDRs, the audit team identified a concern (see CDA-1 in section 6.2). The RTR data sheet for the independent observation for container #NFS0117A in BDR #OR-RTR7-0009 did not note the estimated number of layers of confinement, as required. The audit team reviewed RTR data sheets for 74 of 165 containers characterized through the RTR process. CCP provided a corrected copy of the data sheet which reflected the estimated number of layers of confinement, which was verified with the original scan of the same container as well as the number of layers of confinement reflected in the video record. Accordingly, since the condition was determined to be minor and isolated and evidence was provided confirming the data sheet had been corrected, the concern was corrected during the audit.

The audit team also reviewed a sampling of audio/video media recordings of containers characterized on the referenced BDRs. The audit team reviewed video recordings for CH SCGs S3000 solids waste, S4000 soils/gravel waste, and S5000 debris waste.

The audit team performed a walk-through of the RTR characterization facilities. The audit team interviewed the RTR operators and verified the use of current AK summaries and RTR operating procedures. The audit team also examined RTR Unit #6 operational logbook CCP-ORNL-RTR-002, 2014, ORNL-TWPC-RTR6, 7880J and verified logbook entries were reviewed by the VPM as required. The audit team witnessed the image

(lines/pair) test and the RTR characterization scan on container X10C9400031A performed on RTR Unit #6. The RTR unit contained the components required by the WAP to effectively characterize each CH SCG wastes subject to the scope of the audit.

During the audit, no RTR waste characterization activities were being performed on RTR #7. The audit team conducted a walk-through of RTR Unit #7 in building 7880 ZZ. The RTR unit contained the required hardware to effectively characterize CH SCGs S3000 solids waste, S4000 soils/gravel waste, and S5000 debris waste. The audit team interviewed RTR operators, reviewed CCP standing orders, and verified the availability of current AK summaries and RTR operating procedures. The audit team also examined RTR operational logbook CCP-ORNL-RTR-007-001, 2013, ORNL-TWPC, 7880ZZ and verified logbook entries were logged correctly and reviewed by the VPM as required.

The audit team evaluated RTR operator required test and training drum audio/video media for four RTR operators. Records of RTR operator training and qualification, including test and training drum documentation, eye exams, and waste stream training were examined. The audit team verified that RTR operators were appropriately trained and qualified as required.

The procedure reviews, field observations, and document reviews provided evidence that the applicable requirements for RTR are adequately established for compliance with upper-tier requirements, satisfactorily implemented, and effective in achieving the desired results.

5.4.4 Visual Examination

The audit team evaluated the adequacy, implementation, and effectiveness of the ORNL/CCP VE characterization process for RH SCG S5000 debris waste.

The audit team reviewed procedures CCP-TP-500, Rev. 13, *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. Although the ORNL/CCP is not currently performing VE of CH waste, procedure CCP-TP-113, Rev. 18, *CCP Standard Contact-Handled Waste Visual Examination*, was evaluated to ensure that it continues to comply with upper-tier requirements in the event ORNL/CCP elects to use VE of CH waste. Results of the review indicate that the procedures adequately address upper-tier requirements.

ORNL/CCP uses the two-operator method when performing VE characterization. VE is performed by two qualified operators where the waste is visually examined and placed into containers. The audit team interviewed VE operators and the VEE. The audit team also examined the VE operational logbook (CCP-RH-ORNL-VE-002) and verified logbook entries were logged correctly and reviewed by the VPM as required. During the audit, the VE audit team toured the TWPC Hot Cell Facility and observed the VE being performed on container ORRH00685.

The audit team examined the following RH VE BDRs generated from operations performed in the TWPC Hot Cell Facility to verify implementation and compliance with the requirements for documenting VE activities, as stipulated in CCP-TP-500:

- ORNLRHVE13001
- ORNLRHVE13002
- ORNLRHVE13003
- ORNLRHVE13004
- ORNLRHVE13005
- ORNLRHVE13006

The audit team examined training records for three VE operators/ITRs, and confirmed the appointment of one ORNL/CCP VEE. The audit team verified that VE operators, ITRs, and the VEE were appropriately trained and qualified as required.

