

United States Government

Department of Energy

**memorandum**Carlsbad Field Office  
Carlsbad, New Mexico 88221

DATE: February 13, 2002

REPLY TO  
ATTN OF: CBFO:QA:ALH:GS:02-0667:UFC 2300.00

SUBJECT: Audit A-02-11 of the Performance Demonstration Program

TO: Kerry Watson, Assistant Manager, Office of National TRU Waste Program

The Carlsbad Field Office (CBFO) conducted an audit of the Performance Demonstration Program on January 21-31, 2002. The audit team concluded that, overall, the Performance Demonstration Program (PDP) is adequate in accordance with the CBFO Quality Assurance Program Document and the WIPP Hazardous Waste Permit. The audit team also concluded that PDP processes were being satisfactorily implemented and effective. The CBFO audit report is attached.

There were no CBFO Corrective Action Reports issued as a result of the audit. Four conditions adverse to quality were corrected during the audit and one recommendation was identified during the audit.

If you have any questions or comments concerning this report, please contact me at (505) 234-7423.

*/Signature on File/*  
Ms. Ava L. Holland  
Quality Assurance Manager

## Attachment

cc w/attachment:

L. Chism, CBFO

T. Bowden, CTAC

I. Triay, CBFO \*ED

M. Brown, CBFO \*ED

S. Monroe, EPA \*ED

M. Eagle, EPA \*ED

S. Zappe, NMED \*ED

B. Walker, EEG \*ED

C. Watkins, CTAC \*ED

B. Oates, CTAC \*ED

A. Boparai, ANL-E \*ED

C. Huff, ERA \*ED

A. Arceo, CTAC \*ED

CBFO Mailroom

\*ED denotes electronic distribution

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**U.S. DEPARTMENT OF ENERGY  
CARLSBAD FIELD OFFICE**

**AUDIT REPORT  
OF THE**

**PERFORMANCE DEMONSTRATION PROGRAM  
AUDITED IN FIVE LOCATIONS:**

**PORTAGE ENVIRONMENTAL, INC.  
IDAHO FALLS, ID JANUARY 21, 2002**

**PORTAGE ENVIRONMENTAL, INC.  
PLEASANTON, UT JANUARY 22, 2002**

**ENVIRONMENTAL RESEARCH ASSOCIATES  
ARVADA, CO JANUARY 23, 2002**

**ARGONNE NATIONAL LABORATORY - EAST  
ARGONNE, IL JANUARY 24, 2002**

**CARLSBAD FIELD OFFICE AND  
CARLSBAD FIELD OFFICE TECHNICAL ASSISTANCE CONTRACTOR  
CARLSBAD, NM JANUARY 29-31, 2002**

**AUDIT NUMBER A-02-11**



**Prepared by:**           /Signature on File/            
Amelia I. Arceo  
Audit Team Leader

**Date:** 2/12/02

**Approved by:**           /Signature on File            
Ava L. Holland  
CBFO QA Manager

**Date:** 2/14/02

## 1.0 EXECUTIVE SUMMARY

Carlsbad Field Office (CBFO) Audit A-02-11 was conducted to evaluate the adequacy, implementation, and effectiveness of the Waste Isolation Pilot Plant (WIPP) Performance Demonstration Program (PDP) activities. The audit was conducted to verify compliance to the requirements detailed in the Waste Isolation Pilot Plant Hazardous Waste Facility Permit (HWFP), and the Quality Assurance Program Document (QAPD). The audit was conducted in five locations: Portage Environmental, Inc. (Portage) in Idaho Falls, ID, on January 22, 2002; Portage in Pleasanton, UT, on January 23, 2002; Environmental Research Associates (ERA) in Arvada, CO, on January 23, 2002; Argonne National Laboratory - East (ANL-E) Chemical Technology in Argonne, IL, on January 24, 2002; and CBFO and Carlsbad Field Office Technical Assistance Contractor (CTAC) in Carlsbad, NM on January 29-31, 2002. The audit team concluded that the Quality Assurance (QA) and technical activities of the PDP were adequate, satisfactorily implemented and effective. Programmatic direction and oversight activities by the DOE/CBFO and CTAC/Portage, as specified in the PDP plans and implementing procedures, were adequate and satisfactorily implemented.

