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

Subject: Transmittal of the Hazardous Waste Facility Permit Attachment C6 Audit Plan
and Notification of Assigned Auditors for CBFO Recertification Audit A-19-18 of
the Los Alamos National Laboratory Central Characterization Program

Dear Mr. Kieling:

This letter transmits the audit plan for Carlsbad Field Office (CBFO) Recertification Audit
A-19-18 of the Los Alamos National Laboratory (LANL) 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 LANL in Los Alamos, NM,
and at the Skeen-Whitlock Building in Carlsbad, NM, May 21 – 23, 2019. 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 fine and imprisonment for knowing violations.

Should you have any questions concerning this notification, please contact Mr. Dennis Miehls,
Senior Quality Assurance Specialist, at (575) 234-7491.

Sincerely,

Todd Shrader, Manager
Carlsbad Field Office

Enclosure
cc: w/enclosure

R. Murray, EM-3.113  *ED
K. Lachman, CBFO
M. Brown, CBFO
K. Princen, CBFO
D. C. Gadbury, CBFO
D. Miehls, CBFO
C. Fesmire, CBFO
M. Navarrete, CBFO
M. Stapleton, CBFO
N. Castaneda, CBFO
T. Carver, CBFO
R. Maestas, NMED
D. Biswell, NMED
M. McLean, NMED
T. Runyon, CTAC
P. Martinez, CTAC
H. Tellez, CTAC
C. Castillo, CTAC
R. Castillo, CTAC
D. Harvill, CTAC
G. White, CTAC
J. Haschets, RES
R. Chavez, RES
A. Urquidez, RES
CBFO QA File
CBFO M&RC

*ED denotes electronic distribution
CARLSBAD FIELD OFFICE
AUDIT PLAN

Audit Number: A-19-18

Organization to be Audited: Los Alamos National Laboratory (LANL), Nuclear Waste Partnership LLC (NWP) Central Characterization Program (CCP)

Organizations to be Notified: LANL, NWP, New Mexico Environment Department (NMED), U.S. Environmental Protection Agency

Date and Location: May 21 – 23, 2019
Los Alamos, NM, and Carlsbad, NM

Audit Team: Dennis Miehls, Carlsbad Field Office (CBFO) Office of Quality Assurance (QA) Management Representative
Rick Castillo, Audit Team Leader, CBFO Technical Assistance Contractor (CTAC)
Joe Lopez, Audit Team Leader-in-Training, CTAC
Charlie Riggs, Auditor, CTAC (Program Status)
Bob Prentiss*, Auditor, CTAC (C6 QA)
Katie Gentry*, Auditor, CTAC (C6 QA)
Ricardo Chavez, Auditor, CTAC (AK)
Priscilla Yanez, Auditor, CTAC (NDA)
Porf Martinez, Auditor, CTAC (RTR)
Tim Boswell, Auditor, CTAC (VE/CM)
Randy Fitzgerald, Technical Specialist, CTAC (AK)
Dick Blauvelt*, Technical Specialist, CTAC (AK)
Dustin Stegman, Technical Specialist, CTAC (VE)
Rhett Bradford, Technical Specialist, CTAC (RTR)
Paul Gomez**, Technical Specialist, CTAC (PL V&V/FGA)
Jim Oliver, Technical Specialist, CTAC (NDA)
B.J. Verret*, Technical Specialist, CTAC (FGA)

* Indicates team members working remotely or at the Skeen-Whitlock Building in Carlsbad, NM.
** Indicates performing FGA field activities only

Audit Scope:
The audit team will evaluate the continued adequacy, implementation, and effectiveness of the technical and QA activities performed by NWP/CCP at LANL for characterization of contact-handled transuranic Summary Category Groups (SCGs) S3000 solids, S4000 soils/gravel, and S5000 debris wastes.
The audit team will also evaluate characterization activities for SCG S3000 homogenous solids waste, and the MILCC#3 nondestructive assay equipment, as portions of these areas were identified as indeterminate last year during LANL/CCP Recertification Audit A-18-14.