Two concerns were identified during the audit.

- An obsolete version of CCP-AK-ORNL-500 (Rev. 2) was observed being used during VE activities on January 14, 2014. CCP-AK-ORNL-500, Rev. 3, was issued on January 8, 2014. CCP-QP-010, Rev. 24, *CCP Document Preparation, Approval, and Control*, Sec. 4.2 (Note) states: "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" (see CAR 14-009 in section 6.2).
- CCP-TP-500 includes steps for the operator to consider when a waste container is full or has met the packaging limit specified in the AK summary report. There are currently no waste streams with packaging limits at ORNL. Accordingly, there are no packaging limits noted in the associated AK summary reports. Therefore; since CCP-TP-500 is used throughout the complex, it was recommended that the statements in CCP-TP-500, sections 4.1.2[1] and 4.2.4, be revised for clarity when considering whether a packaging limit is applicable (see Recommendation 2 in section 6.4).

The procedure reviews, field observations, and document reviews provided evidence that the applicable requirements for VE are adequately established for compliance with upper-tier requirements, satisfactorily implemented, and effective in achieving the desired results.

5.4.5 Nondestructive Assay

The audit team evaluated the adequacy, implementation, and effectiveness of NDA activities at ORNL to characterize CH SCGs S3000 solids waste, S4000 soils/gravel

waste, and S5000 debris waste on the Mobile Qualitative and Quantitative Drum Counter with Isotopics (IQ3).

The audit team reviewed procedures CCP-TP-046, Rev. 5, *CCP Mobile IQ3 System Calibration Procedure*; CCP-TP-047, Rev. 12, *CCP Mobile IQ3 Gamma Scanner Operation*; and CCP-TP-048, Rev. 16, *CCP ORNL NDA System Data Reviewing, Validating, and Reporting Procedure*, to determine the degree to which they address applicable upper-tier requirements. Results of the review indicate that the procedures adequately address upper-tier requirements.

Checklists were prepared based on current revisions of the WAC and CCP implementing procedures to evaluate the following:

- Operability and condition of the IQ3
- System stability as evidenced by the implementation and effectiveness of quality control measurements and calibration verification
- Successful calibration verifications and calibration confirmation
- Applicability of each system's calibration and operational range
- Completed BDRs
- Data storage and retrievability

BDRs reviewed included:

- OR-IQ3-0223
- OR-IQ3-0224
- OR-IQ3-0225
- OR-IQ3-0228

The audit team confirmed the BDRs included results for one weekly interfering matrix drum and seven waste drums; one weekly interfering matrix drum and five waste drums; one weekly interfering matrix drum and seven waste drums; and one weekly interfering matrix drum and eight waste drums, respectively, for a total of four weekly interfering matrix drums and 27 waste drums.

The operability of the IQ3 was documented in a revised calibration report that documents the systems capability to assay CH SCG S3000 solids waste as well as SCGs S4000 soils/gravel and S5000 debris wastes.

At the time of the audit, ORNL/CCP had not yet completed its participation in the CBFO Performance Demonstration Program (PDP) for the IQ3; however, a memorandum (CP:13:01582) addressed to the CBFO Transportation Packaging Manager from the CCP National TRU Program Certification Manager dated December 5, 2013, was presented as evidence of the request to participate in the PDP.

The procedure reviews, field observations, and document reviews provided evidence that the applicable requirements for NDA are adequately established for compliance with upper-tier requirements, satisfactorily implemented, and effective in achieving the desired results. No concerns were identified.

5.4.6 Radiological Characterization (Dose-to-Curie)

The audit team evaluated the adequacy, implementation, and effectiveness of the DTC methodology used by the ORNL/CCP to characterize waste stream OR-REDC-RH-HET. Approximately seven 55-gallon drums of RH SCG S5000 debris waste have been measured resulting in one completed BDR (ORRHDTTC13001).

