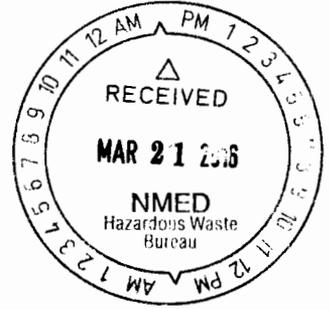




ENTERED

**Department of Energy**  
Carlsbad Field Office  
P. O. Box 3090  
Carlsbad, New Mexico 88221  
**MAR 16 2016**



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

**Subject:** Transmittal of the Hazardous Waste Facility Permit Attachment C6 Audit Plan and Notification of Assigned Auditors for CBFO Recertification Audit A-16-15 of the Oak Ridge National Laboratory Central Characterization Program

Dear Mr. Kieling:

This letter transmits the audit plan for Carlsbad Field Office (CBFO) Recertification Audit A-16-15 of the Oak Ridge National Laboratory (ORNL) Central Characterization Program for transuranic waste characterization activities. The audit will be conducted as required by the Waste Isolation Pilot Plant Hazardous Waste Facility Permit at the ORNL in Oak Ridge, TN, and at the Skeen-Whitlock Building in Carlsbad, NM, April 19 – 21, 2016. The audit plan identifies the audit team members, as required by the Permit.

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

Should you have any questions concerning this notification, please contact Mr. Martin P. Navarrete, Senior Quality Assurance Specialist, at (575) 234-7483.

Sincerely,

Todd Shrader, Manager  
Carlsbad Field Office

Enclosure



Mr. John E. Kieling

-2-

cc: w/enclosure

S. Dunagan, CBFO	*ED
M. Brown, CBFO	ED
J. R. Stroble, CBFO	ED
G. Basabilvazo, CBFO	ED
M. Navarrete, CBFO	ED
D. Miehl, CBFO	ED
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N. Castaneda, CBFO	ED
T. Carver, CBFO	ED
S. Ross, EM-43	ED
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CBFO QA File

CBFO M&RC

\*ED denotes electronic distribution

**CARLSBAD FIELD OFFICE  
AUDIT PLAN**

**Audit Number:** A-16-15

**Organization to be Audited:** Oak Ridge National Laboratory (ORNL), Nuclear Waste Partnership LLC (NWP) Central Characterization Program (CCP)

**Organizations to be Notified:** ORNL  
NWP  
New Mexico Environment Department (NMED)  
Defense Nuclear Facilities Safety Board  
U.S. Environmental Protection Agency

**Date and Location:** April 19 – April 21, 2016  
Oak Ridge, TN, and Carlsbad, NM

**Audit Team:**

Martin Navarrete	Management Representative, Carlsbad Field Office (CBFO) Office of Quality Assurance
Michael Hernandez	Management Representative-in-Training, CBFO Office of Quality Assurance
Rick Castillo	Audit Team Leader, CBFO Technical Assistance Contractor (CTAC)
Berry Pace	Auditor, CTAC
Charlie Riggs (AK)	Auditor, CTAC
Priscilla Martinez (NDA)	Auditor, CTAC
Katie Martin (VE)	Auditor, CTAC
Tamara Ackman (RTR)	Auditor, CTAC
Jim Schuetz (C6 QA)*	Auditor, CTAC
Dick Blauvelt (AK)	Technical Specialist, CTAC
Judith Stewart (AK)	Technical Specialist, CTAC
Greg Knox (RTR)	Technical Specialist, CTAC
Rhett Bradford (VE)	Technical Specialist, CTAC
Paul Gomez (PL/V&V)	Technical Specialist, CTAC
Jim Oliver (NDA/DTC)	Technical Specialist, CTAC
B.J. Verret (FGA/CM)	Technical Specialist, CTAC

\* Indicates team members working at the Skeen-Whitlock Building in Carlsbad, NM.

**Audit Scope:**

The audit team will evaluate the continued adequacy, implementation, and effectiveness of the technical and quality assurance (QA) activities performed by NWP/CCP at ORNL for characterization of contact-handled (CH) Summary Category Groups (SCGs) S3000 solids, S4000 soils/gravel, and S5000 debris wastes, and remote-handled (RH) SCG S5000 debris wastes.

The audit will be performed at the ORNL site in Oak Ridge, TN, and at the Skeen-Whitlock Building in Carlsbad, NM. A list of the equipment and processes to be evaluated is attached to this plan (Attachment 1).

**Governing Documents/Requirements:**

Evaluation of the overall program adequacy and effectiveness of ORNL/CCP documents will be based on the current revisions of the following documents:

- *Quality Assurance Program Document, DOE/CBFO-94-1012*
- *Waste Isolation Pilot Plant Hazardous Waste Facility Permit NM4890139088-TSDF*
- *Transuranic Waste Acceptance Criteria for the Waste Isolation Pilot Plant, DOE/WIPP-02-3122*
- *Remote-Handled TRU Waste Characterization Program Implementation Plan, DOE/WIPP-02-3214*

Programmatic and technical checklists will be 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*
- *CCP/TRU Waste Processing Center/Oak Ridge National Laboratory Interface Document, CCP-PO-027*
- *CCP Interface Document Preparation, CCP-PO-043*
- Related CCP QA and technical implementing procedures

**Activities to be Audited:**

**General**

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

**Quality Assurance**

The following general areas from section C6-1 of the Hazardous Waste Facility Permit:

- Nonconformances
- Personnel Qualification and Training
- Records

**Technical Activities**

- Project-level Data Validation and Verification (PLV&V)
- Acceptable Knowledge (AK), including waste certification (i.e., Waste Stream Profile Forms)
- Real-time Radiography (RTR)
- Visual Examination (VE)
- Nondestructive Assay (NDA)
- Dose-to-Curie (DTC)
- Flammable Gas Analysis (FGA)
- WIPP Waste Information System/Waste Data System (WWIS/WDS)

**Schedule of Audit Activities:**

A pre-audit conference is scheduled for Tuesday, April 19, 2016, at 8:30 a.m.