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, implementation, and effectiveness of LANL/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

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/LANL Interface Document*, CCP-PO-012
- Related NWP/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

**C6-1 through C6-4 and general QA program elements as applicable**

- Nonconformances
- Personnel Qualification and Training
- Measuring and Test Equipment (M&TE)
- Software Version Installation
- Records
Technical Activities

- Project-level Data Validation and Verification (PL/V&V)
- Acceptable Knowledge (AK)
- Real-time Radiography (RTR)
- Visual Examination (VE)
- Visual Examination Technique (VET), Off-Site Source Recovery Program
- Nondestructive Assay (NDA), including Performance Demonstration Program
- Flammable Gas Analysis (FGA)
- Container Management
- WIPP Waste Information System/Waste Data System (WWIS/WDS)

Schedule of Audit Activities:

A pre-audit conference is scheduled for Tuesday, May 21, 2019, at 8:30 a.m.

If needed, the audit team leader will conduct a management briefing with appropriate LANL and NWP/CCP management at 8:30 a.m. on Wednesday and Thursday, May 22 and 23, 2019.

A post-audit conference is scheduled for Thursday, May 23, 2019, at 2:00 p.m.

All meetings will take place at designated locations at the LANL in Los Alamos, NM, and at the Skeen-Whitlock Building in Carlsbad, NM.

Prepared by: Rick L. Castillo
CTAC Audit Team Leader

Date: 4/17/19

Concurrence: Donald C. Gadbury, Director
CBFO Office of Quality Assurance

Date: 4-17-19
### Processes and Equipment to be Evaluated During the A-19-18 LANL/CCP Audit

<table>
<thead>
<tr>
<th>WIPP #</th>
<th>Process/Equipment Description</th>
<th>Applicable to the Following Waste Streams/Groups of Waste Streams</th>
<th>Currently Approved by NMED</th>
<th>Currently Approved by EPA</th>
</tr>
</thead>
<tbody>
<tr>
<td>11HC2</td>
<td>Nondestructive Assay Procedure – CCP-TP-063, CCP-TP-064, CCP-TP-103 Description – Canberra Industries High Efficiency Neutron Counter (HENC) mounted in a transportation container.</td>
<td>Solids (S3000) Soils/Gravel (S4000) Debris (S5000)</td>
<td>N/A</td>
<td>YES</td>
</tr>
<tr>
<td>11HC3</td>
<td>Nondestructive Assay Procedure – CCP-TP-103, CCP-TP-107, CCP-TP-108 Description – Canberra Industries High Efficiency Neutron Counter (HENC) mounted in a trailer</td>
<td>Solids (S3000) Soils/Gravel (S4000) Debris (S5000)</td>
<td>N/A</td>
<td>YES</td>
</tr>
<tr>
<td>11SHC1</td>
<td>Nondestructive Assay Procedure – CCP-TP-059, CCP-TP-064, CCP-TP-103 Description – Super High-Efficiency Neutron Counter mounted in a trailer, SWBs</td>
<td>Solids (S3000) Soils/Gravel (S4000) Debris (S5000)</td>
<td>N/A</td>
<td>YES</td>
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<tr>
<td>11MILCC1</td>
<td>Nondestructive Assay Procedure(s) – CCP-TP-076, CCP-TP-077 and CCP-TP-103 Description – Mobile In-Situ Object Counting System (ISOCS) Large Container Counter (MILCC)</td>
<td>Solids (S3000) Soils/Gravel (S4000) Debris (S5000)</td>
<td>N/A</td>
<td>YES</td>
</tr>
<tr>
<td><strong>11MILCC3</strong></td>
<td>Nondestructive Assay Procedure(s) – CCP-TP-076, CCP-TP-077 and CCP-TP-103 Description – Mobile In-Situ Object Counting System (ISOCS) Large Container Counter (MILCC)</td>
<td>*Solids (S3000) Soils/Gravel (S4000) Debris (S5000)</td>
<td>N/A</td>
<td>TBD</td>
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<tr>
<td>11HERTR3</td>
<td>High Energy Real-Time Radiography (HERTR) Procedures CCP-TP-053 and CCP-TP-198 Description – High Energy Real-Time Radiography (RTR) [built by VJ Technologies] 55-gallon drums and SWBs</td>
<td>Solids (S3000) Soils/Gravel (S4000) Debris (S5000)</td>
<td>YES (S3000) YES (S4000) YES (S5000)</td>
<td>YES</td>
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<tr>
<td>11VE1</td>
<td>CH Visual Examination Procedure – CCP-TP-113 Description – CH Characterization performed utilizing Visual Examination (VE) and Acceptable Knowledge (AK)</td>
<td>*Solids (S3000) Soils/Gravel (S4000) Debris (S5000)</td>
<td>*TBD (S3000) N/A (S4000) YES (S5000)</td>
<td>YES</td>
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<tr>
<td>11VE2</td>
<td>Off-Site Source Recovery Program Procedure(s) – CCP-TP-069 and CCP-TP-101 Description – Characterization performed utilizing Visual Examination (VE) and Acceptable Knowledge (AK)</td>
<td>Debris (S5000)</td>
<td>YES</td>
<td>YES</td>
</tr>
</tbody>
</table>
Processes and Equipment to be Evaluated During the A-19-18 LANL/CCP Audit (cont.)