For DTC, the dose rate is defined as the external exposure rate from gamma-ray emitting radionuclides within the waste matrix, predominately Cesium-137 (Cs-137). Based on a review of the current revisions of CCP procedures and data provided prior to and during the audit, a checklist was prepared and used to evaluate the following:

- Continued use of average radionuclide ratios previously developed through examination of swipe sample data and corroborated by the NDA of CH waste derived from the original RH waste stream
- Continued use of the previously approved relationship between the measured dose or exposure rate and the activity of Cs-137
- Measurement of the external dose or exposure rate of the waste containers
- Calculation of the radionuclide activities and other derived radiological quantities and associated uncertainties
- Results of applying the DTC methodology to characterize waste as evidenced in BDR ORRHDTTC13001
- Determination of the number of containers examined, completed BDRs, and BDRs that had been through project-level review that were generated prior to this audit
- Completed BDR to ensure data are reported and reviewed as required
- Data storage and retrievability
- Personnel qualification and training

Measurements of the external dose or exposure rates of the waste are made in a hot cell in building 7880, room 231 (DTC Hotcell/Alcove). The exposure rate, attributed entirely to Cs-137, is measured four times at a distance of 1.0 meter from the 55-gallon waste containers. A Thermo Scientific Model FHZ-612 (XC-0761) survey meter is used to measure the dose rate. Each container is rotated 90 degrees successively between each of the four measurements. The average measured dose or exposure rate for each 55-gallon waste container and associated scaling factors are used to estimate the activity of individual radionuclides and other derived radiological quantities and associated uncertainties.

The procedure reviews, field observations, and document reviews provided evidence that the applicable requirements for radiological characterization are adequately established for compliance with upper-tier requirements, satisfactorily implemented, and effective in achieving the desired results. No concerns were identified.

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

The audit team conducted interviews and reviewed implementing procedures relative to the WWIS/WDS data entry process to determine the degree to which the procedures adequately address upper-tier requirements. The procedures reviewed included CCP-TP-030, Rev. 33, *CCP CH TRU Waste Certification and WWIS/WDS Data Entry*, and CCP-TP-530, Rev. 11, *CCP RH TRU Waste Certification and WWIS/WDS Data Entry*. Results of the review indicate that the procedures adequately address upper-tier requirements.

The audit team evaluated the implementation of the WWIS/WDS data entry procedures for manual data entry and electronic data transfer into the WWIS/WDS software application. The evaluation included review of records of data population of the spreadsheet, review of data entry by a waste certification assistant (WCA), and waste certification by the waste certification official (WCO). Other records reviewed included container information summaries, pages from BDRs showing analyses values, WWIS/WDS Waste Container Data Reports, and submittals for WWIS/WDS review/approval. Records for data entry of both CH- and RH-type waste characterization and certification data were reviewed.

The audit team reviewed the CH waste characterization case files for four CH waste containers: X10C0506150B and X10C0506150C from the debris waste stream OR-ISTP-CH-HET, and X10C9311454A and X10C9313063A from the soils waste stream OR-NFS-CH-SOIL. The audit team reviewed files for the RH waste canister OR0073, which was loaded with three internal containers (ORRH00019, ORRH00649, and ORRH00650). The RH waste containers were from the waste stream RH OR-REDC-RH-HET. The RH loading file for the loaded canister and the RH waste characterization case files for the individual RH waste containers were reviewed. In all cases the files reviewed were determined to be complete and acceptable.

CH and RH waste characterization case files included CIS excerpts, Waste Certification Data Entry Form signed spreadsheet copies, supporting forms and data, and WWIS/WDS Waste Container Data Reports. The RH loading file for the RH canister included the canister container summary, supporting forms and data, and the WWIS/WDS Waste Container Data Report.

The case files reviewed covered analytical data and the data entry process for work that was performed prior to suspension of characterization activities at ORNL. The data entry packages that were reviewed provide evidence of the ability of CCP WCA and WCO personnel to perform data entry and waste certification for ORNL waste containers.

The procedures reviewed and objective evidence assembled and evaluated during the audit provided evidence that the applicable requirements for WWIS/WDS data entry are adequately established, satisfactorily implemented, and effective in achieving the desired results.

