

United States Government

Department of Energy

# memorandum

 Carlsbad Field Office  
 Carlsbad, New Mexico 88221

DATE: MAR 04 2005

 REPLY TO  
 ATTN OF: CBFO:OCT:KWW:GS:05-0198:UFC 5822.00

 SUBJECT: Annual Recertification of Idaho National Engineering and Environmental  
 Laboratory's (INEEL) TRU Waste Characterization Program (TWCP)

to: Elizabeth Sellers, Manager, Idaho Operations Office



The Carlsbad Field Office (CBFO) has completed the annual recertification audit of the Idaho National Engineering and Environmental Laboratory's (INEEL) TRU Waste Characterization Program (TWCP). Audit A-04-17 was conducted in Idaho on May 25-27, 2004. The audit team determined that the technical and quality assurance activities evaluated remain in compliance with the "Waste Analysis Plan" (WAP) of the *WIPP Hazardous Waste Facility Permit*, the *Quality Assurance Program Document* (QAPD), the *CH Transuranic Waste Acceptance Criteria for the Waste Isolation Pilot Plant* (WIPP CH-WAC), and other CBFO requirements and standards.

Based on the results of audit A-04-17, the CBFO is continuing the INEEL TWCP authority for characterization and data generation level review and validation of data for S3000 homogeneous solids, S4000 soils/gravel, and S5000 debris waste and supplying certified SUMMA® canisters for headspace gas (HSG) sample collection to the generator/storage sites.

These authorities are limited to only those processes, systems, and procedures that were audited during A-04-17 and that are listed in the attachments to this memorandum. TRU waste characterization using significantly revised or new processes, systems, or procedures must be evaluated by the CBFO prior to their implementation.

If you have any questions, please contact Mr. Kerry Watson at (505) 234-7357.

Ines R. Triay  
Acting Manager

Attachment(s)

050308



Elizabeth Sellers

-2-

March 4, 2005

cc: w/attachments

K. Watson, CBFO	*ED
R. McCallister, CBFO	ED
A. Holland, CBFO	ED
M. Navarrete, CBFO	ED
J. Wells, DOE-ID	ED
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D. Hicks, DOE-RFFO	ED
J. Nunz, DOE-LASO	ED
M. French, DOE-RL	ED
S. Sailer, INEEL	ED
C. Crowder, INEEL	ED
G. O'Leary, RFETS	ED
R. Dunn, Hanford	ED
T. Hedahl, WTS	ED
D. Haar, WTS	ED
B. Gitlin, EPA	ED
M. Eagle, EPA	ED
E. Feltcorn, EPA	ED
R. Joglekar, EPA	ED
S. Zappe, NMED	ED
K. Jackson, WTS	ED
D. Standiford, WTS	ED
M. Strum, WTS	ED
L. Greene, WRES	ED
A. Axinn, CTAC	ED

CBFO M&RC

WIPP Operating Records, MS 486-06

CTAC Controlled Document Coordinator

**IDAHO NATIONAL ENGINEERING AND ENVIRONMENTAL LABORATORY'S  
TRU WASTE CHARACTERIZATION PROGRAM  
CERTIFICATION PROGRAM STATUS**

The Director of the CBFO Office of Characterization and Transportation and Quality Assurance Manager have evaluated the documentation supporting the continued compliance of the Idaho National Engineering and Environmental Laboratory's (INEEL) TRU Waste Characterization Program (TWCP). Based on the results of audit A-04-17, it is recommended that the CBFO Manager continue the INEEL/TWCP authority for characterization and generation level review and validation of data for the following Summary Categories using the listed characterization activities.