Furthermore, the PDP was evaluated at Rocky Flats Environmental Technology Site (RFETS, A-01-07, 1/29-2/1/01), Hanford Site (HNF A-01-03, 6/11-15/01), Idaho National Engineering and Environmental Laboratory (INEEL, A-01-14, 7/30-8/3/01), Los Alamos National Laboratory (LANL, A-02-04, 10/22-26/01) and Savannah River Site (SRS A-02-06, 12/10-14/02) during the appropriate site audits for recertification. No deficiencies pertaining to the PDP work were noted during these audits.

The audit team did not identify any conditions adverse to quality that required the issuance of CBFO Corrective Action Reports (CARs). Four isolated deficiencies regarding document preparation and QA records were identified. These required only remedial corrective actions and were corrected during the audit (CDA). One Recommendation is being offered for CTAC/Portage management's consideration. The CDAs and recommendation are described in Section 6.0 of this report.

## 2.0 SCOPE

The audit team evaluated the adequacy, implementation, and effectiveness of technical and QA activities related to the PDP. The audit covered work done by the DOE/CBFO and the CTAC/Portage Program Manager and Coordinators including the Sample Preparation Contractors' (SPCs) development of the headspace gas (HSG) and Resource Conservation and Recovery Act (RCRA) constituent samples, distribution of PDP samples to various WIPP PDP participants, and receipt and analyses of the results. The requirements for the PDP come from the HWFP and the QAPD, and flow down into the PDP Management Plan, PDP Plans for Analysis of Simulated Headspace Gases and RCRA Constituent Analysis of Solidified Wastes, and the contractors' implementing procedures. The PDP for Nondestructive Assay was not part of this audit. The evaluation of the program documentation was based on the following documents:

DOE/CBFO-01-3107, Revision 0, "Performance Demonstration Program Management Plan"

DOE/CAO-95-1076, Revision 3, "Performance Demonstration Program Plan for Analysis of Simulated Headspace Gases"

CAO-95-1077, Revision 4, "Performance Demonstration Program Plan for RCRA Constituent Analysis of Solidified Wastes"

The programmatic and technical checklists were developed from the above documents and the following implementing documents:

CTAC Management Procedure (MP) 2.5, Revision 0, "Conduct of the Headspace Gas Performance Demonstration Program"

CTAC MP 2.6, Revision 0, "Conduct of the RCRA Performance Demonstration Program"

### **3.0 AUDIT TEAM AND OBSERVERS**

The following people performed or observed the audit:

#### **AUDITOR/TECHNICAL SPECIALIST**

Amelia I. Arceo	Audit Team Leader
William J. Verret	Technical Specialist

#### **OBSERVER**

Ben Walker	Observer, EEG (observed audits at CBFO and CTAC)
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### **4.0 AUDIT PARTICIPANTS**

Individuals contacted during the audit are listed in Attachment 1. A preaudit meeting was held at each site prior to that portion of the audit. A postaudit meeting was also held at each site at the conclusion of audit activities to discuss issues and deficiencies.

## **5.0 SUMMARY OF AUDIT RESULTS**

### **5.1 Program Adequacy, Implementation, and Effectiveness**

The audit team concluded that the PDP QA program was adequate for the work being performed and was implemented in accordance with the program documents delineated in Section 2.0. The technical areas evaluated were determined to be effective.

### **5.2 SPECIFIC QA PROGRAM AUDIT ACTIVITIES**

#### **5.2 QA Program Audit Activities**

The details of the audit activities, along with the specific objective evidence reviewed, are contained within the audit checklists. The checklists are maintained as QA Records.

##### **5.2.1 CBFO Management and Overview**

CBFO's oversight of the PDP was audited in Carlsbad, NM. Task Plans, approval letters of PDP participation, e-mails and memoranda between the CBFO and contractors, document reviews and approvals of Management Plan and PDP Plans, determination of quality levels, and PDP QA records packages at the CBFO Mail and Records Center were reviewed and it was determined that CBFO's management and oversight of the PDP is adequate and effective. Two conditions adverse to quality were identified and corrected during the audit. One pertained to the PDP Management Plan not revised to reflect current practices (CDA 1), and one regarding the missing signature of the QA Team Leader on the title pages of the PDP Plan for Analysis of HSG and PDP Plan for RCRA Constituent Analysis of Solidified Wastes (CDA 2). These CDAs are listed in Section 6.0 of this report.