5.4.8 Flammable Gas Sampling and Analysis

The audit team conducted interviews with responsible FGA personnel and confirmed that ORNL/CCP personnel performing FGA use DOE procedure DOE/WIPP 06-3345, Rev. 6, *Waste Isolation Pilot Plant Flammable Gas Analysis*. Training of personnel was verified to be adequate and current. Instrumentation and equipment was verified to be acceptable. A demonstration of sampling and analysis was conducted for the auditor. Flammable gas (FG) BDRs OR09FG4009_MDL (minimum detection limit study), OR12FG4001_ICAL (initial calibration study), and OR13FG4003 (FG BDR) were examined. All FG BDRs were compliant and contained the required information. Additionally, the logbook for FG CCP-ORNL-FGA8-002 contained the required information and had been properly reviewed and signed by the VPM, as required. Certificates of Accuracy were examined for FG calibration gas cylinders AAL17427 (Continuing Calibration Verification Standard), ALM006266 (Initial Calibration Standard), ALM002310 (Internal Standard and Bromofluorobenzene Tune Standard), and ALM011375 (Internal Standard and Bromofluorobenzene Tune Standard), and the standards were verified to be current.

The procedures reviewed and objective evidence assembled concluded that the applicable requirements for FGA are adequately established for compliance with upper-tier requirements, satisfactorily implemented, and effective in achieving the desired results.

5.4.9 Container Management

ORNL performs container movement for the CCP and is responsible for supplying containers to the CCP for characterization activities. ORNL personnel move containers and track their location using ORNL procedures and techniques.

The audit team conducted interviews with responsible personnel and reviewed implementing procedure CCP-TP-509, Rev. 4, *CCP Remote-Handled Transuranic Container Tracking*, relative to RH container management activities performed by ORNL/CCP, to determine the degree to which CCP procedures adequately address upper-tier requirements. ORNL/CCP tracks RH containers using the RH AK Tracking Spreadsheet. This spreadsheet was examined and contained the required information.

ORNL/CCP CH container management is conducted using procedure CCP-TP-068, Rev. 11, *CCP Standardized Container Management*. Compliance was verified by field observations of CH containers in buildings CHSA and CHMB, examination of container management documents, and interviews with the container management specialist. CH containers are brought into the ORNL/CCP characterization system by weighing and

initiation of a drum traveler sheet which is attached to the top of the drum. The containers are prepared for the characterization technique and then ORNL/CCP performs the required characterization. It was verified that travelers were attached to containers X10CSATN0395A, X10C9311811A, and X10C9400218A, which were undergoing characterization, and that each characterization process completed was noted on the drum traveler. ORNL/CCP personnel use information entered into the CH AK Tracking Spreadsheet to track drums until disposal and note final disposition in the CH AK Tracking Spreadsheet.

Containers associated with an NCR are returned to ORNL for remediation. VPM Hold Tags were verified to be properly placed on drums as required, and are removed only with approval of the VPM. Drums with NCRs or Hold Tags are easily identified to preclude shipment to the WIPP.

The procedure review, field observations, and document reviews provided evidence that the applicable requirements for container management are adequately established for compliance with upper-tier requirements, satisfactorily implemented, and effective in achieving the desired results.

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 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.

The following CAR was issued as a result of this audit.

CAR 14-009

Condition:

An obsolete version of CCP-AK-ORNL-500 (Rev. 2) was observed being used during VE activities on January 14, 2014. CCP-AK-ORNL-500, Rev. 3, was issued on January 8, 2014.

Requirement:

CCP-QP-010, Rev. 24, section 4.2 (Note) states: "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."

6.2 Deficiencies Corrected During the Audit

During the audit, the audit team may identify CAQs. Audit team members, the Audit Team Leader (ATL), and the CBFO Management Representative 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 and the CBFO QA Management Representative, determines if the CAQ is a minor and isolated case requiring only remedial action and therefore can be corrected during the audit.

Upon determination that the CAQ is minor and isolated, the audit team member, in conjunction with the ATL and the CBFO QA Management Representative, 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 CBFO QA Management Representative categorizes the condition as corrected during audit (CDA) according to the definition below.