S5000 – Debris Waste

Headspace gas (HSG) analysis  
Data generation-level review & validation

S4000 –Soils/Gravel

Headspace gas (HSG) analysis  
Data generation-level review & validation  
Solids sampling (coring)  
Solids analysis

S3000 – Homogeneous Solids

Headspace gas (HSG) analysis  
Data generation-level review & validation  
Solids sampling (coring)  
Solids analysis  
Visual examination

In addition, it is recommended that the INEEL TWCP authority be continued for supplying certified SUMMA® canisters for HSG sample collection to generator/storage sites. These recommendations are limited to those processes and procedures that were audited during A-04-17. Attachments 2 & 3 contain complete lists of procedures and equipment currently certified at INEEL TWCP.

## **STATUS**

All program elements remain complete.

- The following INEEL required site documents have been revised, approved, and are current. These program documents demonstrate how the TWCP complies with CBFO requirements.
  - **SOW** – *CBFO Statement of Work for the INEEL TWCP, TWCP-CBFO-SOW*
  - **Quality Plan** – *Quality Program Plan for the INEEL TRU Waste Characterization Program, PLN-1258, Revision 1*
  - **Lab QAP** – *Analytical Laboratories Department Quality Assurance Plan for the TRU Waste Characterization Program, PLN-600, Revision 9.*
  - Standard operating procedures (see attachment 3 for complete procedure list)

- INEEL participation in the following performance demonstration programs (PDPs):
  - RCRA PDP -- Participation was satisfactory in Cycle 10A (Memo CBFO:NTP:MRB:IW:03-2153:UFC 5822, dated May 20, 2003) & Cycle 11A (Memo CBFO:NTP:MRB:JGW:04-1426:UFC 5822, dated May 13, 2004)
  - HSG PDP -- Participation was satisfactory in Cycle 17A (Memo CBFO:NTP:MRB:VW:03-1657:UFC 5822 dated April 8, 2003) & Cycle 18A (Memo CBFO:NTP:MRB:VW:04-1119:UFC 5822 dated March 29, 2004)
- CBFO completed the recertification audit (A-04-17) on May 27, 2004. The interim audit report was issued on June 8, 2004. The audit team determined that the technical and quality assurance programs remain adequate, satisfactorily implemented and effective.
- The Final Audit Report was issued to NMED on June 30, 2004.
- NMED approved the Final Audit Report on August 27, 2004 for those processes evaluated during Audit A-04-17. The NMED requested a revised B6 checklist to complete the administrative record. The revised B6 checklist was sent to NMED on September 21, 2004. NMED emailed approval of soils analysis by INEEL TWCP on November 29, 2004
- The EPA did not participate in Audit A-04-17.
- No CARs were issued during Audit A-04-17.

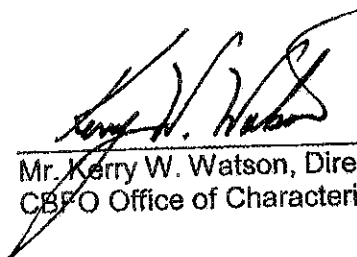
**RECOMMENDATION**

The recommendation to the CBFO Manager is to continue the INEEL TWCP authority for characterization of contact-handled, S3000 homogenous solids, S4000 soils/gravels, and S5000 debris waste. In addition, it is recommended that the INEEL TWCP be authorized to continue to supply certified SUMMA® canisters for HSG sample collection to generator/storage sites requesting such services.

**CONCURRENCE**

 FOR  
Ms. Ava L. Holland, Manager  
CBFO Quality Assurance

3-1-05  
Date

  
Mr. Kerry W. Watson, Director  
CBFO Office of Characterization and Transportation

