Subject: Transmittal of the Hazardous Waste Facility Permit Attachment C6 Audit Plan for Audit A-13-01 of the AMWTP Transuranic Waste Characterization and Certification Program

Dear Mr. Kieling:

This letter transmits the audit plan for the subject Carlsbad Field Office recertification audit to be conducted at the Idaho National Laboratory October 15-18, 2012 for work performed by the Advanced Mixed Waste Treatment Project (AMWTP), as required by the Waste Isolation Pilot Plant Hazardous Waste Facility Permit, Section C4-3g. The audit plan identifies the audit team members as required by Section C6-3 of 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.

If you have any questions, please contact Mr. Randy Unger, Director of the Office of Quality Assurance for the Carlsbad Field Office, at (575) 234-7065.

Sincerely,

[Signature]

Jose R. Franco, Manager
Carlsbad Field Office

Enclosure
cc: w/enclosure

E. Ziemianski, CBFO  * ED
R. Unger, CBFO       ED
J. R. Stroble, CBFO  ED
G. Basabilvazo, CBFO ED
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M. Pinzel, CBFO      ED
T. Morgan, CBFO      ED
N. Castaneda, CBFO   ED
S. McCauslin, CBFO   ED
T. Kliphuis, NMED    ED
S. Holmes, NMED      ED
R. Maestas, NMED     ED
P. Martinez, CTAC    ED
C. Castillo, CTAC    ED
G. White, CTAC       ED
WIPP Operating Record ED
CBFO QA File
CBFO M&RC
*ED denotes electronic distribution
Audit Number: A-13-01

Organization: Advanced Mixed Waste Treatment Project (AMWTP)

Organizations to be Notified:
- Bechtel BWXT Idaho, LLC (BBWI)
- Idaho Treatment Group (ITG)
- New Mexico Environment Department
- Environmental Protection Agency
- Defense Nuclear Facilities Safety Board

Date and Location:
October 15 – 18, 2012
Idaho National Laboratory (INL) near Idaho Falls, Idaho

Audit Team:
- Courtland Fesmire, CBFO Quality Assurance Management Representative
- Porf Martinez, Audit Team Leader, CBFO Technical Assistance Contractor (CTAC)
- Tammy Bowden, Auditor, CTAC
- Cindi Castillo, Auditor, CTAC
- Greg Knox, Auditor, CTAC
- Berry Pace, Auditor, CTAC
- Roger Vawter, Auditor, CTAC
- Norm Frank, Auditor, CTAC
- Charlie Riggs, Auditor, CTAC
- Earl Bradford, Auditor, CTAC
- Randall Allen, Auditor, CTAC
- Priscilla Martinez, Auditor, CTAC
- Paul Gomez, Technical Specialist, CTAC
- Dick Blauvelt, Technical Specialist, CTAC
- B.J. Verret, Technical Specialist, CTAC
- Rhett Bradford, Technical Specialist, CTAC
- Jim Oliver, Technical Specialist, CTAC

Audit Scope:

The audit team will evaluate the continued adequacy, implementation, and effectiveness of the AMWTP technical and quality assurance (QA) activities performed for characterizing contact-handled (CH) transuranic (TRU) waste. The QA and technical activities implemented at AMWTP for Summary Category Groups (SCGs) S3000 (homogeneous solids waste) and SCG S5000 (debris waste) will be audited to requirements in the Waste Isolation Pilot Plant (WIPP) Hazardous Waste Facility Permit (HWFP), the CBFO Quality Assurance Program Document (QAPD), and the Transuranic Waste Acceptance Criteria for the Waste Isolation Pilot Plant (WAC).

The specific processes to be audited are identified below and on the attached list. 
Processes and Equipment to be Reviewed During Audit A-13-01.
Activities to be Audited:

The following general areas from Attachment C6, Section C6-3 of the HWFP will be audited:

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

The following QA elements will be audited:

- Organization/QA Program Implementation
- Personnel Qualification and Training
- Quality Improvement (nonconformance reporting and corrective action)
- Documents and Records
- Work Processes
- Procurement
- Inspection and Testing (control of measuring and test equipment (M&TE) for data collection)
- Audits/Assessments
- Container Management
- Software Control

The following waste characterization technical elements will be audited:

- Acceptable Knowledge (AK), including waste certification (i.e., Waste Stream Profile Forms)
- Load Management
- Project-Level Data Validation and Verification (V&V)
- Visual Examination (VE)
- Solids Sampling (SS)
- Headspace Gas Sampling and Analysis (HSG S&A)
- Nondestructive Assay (NDA)
- Real-time Radiography (RTR)
- WIPP Waste Information System/Waste Data System (WWIS/WDS)

Governing Documents/Requirements:

Evaluation of adequacy of AMWTP documents will be based on the current revisions of the following documents:

- *CBFO Quality Assurance Program Document (QAPD)*, 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:

- *AMWTP Certification Plan for INL Contact-Handled Transuranic Waste, MP-TRUW-8.1*
- *AMWTP Quality Assurance Project Plan (QAP)P, MP-TRUW-8.2*
- Related AMWTP quality assurance and technical implementing procedures

**Schedule of Audit Activities:**

A pre-audit conference is scheduled for 8:00 a.m., Monday, October 15, 2012, at the INL.