CDA – 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.

Two CAQs were identified and corrected during this audit as detailed below.

CDA-1

Condition:

The RTR data sheet for container #NFS0117A in BDR #OR-RTR7-0009 did not identify the number of layers of confinement.

Requirement:

CCP-TP-053, *CCP Standard Real-Time Radiography (RTR) Inspection Procedure*, Rev.14, section 4.4.2 [D] states: "Ensure the following data is recorded in Section 2, Waste Container Data, of Attachment 2: ... [D.7] Estimated number of Layers of Confinement."

During the audit, the RTR auditors were provided with objective evidence that included the corrected data sheet identifying the number of layers of confinement recorded in BDR #OR-RTR7-0009 records package for container #NFS0117A. The concern was

determined to be isolated in nature and evidence confirming the correction was presented to the audit team and verified prior to the conclusion of the audit.

CDA-2

Condition:

VE BDR #ORNLRHVE13006 (page 2) contained incorrect information (wrong BDR number). The VE operator lined out, initialed, dated, and entered the correct BDR number. Question #8 on the ITR checklist asks: "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?" The initial answer was checked as "N/A." The ITR checklist was not corrected and re-signed by the ITR after the correction was performed.

Requirement:

CCP-PO-001, Rev. 21, section C3-4b(1) states: "This signature release ensures the following: Batch data review checklists are complete."

During the audit, the BDR was returned to the ITR for corrections to the checklist. On question #8, the "N/A" was lined out, initialed and dated, and the "yes" box was marked. The ITR then re-signed the checklist and forwarded it to the SPM. The SPM checklist was also re-signed signifying review of the changes. The concern was determined to be isolated in nature and evidence confirming the correction was presented to the audit team and 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 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 this 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.

The audit team identified the following two Recommendations during this audit.

Recommendation 1

It is recommended that the following changes be made to the AK summaries reviewed during this audit for clarification and/or consistency.

AK Summary CCP-AK-ORNL-001, Rev. 8

1. Section 2.2: Delete the reference to stainless-steel bands. They are an unacceptable closure device but were not used for repackaging the soil waste stream.
2. Section 4.4.2: Include a brief discussion of the process/activity of Building 110
3. Section 6.3.1.3: Correct the date for the soil excavation project from 2011-2012 to 2011-2018.
4. Adjust the waste material parameter weight table 6-1 for soil as needed to account for the inorganic matrix noted in section 6.4.1.2 for "Solid-A-Sorb" absorbent material. Correct spelling of "Soli-A-Sorb."
5. Add a bullet to section 6.4.3 indicating that the results of sampling and analysis of soil packaged by NFS during the current final phase of soil removal will be compiled and added to the AK record as appropriate.
6. Section 6.5: Move the second paragraph to the end of this section to clarify chronology.

AK Summary CCP-AK-ORNL-008, Rev. 1

1. Add a discussion of building 3030 as a subsection to section 5.3 to provide the building information noted in section 4.4.1.3.
2. Revise section 5.5 as follows: "Therefore, to ensure radionuclide pyrophorics are completely reacted before disposal at WIPP, inner containers (regardless of size) in all drums in waste stream OR-ISTP-CH-HET are examined during waste repackaging, RTR fast scan, or VE to determine if they contain a potentially pyrophoric or other reactive material."

AK Summary CCP-AK-ORNL-500, Rev. 3

1. Revise the definition of "waste stream" in section 2.0, page 11, last paragraph. This is an artifact of earlier drafts and the definition is correctly stated elsewhere in this document. The AKE has identified this error and has drafted an appropriate freeze file.

Recommendation 2

The audit team recommended that the statements in CCP-TP-500, sections 4.1.2 [I] and 4.2.4, be revised for clarity when considering whether a packaging limit is applicable.