3/4/05  
Date

## INEEL TWCP CERTIFIED EQUIPMENT LIST

WIPP #	Site Equipment #	Site Description	Components	Software
<b>Headspace Gas</b>				
12HE1	GC/MS-E	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)	GC/MS (Method described in procedure ACMM-9930)	HP Enviroquant Chemstation
12HE2	GC/MS-F	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)	GC/MS (Method described in procedure ACMM-9930)	HP Enviroquant Chemstation
12HE3	GC/MS-G	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)	GC/MS (Method described in procedure ACMM-9930)	HP Enviroquant Chemstation
12HE4	GC/MS-H	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)	GC/MS (Method described in procedure ACMM-9930)	HP Enviroquant Chemstation
12HE5	GC-1	Environmental Chemistry Lab - Headspace gas volatile organic compounds specified in procedure ACMM-9910 PDP ID = GC-1 (Cycle 17A [Participated] - 4/8/03) (Cycle 18A [Identical] - 3/29/04)	GC-FID (Method described in procedure ACMM-9910)	HP Chemstation
12HE6	GC-2	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)	GC-FID (Method described in procedure ACMM-9910)	HP Chemstation
12HE7	GC-5	Environmental Chemistry Lab - Headspace gas hydrogen and methane analysis specified in procedure ACMM-9925  No PDP participation required for hydrogen/methane analysis	GC-TCD (Method described in procedure ACMM-9925)	EZ Chrom 200
12HE8	GC-6	Environmental Chemistry Lab - Headspace gas hydrogen and methane analysis specified in procedure ACMM-9925	GC-TCD (Method described in procedure ACMM-9925)	EZ Chrom 200

WIPP #	Site Equipment #	Site Description	Components	Software
		No PDP participation required for hydrogen/methane analysis		
12HE9	GC-7	Environmental Chemistry Lab - Headspace gas volatile organic compounds specified in procedure ACMM-9910 PDP ID = GC-7 (Cycle 17A [Identical] – 4/8/03) (Cycle 18A [Identical] – 3/29/04)	GC-FID (Method described in procedure ACMM-9910)	Agilent Chemstation
<b>Solids</b>				
12HA1	VOA-1	INTEC Lab – Total purgable volatile organic compound analysis specified in procedure ACMM-9260	GC/MS (Method described in ACMM-9260)	Finnigan Magnum
12HA8	VOA-4	INTEC Lab – Total purgable volatile organic compounds specified in procedure ACMM-9260	GC/MS (Method described in ACMM-9260)	Agilent Chemstation
12HA3	GC-1	INTEC Lab – Total non-halogenated volatile organic compounds specified in procedure ACMM-9441	GC-FID (Method described in ACMM-9441)	Agilent Chemstation
12HA9	GC-5	INTEC Lab – Total non-halogenated volatile organic compounds specified in procedure ACMM-9441	GC-FID (Method described in ACMM-9441)	Agilent Chemstation
12HA5	SV-2	INTEC Lab – Total semi-volatile organic compounds specified in procedure ACMM-9270	GC/MS (Method described in ACMM-9270)	Varian
12HA6	SV-3	INTEC Lab – Total semi-volatile organic compounds specified in procedure ACMM-9270	GC/MS (Method described in ACMM-9270)	Varian
12HA10	SV-6	INTEC Lab – Total semi-volatile organic compounds specified in procedure ACMM-9270	GC/MS (Method described in ACMM-9270)	Agilent ChemStation
12HA11	SV-7	INTEC Lab – Total semi-volatile organic compounds specified in procedure ACMM-9270	GC/MS (Method described in ACMM-9270)	EnviroQuant ChemStation
12HM1	ID 322554	INTEC Lab – Total metals digestion specified in procedure ACMM-8909	Microwave digester (Method described in procedure ACMM-8909)	NA
12HM3	ICP-4	INTEC Lab – Total metals analysis specified in procedure ACMM-2901	Total metals analysis (ICP-AES) specified in procedure ACMM-2901	J-YESS
12HM4	ICP-5	INTEC Lab – Total metals analysis specified in procedure ACMM-2901	Total metals analysis (ICP-AES) specified in procedure ACMM-2901	J-YESS
12HM7	CVHG-1	INTEC Lab – Total metals (Hg) analysis specified in procedure ACMM-2810	Total metals (Hg) analysis (CVAA) specified in procedure ACMM-2810	AA WinLab Analyst
12HM8	CVHG-2	INTEC Lab – Total metals (Hg) analysis specified in procedure ACMM-2810	Total metals (Hg) analysis (CVAA) specified in procedure ACMM-2810	AA WinLab Analyst
12HM9	MW-3	INTEC Lab - Total metals digestion specified in procedure ACMM-8909	Microwave digester - Method described in procedure ACMM-8909	NA

