



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

March 24, 2005



Mr. Steve Zappe, Project Leader  
 Hazardous Waste Bureau  
 New Mexico Environment Department  
 2905 Rodeo Park Drive East, Bldg. 1  
 Santa Fe, New Mexico 87505

Subject: Revised Audit Plan A-05-13 and Assigned Auditors for the Idaho National Laboratory Transuranic Waste Characterization Program (TWCP)

Dear Mr. Zappe:

This letter transmits the revised audit plan for Carlsbad Field Office Audit A-05-13 of the Idaho National Laboratory (INL) Laboratory Operations. The audit is to be conducted as required by the Waste Isolation Pilot Plant Hazardous Waste Facility Permit, Section B4-3f, at the INL facilities near Idaho Falls, Idaho, May 2-5, 2005, rather than May 3-5, 2005. The audit plan identifies the audit team members and the planned audit scope as required by Section B6-3 of the Permit.

Please contact the CBFO Quality Assurance Manager, Ava L. Holland, at (505) 234-7423 should you have any questions concerning this notification.

Sincerely,

  
 Dr. Inés R. Triay  
 Acting Manager

Enclosure

cc w/enclosure:  
 K. Watson, CBFO ED  
 A. Holland, CBFO ED  
 D. Miehl, CBFO ED  
 J. Bearzi, NMED ED  
 S. Holmes, NMED ED  
 R. Raaz, WTS ED  
 L. Price, LANL ED

CBFO M&RC  
 CBFO QA File  
 WIPP Operating Record, MS 486-06  
 \*ED denotes electronic distribution



## CARLSBAD FIELD OFFICE AUDIT PLAN

**Audit Number:** A-05-13

**Organization to be Audited:** Idaho National Laboratory (INL) Transuranic Waste Characterization Program (TWCP)

**Organizations to be notified:** Idaho National Laboratory (INL)  
Environmental Protection Agency (EPA)  
New Mexico Environment Department (NMED)  
Defense Nuclear Facilities Safety Board (DNFSB)  
Washington TRU Solutions (WTS)

**Date and Location:** May 2-5, 2005  
Idaho Falls, Idaho

**Audit Team:**

Martin Navarrete	CBFO QA Management Representative
Annabelle Axinn	Audit Team Leader
Earl Bradford	Auditor, CTAC
Dave Kimbro	Auditor, CTAC
Tammy Bowden	Auditor, CTAC
James Schuetz	Auditor, CTAC
Tommy Putnam	Auditor, CTAC
P.Y. Martinez	Auditor, CTAC
BJ Verret	Technical Specialist, CTAC
Wayne Ledford	Technical Specialist, CTAC

### Audit Scope:

The audit will reevaluate the capability of the INL TWCP to perform as an independent visual examination (VE), sampling and analysis program. The audit will reevaluate the adequacy, implementation, and effectiveness of the INL TWCP quality assurance program activities and technical activities related to the VE, sampling and sample analysis operations. The audit will verify INL TWCP implementation of the CBFO QA Program elements required to develop and maintain proper implementation of the INL TWCP VE, sampling, and analytical laboratory processes. In addition, the audit will evaluate the capability of the INL to perform VE of debris waste.

### Governing Documents/Requirements:

The determination of the adequacy, implementation, and effectiveness for the selected laboratory activities will be based on the current revisions of the following documents. In addition, programmatic and technical checklists will be developed from the active revision 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, New Mexico Environment Department

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

CBFO Statement of Work for the INL Transuranic Waste Characterization  
Program, plus attachment

Analytical Laboratories Department Quality Assurance Plan for the TWCP, PLN-  
600

Quality Program Plan for the INL TWCP, PLN-1258

QA Program Administrative Controls for the TWCP, MCP-2610

Related quality assurance and technical implementing procedures

**Activities to be Audited:**

The following CBFO quality assurance elements will be evaluated:

- Organization and Quality Assurance Program (Program Interfaces and Statement of Work)
- Personnel Qualification and Training
- Nonconformances and Corrective Action
- Documents & Records
- Work Processes
- Procurement
- Inspection and Testing
- Control of Measuring and Test Equipment Used for Characterization
- Audits/Assessments
- Sample Control
- Software QA

The following CBFO characterization technical elements will be evaluated:

- Solids Analysis
- HSG Analysis
- Solids Coring
- Visual Examination of Solids
- Visual Examination of Debris
- Generation-level Data Verification and Validation

See attached table "Processes and Equipment to be Reviewed During Audit A-05-13 of INL" for additional details.