7.0 LIST OF ATTACHMENTS

- Attachment 1: Personnel Contacted During the Audit
- Attachment 2: Summary Table of Audit Results
- Attachment 3: Table of Audited Documents
- Attachment 4: List of Processes and Equipment Reviewed

PERSONNEL CONTACTED DURING AUDIT A-14-03				
NAME	ORG/TITLE	PREAUDIT MEETING	CONTACTED DURING AUDIT	POST-AUDIT MEETING
Randall Allen	CTAC QA Manager	X		X
Cheryl Armijo	NWP/CCP Training Records Clerk		X	
Michele Billett	NWP/CCP NTPC Training Coordinator		X	
Daphne Brothers	NWP/CCP RTR Operator		X	
Michael R. Brown	CBFO QA Director			X
W. P. Byrd	WAI TWPC QA	X		X
Norma Castaneda	CBFO/NTP Waste Certification Manager	X		X
Robert Ceo	MCS EA		X	
Dan E. Coffey	TWPC PK/Characterization Support	X		X
Daniel Crosby	MCS NDA Operator-In-Training		X	
Neil Dickes	NWP/CCP NDA Support	X		X
Kevin D. East	TWPC RH Procurement Specialist	X		
A.J. Fisher	NWP/CCP Support Group Manager	X	X	
Joe Franco	CBFO Manager			X
James Gaenslen	RH PAR Operator		X	
Chad Gerlock	MCS NDA Operator		X	
Patsy Gilbert	LANL-CO Site Docs Administrator/Observer	X		
Ed Gulbransen	NWP/CCP NTP Certification Manager			X
Anthony Harley	NWP/CCP VEE	X	X	
LaTrana Harmon	NWP/CCP QA	X		X
Jeff Harrison	NWP/CCP AK Expert	X	X	X

PERSONNEL CONTACTED DURING AUDIT A-14-03				
NAME	ORG/TITLE	PREAUDIT MEETING	CONTACTED DURING AUDIT	POST-AUDIT MEETING
Fred Heacker	WAI TWPC Deputy General Manager	X		X
Steve Holmes	NMED/HWB Observer	X		
Laura Jones	NWP/CCP QAE		X	
Martin Jones	TWPC RH Floor Supervisor	X	X	
Irene Joo	NWP/CCP RH Manager	X	X	X
Creta Kirkes	NWP/CCP WCO		X	
Trais Kliphuis	NMED/HWB Observer	X		
Scott Kranker	TWPC STR	X		X
Wayne Ledford	NWP/CCP QA Specialist	X		X
Ronnie Lee	NWP/CCP Waste Certification Manager	X	X	X
Kenneth Licklitter	CBFO/CTAC/NTP Observer	X		X
Eric Lyles	NWP/CCP RTR Operator		X	
Ricardo Maestas	NMED Observer			X
R.C. McKay	WAI TWPC General Manager	X		
Kevin Meyer	MCS EA		X	
Dennis Miehlis	CBFO Sr. QA Specialist	X		X
David Moody	NWP/CCP SPM	X	X	X
Tom Morgan	CBFO/NTP Certification Manager	X		X
Martin Navarrete	CBFO QA Representative	X		X
Fred Oney	NWP/CCP RTR Operator	X	X	
Jose Payanes	NWP/CCP Document Services Manager		X	
Mark Percy	NWP/CCP SPM	X		
Sheila Percy	NWP/CCP NTPC Records Manager	X	X	
Kevin Peters	NWP/CCP AK Expert	X	X	X

PERSONNEL CONTACTED DURING AUDIT A-14-03				
NAME	ORG/TITLE	PREAUDIT MEETING	CONTACTED DURING AUDIT	POST-AUDIT MEETING
Mike Ramirez	NWP/CCP Certification Manager	X		X
Steve Redmond	NWP/CCP RTR Operator		X	
Jeremy Robinson	NFT FGA Lead Operator	X	X	
Beverly Schrock	NWP/CCP SPM	X	X	X
Patrick Smith	NWP/CCP Records Lead	X	X	
Andrew Stallings	NWP/CCP VPM	X	X	X
Brett Stockdale	DOE/UCOR Support			X
Shawn Treadway	NWP/CCP Container Manager		X	
Joe Wachter	MCS Technical Director	X	X	
Daniel Wade	NWP/CCP SPM	X		X
Connie Walker	NMED Contractor/Observer	X	X	
Wade Weyerman	LANL MLU Manager	X		
Ronald Whitson	MCS Operator/ITR	X	X	

