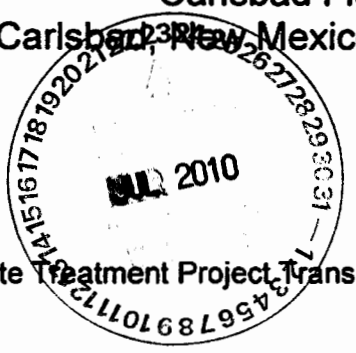
DOE F 1325.8

United States Government **Department of Energy**

memorandum

Carlsbad Field Office
Carlsbad, New Mexico 88221



DATE: July 23, 2010

REPLY TO ATTN OF: CBFO:QA:MPN:MAG:10-1351:UFC 2300.00

SUBJECT: Recertification Audit A-10-24 of the Advanced Mixed Waste Treatment Project Transuranic Waste Characterization and Certification Program

TO: Bill Lattin, DOE-ID

Please be advised that an audit team from the Carlsbad Field Office (CBFO) will conduct a recertification audit of the Advanced Mixed Waste Treatment Project (AMWTP) at the Idaho National Laboratory (INL) near Idaho Falls, Idaho, August 23-26, 2010. The AMWTP characterization activities for both Summary Category Groups (SCGs) S3000 (homogeneous solids) and S5000 (debris waste) will be evaluated during the audit. The audit will be conducted in accordance with the attached audit plan. Representatives from the CBFO and the New Mexico Environment Department (NMED) may be present to observe the audit. In addition, the U. S. Environmental Protection Agency (EPA) may conduct an independent inspection of the AMWTP and/or an inspection of the CBFO audit process.

Your representatives are requested to coordinate with the audit team to develop the necessary documentation for the audit team to gain access to the AMWTP facilities, conduct the audit, and have appropriate access to necessary documentation and records. Please provide meeting rooms for the entrance and exit meetings, and working rooms for the audit team and NMED/EPA Observers. The audit team will require a full set of documentation applicable to the AMWTP characterization activities for the Waste Isolation Pilot Plant (WIPP), including the applicable procedures.

If you have any questions concerning the audit, please contact me at (575) 234-7483.

for Martin P. Navarrete
Senior Quality Assurance Specialist

Attachment

cc: w/attachment

A. Holland, CBFO	*ED	S. Zappe, NMED	ED
D. Gadbury, CBFO	ED	S. Holmes, NMED	ED
N. Castaneda, CBFO	ED	T. Kesterson, DOE OB WIPP NMED	ED
E. Schweinsberg, AMWTP	ED	C. Timm, PECOS	ED
E. Dumas, AMWTP	ED	D. Winters, DNFSB	ED
T. Fallon, AMWTP	ED	P. Gilbert, LANL-CO	ED
T. Peake, EPA	ED	G. Lyshik, LANL-CO	ED
M. Eagle, EPA	ED	P. Martinez, CTAC	ED
E. Feltcorn, EPA	ED	A. Pangle, CTAC	ED
R. Joglekar, EPA	ED	R. Garcia, CTAC	ED
S. Ghose, EPA	ED	WIPP Operating Record	
R. Lee, EPA	ED	CBFO QA File	
P. Kelly, EPA	ED	CBFO M&RC	

*ED denotes electronic distributic

CARLSBAD FIELD OFFICE CERTIFICATION AUDIT PLAN

Audit Number: A-10-24

Organization: Advanced Mixed Waste Treatment Project (AMWTP)

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

Date and Location: August 23 – 26, 2010
Idaho Falls, Idaho

Audit Team:

Martin Navarrete	CBFO Quality Assurance Representative
Porf Martinez	Audit Team Leader, CBFO Technical Assistance Contractor (CTAC)
Jack Walsh	Auditor, CTAC
Greg Knox	Auditor, CTAC
Tammy Bowden	Auditor, CTAC
Cindi Castillo	Auditor, CTAC
BJ Verret	Auditor, CTAC
Nick Wade	Auditor, CTAC
Jim Schuetz	Auditor, CTAC
Earl Bradford	Auditor, CTAC
Harold Washington	Auditor, CTAC
Priscilla Martinez	Auditor, CTAC
Paul Gomez	Technical Specialist, CTAC
Dick Blauvelt	Technical Specialist, CTAC
Wayne Ledford	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 transuranic (TRU) waste. The QA and technical activities implemented at AMWTP will be audited to requirements in the Waste Isolation Pilot Plant (WIPP) Hazardous Waste Facility Permit (HWFP) for Summary Category Groups (SCGs) S3000 (homogeneous solids waste) and SCG S5000 (debris waste). The specific processes to be audited are identified below in the "Activities to be Audited" section and on the attached list, "Processes and Equipment to be Reviewed During Audit A-10-24."

Activities to be Audited:

The following general areas from Attachment B6, Section B6-3 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 CBFO 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 CBFO waste characterization technical elements will be audited for SCG S3000 and SCG S5000:

Project-Level Data Validation and Verification (V&V)
Acceptable Knowledge (AK)
Real-time Radiography (RTR)
Visual Examination (VE)
Solids Sampling and Analysis (SS&A)
Headspace Gas Sampling and Analysis (HSG S&A)
Performance Demonstration Program (PDP)
Nondestructive Assay (NDA)
Waste Certification (Waste Stream Profile Form)
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:

- *Quality Assurance Program Document (QAPD)*, DOE/CBFO-94-1012
- Hazardous Waste Facility Permit, Waste Isolation Pilot Plant EPA No. NM4890139088-TSDF, the New Mexico Environment Department (HWFP)
- *Transuranic Waste Acceptance Criteria for the Waste Isolation Pilot Plant* (WAC), DOE/WIPP-02-3122

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

- *AMWTP Certification Plan for INEEL Contact-Handled Transuranic Waste,* MP-TRUW-8.1
- *AMWTP Quality Assurance Project Plan* (QAPjP), 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, August 23, 2010, at the in-town offices of the AMWTP.

Audit team caucuses will be held at 4:00 p.m., Monday, Tuesday and Wednesday, August 23, 24 and 25, 2010, at the in-town offices of the AMWTP.

The audit team leader will meet with AMWTP management to discuss audit concerns and audit progress at 8:30 a.m., Tuesday, Wednesday and Thursday, August 24, 25 and 26, 2010.

A post-audit conference is scheduled for 4:00 p.m., Thursday, August 26, 2010, at the in-town offices of the AMWTP.

Approved By: _____ **Date:** 7/22/10
Pon Martinez, Audit Team Leader

Approved By: _____ **Date:** 7/23/10
Ava L. Holland, Director
CBFO Office of Quality Assurance

Processes and Equipment to be Reviewed During Audit A-10-24

WIPP #	Site Equipment #	Equipment Description	Components	Software	NDA Calibrated Range, Operating Range and TMU
HEADSPACE GAS					
9HG4	Z-221-001A	Consonant Technology Inc. (CTI) –Gas Chromatography/Mass Spectrometry (GC/MS) System PDP ID # CTI-HGAS-A-001 Method described in procedure INST-OI-43	Agilent 5973N Network Mass Selective Detector – Unit 001	HGAS Software, Version 1.23	N/A
NONDESTRUCTIVE ASSAY					
9DA1	Z-211-102	Canberra Integrated Waste Assay System (IWAS) for assay and isotopics on 55-gallon and 83/85-gallon drums DAS –102 - PDP Registration # AM01/AMN1 Method described in procedure INST-OI-14	➢ Broad Energy Germanium (BEGe) gamma detectors ➢ 122 helium-3 tubes used in passive neutron coincidence counting modality and the active neutron differential die-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.
9DA2	Z-211-103	Canberra Integrated Waste Assay System (IWAS) for assay and isotopics on 55-gallon and 83/85-gallon drums DAS-103 - PDP Registration # AM02/AMN2 Method described in procedure INST-OI-14	➢ Broad Energy Germanium (BEGe) gamma detectors ➢ 122 helium-3 tubes used in passive neutron coincidence counting modality and the active neutron differential die-away modality	NDA 2000 Canberra's Genie 2000 Multi-Group Analysis (MGA)	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