**Schedule of Audit Activities:**

A pre-audit conference is scheduled for Tuesday, May 2, at 8:00 a.m.

Audit team caucuses will be held at 4:30 p.m. Tuesday, May 3, and Wednesday, May 4, and at 12:00 noon on Thursday, May 5.

The audit team will meet with the appropriate INL management at 8:30 a.m. Tuesday, May 3, 2005 through Thursday, May 5, 2005.

A post-audit conference is scheduled for Thursday, May 5, at 4:00 p.m. All INL meeting locations will be determined at a later date.

Prepared by: *A. Axinn*  
Annabelle Axinn, CTAC  
Audit Team Leader

Date: *3/23/05*

Approved by: *Ava L. Holland FOR*  
Ava L. Holland, CBFO  
Quality Assurance Manager

Date: *3-24-05*

**INL TWCP EQUIPMENT LIST**

<b>WIPP #</b>	<b>Site Equipment #</b>	<b>Procedure Number Method Equipment Description</b>	<b>Components</b>	<b>Software</b>
<b>Headspace Gas</b>				
12HE1	GC/MS-E	Procedure – ACMM-9930, Rev. 8 Start Date: 10 Jul 03 Description - Headspace gas volatile organic compounds	GC/MS (Method described in procedure ACMM-9930)	HP Enviroquant ChemStation
12HE2	GC/MS-F	Procedure - ACMM-9930, Rev. 8 Start Date: 10 Jul 03 Description - Headspace gas volatile organic compounds	GC/MS (Method described in procedure ACMM-9930)	HP Enviroquant ChemStation
12HE3	GC/MS-G	Procedure - ACMM-9930, Rev. 8 Start Date: 10 Jul 03 Description - Headspace gas volatile organic compounds	GC/MS (Method described in procedure ACMM-9930)	HP Enviroquant ChemStation
12HE4	GC/MS-H	Procedure - ACMM-9930, Rev.8 Start Date: 10 Jul 03 Description - Headspace gas volatile organic compounds	GC/MS (Method described in procedure ACMM-9930)	HP Enviroquant ChemStation
12HE5	GC-1	Procedure - ACMM-9910, Rev. 6 Start Date: 15 Apr 04 Description - Headspace gas volatile organic compounds	GC-FID (Method described in procedure ACMM-9910)	HP ChemStation
12HE6	GC-2	Procedure - ACMM-9910, Rev. 6 Start Date: 15 Apr 04 Description - Headspace gas volatile organic compounds by GC/FID	GC-FID (Method described in procedure ACMM-9910)	HP ChemStation
12HE7	GC-5	Procedure - ACMM-9925, Rev. 1 Start Date: 20 Apr 04 Description - Headspace gas hydrogen and methane analysis	GC-TCD (Method described in ACMM-9925)	EZ Chrom 200
12HE8	GC-6	Procedure - ACMM-9925, Rev. 1 Start Date: 20 Apr 04 Description - Headspace gas hydrogen and methane analysis	GC-TCD (Method described in ACMM-9925)	EZ Chrom 200
12HE9	GC-7	Procedure - ACMM-9910, Rev. 6 Start Date: 15 Apr 04 Description - Headspace gas volatile organic compounds	GC-FID (Method described in procedure ACMM-9910)	Agilent Chemstation