SUMMARY TABLE OF AUDIT RESULTS

QA / Technical Elements	Concern Classification				QA Evaluation		Technical Evaluation
	CARs	CDAs	Obs	Rec	Adequacy	Implementation	Effectiveness
Acceptable Knowledge				X	A	S	E
Reconciliation of DQO's WSPFs					A	S	E
Project Level Data V & V		X			A	S	E
Real-time Radiography		X			A	S	E
Visual Examination	X			X	A	S	E
Nondestructive Assay					A	S	E
Dose-to-Curie					A	S	E
Container Mgmt / FGA					A	S	E
QA General C6-1 Training					A	S	E
QA General C6-1 NCRs / Records / Doc Control					A	S	E
QA General C6-1 WWIS / WDS					A	S	E
TOTALS	1	2	0	2	A	S	E

Definitions

E = Effective

S = Satisfactory

I = Indeterminate

M = Marginal

U = Unsatisfactory

CAR = Corrective Action Report

CDA = Corrected During Audit

NE = Not Effective

Obs – Observation

Rec = Recommendation

A = Adequate

NA = Not Adequate

TABLE OF AUDITED DOCUMENTS			
NUMBER	PROCEDURE NUMBER	REV	PROCEDURE TITLE
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-003	13	CCP Transuranic Authorized Methods for Payload Control (CCP CH-TRAMPAC)
4.	CCP-PO-005	23	CCP Conduct of Operations
5.	CCP-PO-027	5	CCP/TRU Waste Processing Center/Oakridge National Laboratory Interface Document
6.	CCP-PO-050	1	CCP TRUPACT-III TRU Waste Authorized Methods for Payload Control (CCP TRUPACT-III TRAMPAC)
7.	CCP-PO-505	2	CCP Remote-Handled Transuranic Waste Authorized Methods for Payload Control (CCP RH-TRAMPAC)
8.	CCP-QP-001	8	CCP Graded Approach
9.	CCP-QP-002	35	CCP Training and Qualification Plan
10.	CCP-QP-005	23	CCP TRU Nonconforming Item Reporting and Control
11.	CCP-QP-008	21	CCP Records Management
12.	CCP-QP-010	24	CCP Document Preparation, Approval, and Control
13.	CCP-QP-014	6	CCP Quality Assurance Trend Analysis and Reporting
14.	CCP-QP-015	12	CCP Procurement
15.	CCP-QP-016	18	CCP Control of Measuring and Testing Equipment
16.	CCP-QP-017	4	CCP Identification and Control of Items
17.	CCP-QP-018	10	CCP Management Assessment
18.	CCP-QP-019	7	CCP Quality Assurance Reporting to Management
19.	CCP-QP-021	9	CCP Surveillance Program
20.	CCP-QP-022	13	CCP Software Quality Assurance Plan
21.	CCP-QP-023	4	CCP Handling, Storage and Shipping
22.	CCP-QP-026	14	CCP Inspection Control
23.	CCP-QP-027	6	CCP Test Control
24.	CCP-QP-028	15	CCP Records Filing, Inventorying, Scheduling, and Dispositioning
25.	CCP-QP-030	9	CCP Written Practice for the Qualification of CCP Helium Leak Detection Personnel
26.	CCP-TP-001	21	CCP Project Level Data Validation and Verification
27.	CCP-TP-002	26	CCP Reconciliation of DQOs and Reporting Characterization Data
28.	CCP-TP-005	26	CCP Acceptable Knowledge Documentation
29.	CCP-TP-028	8	CCP Radiographic Test Drum and Training Container Construction
30.	CCP-TP-030	33	CCP CH TRU Waste Certification and WWIS/WDS Data Entry
31.	CCP-TP-033	20	CCP Shipping of CH TRU Waste
32.	CCP-TP-046	5	CCP Mobile IQ3 System Calibration Procedure
33.	CCP-TP-047	12	CCP Mobile IQ3 Gamma Scanner Operation
34.	CCP-TP-048	16	CCP ORNL NDA System Data Reviewing, Validating, and Reporting Procedure
35.	CCP-TP-053	14	CCP Standard Real-Time Radiography (RTR) Inspection Procedure
36.	CCP-TP-055	5	CCP Varian Porta-Test Leak Detector Operations
37.	CCP-TP-058	5	CCP NDA Performance Demonstration Program
38.	CCP-TP-068	11	CCP Standardized Container Management
39.	CCP-TP-082	9	CCP Waste Container Filter Vent Operation
40.	CCP-TP-083	8	CCP Gas Generation Testing
41.	CCP-TP-086	18	CCP CH Packaging Payload Assembly
42.	CCP-TP-113	18	CCP Standard Contact-Handled Waste Visual Examination
43.	CCP-TP-138	2	CCP Execution of Long-Term Objective for the Unified Flammable Gas Test Procedure
44.	CCP-TP-164	0	CCP Real-Time Radiography #7 Operating Procedure
45.	CCP-TP-165	3	CCP Real-Time Radiography #6 Operating Procedure
46.	CCP-TP-500	13	CCP Remote-Handled Waste Visual Examination
47.	CCP-TP-504	14	CCP Dose-to-Curie Survey Procedure for Remote-Handled Transuranic Waste
48.	CCP-TP-506	4	CCP Preparation of the Remote-Handled Transuranic Waste Acceptable Knowledge Characterization Reconciliation Report
49.	CCP-TP-507	8	CCP Shipping of Remote-Handled Transuranic Waste
50.	CCP-TP-509	4	CCP Remote-Handled Transuranic Container Tracking
51.	CCP-TP-530	11	CCP RH TRU Waste Certification and WWIS/WDS Data Entry
52.	DOEWIPP 06-3345	6	Waste Isolation Pilot Plant Flammable Gas Analysis
53.	WP 15-GM1002	1	Issues Management Processing of WIPP Forms