Audit team caucuses will be held at 3:30 p.m., Monday through Wednesday, October 15 through 17, 2012, and at 1:00 p.m. on Thursday, October 18, 2012.

The audit team leader will meet with AMWTP management to discuss audit concerns and audit progress at 8:30 a.m., Tuesday through Thursday, October 16 through 18, 2012.

A post-audit conference is scheduled for 3:00 p.m., Thursday, October 18, 2012.

All meeting locations will be identified in the daily audit schedule.

Approved By: __________________________
Frof Martinez, CTAC
Audit Team Leader

Date: 9/5/12

Approved By: __________________________
Randy Unger, CBFO
Director, Office of Quality Assurance

Date: 12/Aug/12
### Processes and Equipment to be Reviewed During Audit A-13-01

<table>
<thead>
<tr>
<th>WIPP #</th>
<th>Site Equipment #</th>
<th>Equipment Description</th>
<th>Components</th>
<th>Software</th>
<th>NDA Calibrated Range, Operating Range and TMU</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td><strong>NEW PROCESSES OR EQUIPMENT</strong></td>
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<tr>
<td>9HG4</td>
<td>Z-221-001-A</td>
<td>Consonant Technology Inc. (CTI) – Gas Chromatography/Mass Spectrometry (GC/MS) System</td>
<td>PDP ID # CTI-HGAS-A-001</td>
<td>Agilent 5973N Network Mass Selective Detector – Unit 001</td>
<td>HGAS Software, Version 1.23</td>
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<tr>
<td>9DA1</td>
<td>Z-211-102</td>
<td>Canberra Integrated Waste Assay System (IWAS) for assay and isotopes on 55-gallon and 85/85-gallon drums</td>
<td>DAS –102 - PDP Registration # AM01/AM1</td>
<td>NDA 2000</td>
<td>The calibration of IWAS system was verified and documented in the site acceptance reports CHIDA-NDA-0051 through CHIDA-NDA-0054.</td>
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<td></td>
<td>The determination of TMU for the IWAS unit is documented in CHIDA-NDA-0055.</td>
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<tr>
<td>9DA2</td>
<td>Z-211-103</td>
<td>Canberra Integrated Waste Assay System (IWAS) for assay and isotopes on 55-gallon and 85/85-gallon drums</td>
<td>NDA 2000</td>
<td>The calibration of IWAS system was verified and documented in the site</td>
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</table>
|       | DAS-103 - PDP Registration # AM02/AMN2 | passive neutron coincidence counting modality and the active neutron differential de- away modality  
- Cf-252/Cs-137 Add-A-Source (AAS) correction source  
- >14 MeV neutron generator  
- Fast Neutron Detector Packs (FNDP) | 2000  
- Multi-Group Analysis (MGA)  
- Multi-Group Analysis-Uranium (MGA-U) | acceptance reports CI-IDA-NDA-0051 through CI-IDA-NDA-0054.  
- The determination of TMU for the IWAS unit is documented in CI-IDA-NDA-0055, Total Measurement Uncertainty for the AMWTP Integrated Waste Assay Systems, Revision 1, July 30, 2003. |
| 9DA3  | Z-390-100 | Broad Energy Germanium (BEGe) gamma detectors  
- 122 helium-3 tubes used in passive neutron coincidence counting modality and the active neutron differential de- away modality  
- Cf-252/Cs-137 Add-A-Source (AAS) correction source  
- >14 MeV neutron generator  
- Fast Neutron Detector Packs (FNDP) | NDA 2000  
- Canberra’s Genie 2000  
- Multi-Group Analysis (MGA)  
- Multi-Group Analysis-Uranium (MGA-U) | The calibration of IWAS system was verified and documented in the site acceptance reports CI-IDA-NDA-0051 through CI-IDA-NDA-0054.  
- The determination of TMU for the IWAS unit is documented in CI-IDA-NDA-0055, Total Measurement Uncertainty for the AMWTP Integrated Waste Assay Systems, Revision 1, July 30, 2003. |
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<td>9RR1</td>
<td>Z-213-101</td>
<td>Real-Time Radiography System – 55-gallon drums, 83-gallon drums and SWBs Method described in INST-OI-12 and INST-OI-81</td>
<td>RTR System</td>
<td>Waste Tracking System (WTS)</td>
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<td>9RR2</td>
<td>Z-213-106</td>
<td>Real-Time Radiography System – 55-gallon drums, 83-gallon drums and SWBs Method described in procedure INST-OI-12 and INST-OI-81</td>
<td>RTR System</td>
<td>Waste Tracking System (WTS)</td>
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<td>Z-250-802</td>
<td>Drum Coring and Sample Collection Glove Box</td>
<td>Drum Coring and Sample Collection Glove Box</td>
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<td>Newly Generated Waste Visual Examination Closure (VNC)</td>
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<td>Method described in INST-FOI-17</td>
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<td>9VE7</td>
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<td>9VE8</td>
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<td>9VE10</td>
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