WIPP #	Site Equipment #	Site Description	Components	Software
<b>Coring</b>				
12SS1	W0096-0563-EC-00	Argonne National Laboratory – West – Core sampling as specified in procedure HFEF-OI-6910	Core sampling (Method described in HFEF-OI-6910)	NA

### List of Deactivated Equipment

WIPP #	Site Equipment #	Site Description	Components	Reason for Deactivation
<b>Solids</b>				
12HM2	ID 356094	INTEC Lab – Total metals digestion specified in procedure ACMM-8909	Microwave digester (Method described in procedure ACMM-8909)	Replaced by 12HM9 (MW-3)



<b>INEEL CERTIFIED DOCUMENTS &amp; PROCEDURES LIST</b>		
<b>#</b>	<b>PROCEDURE NUMBER</b>	<b>TITLE</b>
1.	ACLP 4.10	Determination of Method Detection Limits for Gas Analysis
2.	ACLP 4.25	Sample Receiving, Custody, and Storage
3.	ACLP 4.40	Summa Canister Cleaning
4.	ACLP 4.45	Gas Transfer Manifold Systems and Sample Compositing
5.	ACMM-2810	Determination of Mercury by CVAA for TRU Waste Characterization
6.	ACMM-2901	Determination of Metals by ICP-AES for TRU Waste Characterization
7.	ACMM-8909	Microwave Assisted Digestion of Homogeneous Solids and Soil/Gravel
8.	ACMM-9260	Volatile Organic Compounds by Gas Chromatography Mass Spectrometry
9.	ACMM-9270	Semivolatile Organic Compounds by Gas Chromatography/Mass Spectrometry
10.	ACMM-9441	Determination of Nonhalogenated Volatile Organics by Gas Chromatography
11.	ACMM-9500	Sample Preparation for Semivolatile Organic Compounds and Polychlorinated Biphenyls
12.	ACMM-9910	Analysis of Gas Samples for VOCs by GC/FID
13.	ACMM-9925	Analysis of Gas Samples for Hydrogen and Methane by Micro GC/TCD
14.	ACMM-9930	Analysis of Gas Samples for VOCs by GC/MS
15.	HFEF-OI-6862	TWCP Sample Storage and Shipment
16.	HFEF-OI-6890	TWCP Visual Examination
17.	HFEF-OI-6910	TWCP Core Drilling Operations
18.	HFEF-OI-6921	TWCP Solid Sample Preparation
19.	MCP-2002	Analytical Sample Management
20.	MCP-2008	Analytical Data Recording, Review and Reporting
21.	MCP-2009	Analytical Software Control
22.	MCP-2610	QA Program Administrative Controls for the TWCP
23.	NT-AP-03	TWCP Data Generation Level Review
24.	NT-AP-09	TWCP Visual Exam Expert (VEE) Functions and Process
25.	PLN-600	Analytical Laboratory Department Quality Assurance Plan for the Transuranic Waste Characterization Program
26.	PLN-1258	Quality Program Plan for the INEEL TRU Waste Characterization Program
27.	TWCP-CBFO-SOW	CBFO Statement of Work for the INEEL TRU Waste Characterization Program

<b>DEACTIVATED PROCEDURES LIST</b>		
<b>#</b>	<b>PROCEDURE NUMBER</b>	<b>TITLE</b>
1.	ACMM-9080	Determination of Polychlorinated Biphenyls (PCBs) by Gas Chromatography