WIPP #	Site Equipment #	Procedure Number Method Equipment Description	Components	Software
<b>Coring</b>				
12SS1	W0096-0563-EC-00	Procedure - HFEF-OI-6910, Rev. 2d Effective Date: 10 Sep 03 Description - Materials and Fuel Complex [formerly Argonne National Laboratory - West] Core sampling	Core sampling. (Method described in procedure HFEF-OI-6910)	NA
<b>Visual Examination</b>				
<b>Solids</b>				
12HA1	VOA-1	Procedure - ACMM-9260, Rev. 13 Effective Date: 21 Dec 04 Description - Total purgable volatile organic compounds	GC/MS (Method described in ACMM-9260)	Finnigan Magnum
12HA8	VOA-4	Procedure - ACMM-9260, Rev. 13 Effective Date: 21 Dec 04 Description - Total purgable volatile organic compounds	GC/MS (Method described in ACMM-9260)	Agilent ChemStation
12HA3	GC-1	Procedure - ACMM-9441, Rev. 11 Effective Date: 22 Dec 04 Description - Total non-halogenated volatile organic compounds	GC-FID (Method described in ACMM-9441)	Agilent ChemStation
12HA9	GC-5	Procedure - ACMM-9441, Rev. 11 Effective Date: 22 Dec 04 Description - Total non-halogenated volatile organic compounds	GC-FID (Method described in ACMM-9441)	Agilent ChemStation
12HA5	SV-2	Procedure - ACMM-9270, Rev. 8 Effective Date: 20 Jan 05 Description - Total semi-volatile organic compounds	GC/MS (Method described in ACMM-9270)	Varian
12HA6	SV-3	Procedure - ACMM-9270, Rev. 8 Effective Date: 20 Jan 05 Description - Total semi-volatile organic compounds	GC/MS (Method described in ACMM-9270)	Varian
12HA10	SV-6	Procedure - ACMM-9270, Rev. 8 Effective Date: 20 Jan 05 Description - Total semi-volatile organic compounds	GC/MS (Method described in ACMM-9270)	Agilent ChemStation
12HA11	SV-7	Procedure - ACMM-9270, Rev. 8 Effective Date: 20 Jan 05 Description - Total semi-volatile organic	GC/MS (Method described in ACMM-9270)	EnviroQuant ChemStation

WIPP #	Site Equipment #	Procedure Number Method Equipment Description	Components	Software
		compounds		
12HM1	ID 322554	Procedure – ACMM-8909, Rev. 9 Effective Date: 24 Jan 05 Description – Total metals digestion	Microwave digester (Method described in procedure ACMM-8909)	NA
12HM3	ICP-4	Procedure – ACMM-2901, Rev. 3 Effective Date: 27 Jan 05 Description – Total metals analysis	Total metals analysis (ICP-AES) specified in procedure ACM-2901	J-YESS
12HM4	ICP-5	Procedure – ACMM-2901, Rev. 3 Effective Date: 27 Jan 05 Description – Total metals analysis	Total metals analysis (ICP-AES) specified in procedure ACM-2901	J-YESS
12HM7	CVHG-1	Procedure – ACMM-2810, Rev. 3 Effective Date: 27 Jan 05 Description – Total metals (Hg) analysis	Total metals (Hg) analysis (CVAA) specified in procedure ACMM-2810	AA WinLab analyst
12HM8	CVHG-2	Procedure – ACMM-2810, Rev. 3 Effective Date: 27 Jan 05 Description – Total metals (Hg) analysis	Total metals (Hg) analysis (CVAA) specified in procedure ACMM-2810	AA WinLab analyst
12HM9	MW-3	Procedure – ACMM-8909, Rev. 9 Effective Date: 24 Jan 05 Description – Total metals digestion	Microwave digester – Method described in procedure ACMM-8909	NA