Audit team caucuses will be held at 4:00 p.m. on Tuesday and Wednesday, April 19 and 20, and at 1:00 p.m. on Thursday, April 21, 2016.

If needed, the audit team leader will conduct a management briefing with appropriate ORNL and CCP management Wednesday, April 20, and Thursday, April 21, 2016, at 8:30 a.m.

A post-audit conference is scheduled for Thursday, April 21, 2016, at 3:00 p.m.

All meetings will take place at the designated locations at the ORNL in Oak Ridge, TN, and Skeen-Whitlock Building in Carlsbad, NM.

Prepared by:  Date: 3/9/16  
Rick L. Castillo  
CTAC Audit Team Leader

Concurrence:  Date: 3/9/2016  
Michael R. Brown, Director  
CBFO Office of Quality Assurance

<b>CENTRAL CHARACTERIZATION PROGRAM LIST OF CH AND RH EQUIPMENT AND PROCESSES REQUIRING EVALUATION AND CERTIFICATION AT OAK RIDGE NATIONAL LABORATORY</b>					
WDS Method ID #	Site Equipment # or Title	Description	Components	Software	NDA Calibrated Range, Operating Range and TMU
<b>Nondestructive Assay (NDA)</b>					
16IQ1	IQ3	Canberra Mobile Qualitative and Quantitative Drum Counter with Isotopics (IQ3)  Procedure CCP-TP-046, CCP-TP-047, CCP-TP-048	<ul style="list-style-type: none"> <li>• High Sensitivity Gamma Waste Assay System</li> <li>• 3 HPGe Coaxial Detectors</li> <li>• 3 LEGe Detectors</li> </ul>	NDA-2000 Genie 2000	The calibration of the IQ3 is documented in MCS-IQ3-CALIB-2012, Revision 1, <i>Calibration Report for the MCS IQ3, MCS-IQ3-TMU-2009. Total Measurement Uncertainty</i> for the MCS IQ3 documents the estimate of total measurement uncertainty.
16MILCC2	MILCC2	Mobile ISOCS Large Container Counter (MILCC)  Approved for 55-gallon drums  Procedures CCP-TP-076, CCP-TP-077, and CCP-TP-048	<ul style="list-style-type: none"> <li>• ISOCS Characterized Broad Energy Gamma Detectors (2)</li> <li>• ISOCS rails and collimator sets (2)</li> <li>• ISOCS carts (2)</li> <li>• Signal cables</li> <li>• Canberra LYNX Digital Signal Processors (2)</li> </ul>	NDA-2000 Genie 2000	The calibration of the MILCC is documented in CI-MILCC2-NDA-1001, Revision A, <i>Calibration Report for the MCS Mobile ISOCS Large Container Counter (MILCC) at the Transuranic Waste Processing Center in Oak Ridge, TN.</i> The acceptance range is LLD and limited by dead time. Acceptable density range for gamma is approximately 0.001-2.50 g/cc. The CI-MILCC2-NDA-1002, Revision B, <i>Oak Ridge Mobile ISOCS Large Container Counter 2 Total Measurement Uncertainty Report</i> , documents the estimate of total measurement uncertainty.
<b>Dose-to-Curie (DTC)</b>					
16DTC1	Dose-to-Curie	Radiological characterization process  Procedure CCP-TP-504	As identified in CCP-TP-504	As identified in CCP-TP-504	N/A

<b>CENTRAL CHARACTERIZATION PROGRAM LIST OF CH AND RH EQUIPMENT AND PROCESSES REQUIRING EVALUATION AND CERTIFICATION AT OAK RIDGE NATIONAL LABORATORY</b>					
<b>WDS Method ID #</b>	<b>Site Equipment # or Title</b>	<b>Description</b>	<b>Components</b>	<b>Software</b>	<b>NDA Calibrated Range, Operating Range and TMU</b>
<b>Nondestructive Examination (NDE)</b>					
16RR1	MCS RTR #6	Real-time Radiography Mobile Characterization System RTR #6  Procedure CCP-TP-053, CCP-TP-165	<ul style="list-style-type: none"> <li>• Shielded x-ray enclosure with a hydraulic drum loading door and manually opened personnel door</li> <li>• Conveyer cart including drum manipulation equipment</li> <li>• X-ray imaging system including x-ray tube, image intensifier, and video camera</li> <li>• Video/audio recording equipment</li> <li>• Mobile platform</li> </ul>	N/A	N/A
<b>Visual Examination (VE)</b>					
16RHVE1	Visual Examination	Visual Examination Procedure CCP-TP-500	N/A	N/A	N/A
16VE1	Visual Examination	Visual Examination Procedure CCP-TP-113	N/A	N/A	N/A

<b>List of Deactivated Equipment</b>			
<b>WIPP #</b>	<b>Site Equipment #</b>	<b>Site Description</b>	<b>Date Deactivated</b>
16RR2	MCS RTR #7	Real-Time Radiography Mobile Characterization	September 2015