Processes and Equipment to be Reviewed During Audit A-10-24					
WIPP #	**Site Equipment #**	**Equipment Description**	**Components**	**Software**	**NDA Calibrated Range, Operating Range and TMU**
			➢ Cf-252/Cs-137 Add-A-Source (AAS) correction source ➢ 14 MeV neutron generator ➢ Fast Neutron Detector Packs (FNDP)	Multi-Group Analysis- Uranium (MGA-U)	in CI-IDA-NDA-0055, "Total Measurement Uncertainty for the AMWTP Integrated Waste Assay Systems", Revision 1, July 30, 2003.
9DA3	Z-390-100	Canberra Integrated Waste Assay System (IWAS) - DAS3 – 55 gallon drums DAS-100 – PDP Registration # AM03/AMN3 Method described in INST-FOI-01	➢ Broad Energy Germanium (BEGe) gamma detectors ➢ 122 helium-3 tubes used in passive neutron coincidence counting modality and the active neutron differential die-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.

Processes and Equipment to be Reviewed During Audit A-10-24

WIPP #	Site Equipment #	Equipment Description	Components	Software	NDA Calibrated Range, Operating Range and TMU
9DA4	Z-390-101	Canberra Integrated Waste Assay System (IWAS) - DAS4 – 55 gallon drums DAS-101 – PDP Registration # AM04/AMN4 Method described in INST-FOI-01	➢ Broad Energy Germanium (BEGe) gamma detectors ➢ 122 helium-3 tubes used in passive neutron coincidence counting modality and the active neutron differential die-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.
NON-DESTRUCTIVE EXAMINATION					
9RR1	Z-213-101	Real Time Radiography System – 55 gallon drums, 83 gallon drums and SWBs Method described in INST-OI-12 and INST-OI-81	RTR System	Waste Tracking System (WTS)	N/A
9RR2	Z-213-106	Real Time Radiography System – 55 gallon drums, 83 gallon drums and SWBs Method described in procedure INST-OI-12 and INST-OI-81	RTR System	Waste Tracking System (WTS)	N/A
SOLIDS					

Processes and Equipment to be Reviewed During Audit A-10-24					
WIPP #	**Site Equipment #**	**Equipment Description**	**Components**	**Software**	**NDA Calibrated Range, Operating Range and TMU**
9DC1	Z-250-802	Drum Coring and Sample Collection Glove Box Method – BN-MDC Method described in procedure INST-OI-16, INST-OI-73, and INST-OI-75	Drum Coring and Sample Collection Glove Box	Waste Tracking System (WTS)	N/A
VISUAL EXAMINATION					
9VE2	N/A	Visual Examination (in lieu of RTR) (VEC) Method described in INST-OI-34	N/A	Waste Tracking System (WTS)	N/A
9VE3	N/A	Newly Generated Waste Visual Examination Closure (VNC) Method described in INST-OI-34	N/A	Waste Tracking System (WTS)	N/A
9VE5	N/A	Visual Examination (in lieu of RTR) (VEC) Method described in INST-FOI-17	N/A	Waste Tracking System (WTS)	N/A
9VE6	N/A	Newly Generated Waste Visual Examination Closure (VNC) Method described in INST-FOI-17	N/A	Waste Tracking System (WTS)	N/A
9VE7	N/A	Box Line Visual Examination (VEB) – Box to drum repackaging Method described in INST-FOI-17	N/A	Waste Tracking System (WTS)	N/A
9VE8	N/A	Box Line Visual Examination (VEB) – Drum to new drum repackaging Method described in INST-FOI-17	N/A	Waste Tracking System (WTS)	N/A

Processes and Equipment to be Reviewed During Audit A-10-24					
WIPP #	**Site Equipment #**	**Equipment Description**	**Components**	**Software**	**NDA Calibrated Range, Operating Range and TMU**
9VE10	N/A	Box Line Visual Examination (VEB) – Drum to new drum repackaging Method described in INST-OI-34	N/A	Waste Tracking System (WTS)	N/A