<table>
<thead>
<tr>
<th>WIPP #</th>
<th>Process/Equipment Description</th>
<th>Applicable to the Following Waste Streams/Groups of Waste Streams</th>
<th>Currently Approved by NMED</th>
<th>Currently Approved by EPA</th>
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<tbody>
<tr>
<td>N/A</td>
<td>Acceptable Knowledge Procedure – CCP-TP-005 Description – Acceptable Knowledge (AK)</td>
<td>Solids (S3000), Soils/Gravel (S4000), Debris (S5000)</td>
<td>YES (S3000) YES (S4000) YES (S5000)</td>
<td>YES</td>
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<tr>
<td>N/A</td>
<td>Data Verification and Validation Procedure(s) – CCP-TP-001, CCP-TP-002, CCP-TP-003, CCP-TP-103, CCP-TP-162 Description – Project Level Data Verification and Validation</td>
<td>Solids (S3000), Soils/Gravel (S4000), Debris (S5000)</td>
<td>YES (S3000) YES (S4000) YES (S5000)</td>
<td>YES</td>
</tr>
<tr>
<td>N/A</td>
<td>WIPP Waste Information System/Waste Data System (WNIS/WDS) Procedure – CCP-TP-030 Description – CH TRU Waste Characterization and WWIS Data Entry</td>
<td>*Solids (S3000), Soils/Gravel (S4000), Debris (S5000)</td>
<td>*TBD (S3000) YES (S4000) YES (S5000)</td>
<td>YES</td>
</tr>
<tr>
<td>N/A</td>
<td>Quality Assurance Program</td>
<td>Solids (S3000), Soils/Gravel (S4000), Debris (S5000)</td>
<td>N/A</td>
<td>YES</td>
</tr>
</tbody>
</table>

*CBFO lifted suspension of certification activities associated with all SCG S3000 waste at the Waste Characterization, Reduction and Repackaging Facility (including remediated nitrate salts) via August 14, 2017 letter CBFO:ONTP:JS:RMS:17-2016:UFC 5900.00. Certification and characterization activities for the SCG S3000 homogenous solids waste and for the MILCC#3 nondestructive assay equipment to be evaluated. These were indeterminate during A-18-14.

**New equipment to be evaluated at TA-55 (MILCC3).