##### **5.2.2 CTAC/Portage Management and Overview**

Technical oversight and coordination of the PDP by CTAC/Portage was audited at CTAC in Carlsbad, NM, and the Portage Offices in Idaho Falls, ID, and Pleasanton, UT. E-mails and memoranda between the CBFO, the PDP Program Manager, the PDP Coordinators, and the SPCs were found in the records packages for the HSG PDP Cycle 15A and RCRA PDP Cycles 7A and 8A. Training records, procurement documentation, document preparation and control documentation, and PDP QA records were also reviewed. Two conditions adverse to quality were identified and corrected during the audit: one regarding missing documentation and a missing signature on the Statement of Work in the records package for PDP RCRA Cycle 7A (CDA 3); and another regarding a missing signature and initials on the Document Review Records (DRRs) for MP 2.5 and MP 2.6 (CDA 4). These CDAs are listed in Section 6.0 of

this report. The technical oversight and coordination of this program was determined to be adequate, satisfactorily implemented and effective.

### **5.3 Technical Activities**

#### **5.3.1 Headspace Gas Analysis**

##### **Argonne National Laboratory - East (ANL-E)**

ANL-E is the SPC for the Headspace Gas PDP, whose work consists of sample preparation, verification analyses, and distribution of headspace gas samples to WIPP HSG PDP participants. ANL-E's Work Plan, QA documentation of HSG PDP Sample Cycle 15A, including logbooks, Certificates of Analysis for Standards, Standard Operating Procedures (SOPs), analytical documentation, training documentation and PDP transmittal documentation were reviewed and it was determined that ANL-E adequately and effectively implemented the HSG PDP.

##### **Portage HSG PDP Coordinator**

The Portage HSG PDP Coordinator receives, evaluates and scores analytical data submitted by the WIPP HSG PDP participants. Based on the scoring results, the HSG PDP coordinator identifies in the scoring report the "pass/fail" status of each participant. QA documentation for HSG PDP Sample Cycle 15A, including travelers, scoring report, training records, software and transmittal documentation were reviewed and it was determined that the Portage HSG Program Coordinator adequately and effectively implemented the HSG PDP.

#### **5.3.3 RCRA Constituent Analysis**

##### **Environmental Research Associates (ERA)**

ERA is the SPC for the RCRA PDP, whose work consists of the preparation of the PDP sample matrix and spiking solution, verification analyses, distribution of the PDP samples to WIPP RCRA PDP participants and maintenance of an archive of surplus samples from past cycles. ERA's Statement of Work (SOW), QA documentation of PDP Sample Cycle 8A, including logbooks, Certificates of Analysis for Standards, SOPs, chain-of-custody forms, analytical, training, procurement and transmittal documentation were reviewed and it was determined that the ERA adequately and effectively implemented the RCRA PDP.

##### **Portage RCRA PDP Coordinator**

The Portage RCRA PDP Coordinator receives, evaluates and scores analytical data submitted by the WIPP RCRA PDP participants. Based on the scoring

results, the RCRA PDP coordinator identifies in the scoring report the “pass/fail” status of each participant. QA documentation for PDP Sample Cycle 8A, including travelers, spreadsheets, scoring report, training records, software, procurement, and transmittal documentation were reviewed and it was determined that the Portage RCRA Program Coordinator adequately and effectively implemented the HSG PDP.

## **6.0 CORRECTIVE ACTION REPORTS, DEFICIENCIES CORRECTED DURING THE AUDIT, OBSERVATIONS, AND RECOMMENDATIONS**

### **6.1 Corrective Action Reports**

No Corrective Action Reports were issued.

### **6.2 Deficiencies Corrected During the Audit (CDA)**

Those deficiencies that are considered isolated in nature and only require remedial action may be corrected and verified during the audit. The following deficiencies were corrected and verified prior to completion of the audit.

1. The DOE/CBFO-01-3107, PDP Management Plan, Revision 0 was not revised to reflect the current practice. The management plan required that the contractor prepare work instructions for each PDP. Instead of work instructions, the contractor prepared management procedures for each PDP. The PDP Management Plan also implied that the contractor performs assessments of contractors, but current practice is that the PDP Manager performs annual reviews and the CBFO performs contractor audits every three years. The PDP Management Plan was revised to change work instructions to management procedures and the statement regarding assessments was clarified. It was issued as Revision 1, on 1/31/02.
2. The title pages of the *PDP Plan for Analysis of Simulated Headspace Gases*, DOE/CAO-95-1076, Rev. 3, and *PDP Plan for RCRA Constituent Analysis of Solidified Wastes*, CAO-95-1077, Rev. 4, were not signed for concurrence by the QA Team Leader. The Document Review Records (DRRs) for both PDP Plans were completed and signed off by the QA Team Leader, but he failed to sign the title page. The current QA Team Leader signed the title pages and a memo was added to each file to explain the discrepancy between the signature dates of the Team Leaders of National TRU Waste Characterization Team and Quality Assurance.
3. The records package for RCRA PDP Cycle 7A did not have all the attachments that were listed on the transmittal and the SOW had a missing signature. The missing attachments were retrieved from the CTAC duplicate file and added to the records package at the CBFO Mail and Records Center and the SOW was signed prior to the end of the audit.