## Processes and Equipment to be Reviewed During Audit A-05-13 of the INL

WIPP #	Process/Equipment Description	Applicable to the Following Waste Streams/Groups of Waste Streams	Currently Approved by NMED	Currently Approved by EPA
<b>NEW PROCESSES OR EQUIPMENT</b>				
NA	TWCP Visual Examination as specified in Procedure HFEF-OI-6890	DEBRIS (S5000)	No	No
<b>PREVIOUSLY APPROVED PROCESSES OR EQUIPMENT</b>				
12HE1	Environmental Chemistry Lab – Headspace gas volatile organic compounds specified in Procedure ACMM-9930 PDP ID = GC/MS-E (Cycle 17A [Identical] – 4/8/03) (Cycle 18A [Identical] – 3/29/04)	DEBRIS (S5000) SOILS/GRAVEL (S4000) HOMOGENEOUS SOLIDS (S3000)	Yes	N/A
12HE2	Environmental Chemistry Lab – Headspace gas volatile organic compounds specified in Procedure ACMM-9930 PDP ID = GC/MS-F (Cycle 17A [Identical] – 4/8/03) (Cycle 18A [Identical] – 3/29/04)	DEBRIS (S5000) SOILS/GRAVEL (S4000) HOMOGENEOUS SOLIDS (S3000)	Yes	N/A
12HE3	Environmental Chemistry Lab – Headspace gas volatile organic compounds specified in Procedure ACMM-9930 PDP ID = GC/MS-G (Cycle 17A [Participated] – 4/8/03) (Cycle 18A [Identical] – 3/29/04)	DEBRIS (S5000) SOILS/GRAVEL (S4000) HOMOGENEOUS SOLIDS (S3000)	Yes	N/A
12HE4	Environmental Chemistry Lab – Headspace gas volatile organic compounds specified in Procedure ACMM-9930 PDP ID = GC/MS-H (Cycle 17A [Identical] – 4/8/03) (Cycle 18A [Participated] – 3/29/04)	DEBRIS (S5000) SOILS/GRAVEL (S4000) HOMOGENEOUS SOLIDS (S3000)	Yes	N/A
12HE5	Environmental Chemistry Lab – Headspace gas volatile organic compounds specified in Procedure ACMM-9910 PDP ID = GC-1	DEBRIS (S5000) SOILS/GRAVEL (S4000)	Yes	N/A



## Processes and Equipment to be Reviewed During Audit A-05-13 of the INL

WIPP #	Process/Equipment Description	Applicable to the Following Waste Streams/Groups of Waste Streams	Currently Approved by NMED	Currently Approved by EPA
	(Cycle 17A [Participated] – 4/8/03) (Cycle 18A [Identical] – 3/29/04)	HOMOGENEOUS SOLIDS (S3000)		
12HE6	Environmental Chemistry Lab – Headspace gas volatile organic compounds specified in Procedure ACMM-9910 PDP ID = GC-2 (Cycle 17A [Identical] – 4/8/03) (Cycle 18A [Participated] – 3/29/04)	DEBRIS (S5000) SOILS/GRAVEL (S4000) HOMOGENEOUS SOLIDS (S3000)	Yes	N/A
12HE7	Environmental Chemistry Lab – Headspace gas hydrogen and methane analysis specified in Procedure ACMM-9925  No PDP participation required for hydrogen/methane analysis	DEBRIS (S5000) SOILS/GRAVEL (S4000) HOMOGENEOUS SOLIDS (S3000)	Yes	N/A
12HE8	Environmental Chemistry Lab – Headspace gas hydrogen and methane analysis specified in Procedure ACMM-9925  No PDP participation required for hydrogen/methane analysis	DEBRIS (S5000) SOILS/GRAVEL (S4000) HOMOGENEOUS SOLIDS (S3000)	Yes	N/A
12HE9	Environmental Chemistry Lab – Headspace gas volatile organic compounds specified in Procedure ACMM-9910 PDP Cycle = GC-7 (Cycle 17A [Identical] – 4/8/03) (Cycle 18A [Participated] – 3/29/04)	DEBRIS (S5000) SOILS/GRAVEL (S4000) HOMOGENEOUS SOLIDS (S3000)	Yes	N/A
12HA1	INTEC Lab – Total purgable volatile organic compound analysis specified in Procedure ACMM-9260 Equipment – VOA-1	SOILS/GRAVEL (S4000) HOMOGENEOUS SOLIDS (S3000)	Yes	N/A
12HA8	INTEC Lab – Total purgable volatile organic compound analysis specified in Procedure ACMM-9260 Equipment – VOA-4	SOILS/GRAVEL (S4000) HOMOGENEOUS SOLIDS (S3000)	Yes	N/A