List of Processes and Equipment Reviewed

WIPP #	Process/Equipment Description	Applicable to the Following Waste Streams/Groups of Waste Streams
PREVIOUSLY APPROVED PROCESSES OR EQUIPMENT		
N/A	Acceptable Knowledge Procedures – CCP-TP-002, CCP-TP-005, & CCP-TP-506	Solids (S3000) Soils (S4000) Debris (S5000)
N/A	Data Generation and Project Level Validation & Verification (V&V) Procedures – CCP-TP-001, CCP-TP-002, CCP-TP-500	Solids (S3000) Soils (S4000) Debris (S5000)
N/A	WIPP Waste Information System (WWIS) Procedures – CCP-TP-030, CCP-TP-033, & CCP-TP-530	Solids (S3000) Soils (S4000) Debris (S5000)
16VE1	Visual Examination (VE) Procedures – CCP-TP-113	Debris (S5000)
16RHVE1	Visual Examination (VE) Procedures – CCP-TP-500	Debris (S5000)
16RR1	Real-Time Radiography Mobile Characterization System (MCS) RTR #6 Procedures – CCP-TP-053 & CCP-TP-165	Solids (S3000) Soils (S4000) Debris (S5000)
16DTC1	Radiological Characterization (Dose-to-Curie) Procedure - CCP-TP-504	Debris (S5000)
16IQ1	Nondestructive Assay – Canberra Mobile Qualitative and Quantitative Drum Counter with Isotopics (IQ3) Procedures – CCP-TP-046, CCP-TP-047, & CCP-TP-048	Solids (S3000) Soils (S4000) Debris (S5000)
N/A	Quality Assurance Program	Solids (S3000) Soils/Gravel (S4000) Debris (S5000)
NEW PROCESSES OR EQUIPMENT		
16RR2	Real-Time Radiography Mobile Characterization System (MCS) RTR #7 Procedures – CCP-TP-053 & CCP-TP-164	Solids (S3000) Soils (S4000) Debris (S5000)
DEACTIVATED PROCESSES OR EQUIPMENT		
NONE		