4. The *Comment Resolution By:* was not completed on one CTAC DRR for the CTAC MP 2.6, Rev. 0. The resolution of comments in one DRR for the CTAC MP 2.7, Rev. 0 was not apparent, because the *Accept/Reject* column was not initialed by the reviewer to show that the responses to comments provided by the preparer were resolved. The DRRs were signed/initialed prior to the end of the audit.

### **6.3 Observations**

There were no observations identified.

### **6.4 Recommendations**

One recommendation is presented for CTAC management consideration:

1. Instructions for completing the *CTAC Document Review Record (DRR)* need to be added to the CTAC MP 6.1 *Document Control*, to provide guidance in completing the form.

### **7.0 LIST OF ATTACHMENTS**

Attachment 1: Personnel Contacted During the Audit



## PERSONNEL CONTACTED DURING THE AUDIT

<b>Personnel Contacted During the Audit Portage Environmental, Inc., in Idaho Falls, ID January 21, 2002</b>				
<b>Name</b>	<b>Org/Title</b>	<b>Preaudit Meeting</b>	<b>Contacted During Audit</b>	<b>Postaudit Meeting</b>
Cliff Watkins	CTAC/Portage PDP Manager and HSG PDP Coordinator	X	X	X

<b>Personnel Contacted During the Audit Portage Environmental, Inc., in Pleasanton, UT January 22, 2002</b>				
<b>Name</b>	<b>Org/Title</b>	<b>Preaudit Meeting</b>	<b>Contacted During Audit</b>	<b>Postaudit Meeting</b>
Berta Oates	CTAC/Portage RCRA PDP Coordinator	X	X	X

<b>Personnel Contacted During the Audit Environmental Research Associates (ERA), in Arvada, CO January 23, 2002</b>				
<b>Name</b>	<b>Org/Title</b>	<b>Preaudit Meeting</b>	<b>Contacted During Audit</b>	<b>Postaudit Meeting</b>
Craig Huff	ERA/Director of Inorganic Chemistry	X	X	X
Curtis Wood	ERA/Quality Assurance Director	X	X	X
Michael Blades	ERA/Organic Project Manager		X	
Cliff Watkins	CTAC/Portage PDP Manager	X		X
Berta Oates	CTAC/Portage RCRA PDP Coordinator	X	X	X

Personnel Contacted During the Audit ANL-E in Argonne, IL January 24, 2002				
Name	Org/Title	Preaudit Meeting	Contacted During Audit	Postaudit Meeting
Cliff Watkins	CTAC/Portage PDP Manager	X		X
Amrit Boparai	CMT/ACL WIPP Program Manager	X	X	X
Fred Martino	CMT/ACL QA/QC Coordinator	X	X	X
Michael J. Kalensky	ANL/ACL - Scientific Associate	X	X	X
Mark VanderPel	ACL - Scientific Associate	X		

Personnel Contacted During the Audit CBFO in Carlsbad, NM January 29-31, 2002				
Name	Org/Title	Preaudit Meeting	Contacted During Audit	Postaudit Meeting
Mike Brown	CBFO Transportation Packaging Manager	X	X	X
Meg Milligan	CBFO Chief Information Officer		X	
Alberta Farmer	L & M Mail and Records Clerk		X	
Olga M. Montejano	L & M Mail and Records Clerk		X	

<b>Personnel Contacted During the Audit CTAC in Carlsbad, NM January 29-31, 2002</b>				
<b>Name</b>	<b>Org/Title</b>	<b>Preaudit Meeting</b>	<b>Contacted During Audit</b>	<b>Postaudit Meeting</b>
Mike Brown	CBFO Transportation Packaging Manager	X		X
Cliff Watkins	CTAC PDP Manager	X	X	X
Debra Medina	CTAC/Technical Editor		X	
Tammy Bowden	CTAC/Document Control specialist		X	
Melissa Rojo	CTAC/Clerk		X	