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WIPP #	Process/Equipment Description	Applicable to the Following Waste Streams/Groups of Waste Streams	Currently Approved by NMED	Currently Approved by EPA
12HA3	INTEC Lab - Total nonhalogenated volatile organic compounds specified in Procedure ACMM-9441 Equipment - GC-1	SOILS/GRAVEL (S4000) HOMOGENEOUS SOLIDS (S3000)	Yes	N/A
12HA9	INTEC Lab - Total nonhalogenated volatile organic compounds specified in Procedure ACMM-9441 Equipment - GC-5	SOILS/GRAVEL (S4000) HOMOGENEOUS SOLIDS	Yes	N/A
12HA5	INTEC Lab - Total semivolatile organic compounds specified in Procedure ACMM-9441 Equipment - SV-2	SOILS/GRAVEL (S4000) HOMOGENEOUS SOLIDS (S3000)	Yes	N/A
12HA6	INTEC Lab - Total semivolatile organic compounds specified in Procedure ACMM-9441 Equipment - SV-3	SOILS/GRAVEL (S4000) HOMOGENEOUS SOLIDS (S3000)	Yes	N/A
12HA10	INTEC Lab - Total semivolatile organic compounds specified in Procedure ACMM-9441 Equipment - SV-6	SOILS/GRAVEL (S4000) HOMOGENEOUS SOLIDS (S3000)	Yes	N/A
12HA11	INTEC Lab - Total semivolatile organic compounds specified in Procedure ACMM-9441 Equipment - SV-7	SOILS/GRAVEL (S4000) HOMOGENEOUS SOLIDS (S3000)	Yes	N/A
12HM1	INTEC Lab - Total metals digestion specified in Procedure ACMM-8909 Equipment - ID 322554	SOILS/GRAVEL (S4000) HOMOGENEOUS SOLIDS (S3000)	Yes	N/A
12HM3	INTEC Lab - Total metals analysis specified in Procedure ACMM-2901 Equipment - ICP-4	SOILS/GRAVEL (S4000) HOMOGENEOUS SOLIDS (S3000)	Yes	N/A
12HM4	INTEC Lab - Total metals analysis specified in Procedure ACMM-2901 Equipment - ICP-5	SOILS/GRAVEL (S4000) HOMOGENEOUS SOLIDS (S3000)	Yes	N/A

## Processes and Equipment to be Reviewed During Audit A-05-13 of the INL

WIPP #	Process/Equipment Description	Applicable to the Following Waste Streams/Groups of Waste Streams	Currently Approved by NMED	Currently Approved by EPA
		(S3000)		
12HM7	INTEC Lab – Total metals (Hg) analysis specified in ProcedureACMM-2810 Equipment – CVHG-1	SOILS/GRAVEL (S4000) HOMOGENEOUS SOLIDS (S3000)	Yes	N/A
12HM8	INTEC Lab – Total metals (Hg) analysis specified in ProcedureACMM-2810 Equipment – CVHG-2	SOILS/GRAVEL (S4000) HOMOGENEOUS SOLIDS (S3000)	Yes	N/A
12HM9	INTEC Lab – Total metals digestion specified in ProcedureACMM-8909 Equipment – MW-3	SOILS/GRAVEL (S4000) HOMOGENEOUS SOLIDS (S3000)	Yes	N/A
12SS1	Materials and Fuel Complex (MFC)– Core sampling as specified in ProcedureHFEF-OI-6910 Equipment – W0096-0563-EC-00	SOILS/GRAVEL (S4000) HOMOGENEOUS SOLIDS (S3000)	Yes	N/A
N/A	TWCP Visual Examination as specified in ProcedureHFEF-OI-6890	HOMOGENEOUS SOLIDS (S3000)	Yes	Yes
N/A	Data Verification and Validation	DEBRIS (S5000) SOILS/GRAVEL (S4000) HOMOGENEOUS SOLIDS (S3000)	Yes	Yes
N/A	Sample Management as described in ProcedureMCP-2002	SOILS/GRAVEL (S4000) HOMOGENEOUS SOLIDS (S3000)	Yes	N/A
N/A	SUMMA Canister Cleaning for generator/storage sites HSG sample collection, as described in Procedure ACLP 4.45	DEBRIS (S5000) SOILS/GRAVEL (S4000) HOMOGENEOUS SOLIDS	Yes	N/A

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WIPP #	Process/Equipment Description	Applicable to the Following Waste Streams/Groups of Waste Streams	Currently Approved by NMED	Currently Approved by EPA
		(S3000)		
N/A	Quality Assurance Program	N/A	N/A	Yes