



United States Government

Department of Energy

memorandum

 Carlsbad Field Office
 Carlsbad, New Mexico 88221


DATE: October 9, 2008

REPLY TO
ATTN OF: CBFO:QA:ALH:KBS:08-0320:UFC 2300.00

SUBJECT: Audit Report A-08-20, Carlsbad Field Office Performance Demonstration Program

TO: Donald C. Gadbury, Office Director, Office of the National TRU Program

The Carlsbad Field Office (CBFO) conducted an audit of the Performance Demonstration Program (PDP) April 29–May 7, 2008. The audit team concluded that, overall, the PDP was adequate in accordance with the CBFO *Quality Assurance Program Document*, the WIPP Hazardous Waste Facility Permit, and the Waste Acceptance Criteria. The audit team also concluded that PDP processes were being implemented and were effective. The CBFO audit report is attached.

There were no CBFO Corrective Action Reports issued as a result of this audit. One observation and one recommendation were presented to management for consideration.

If you have any questions or comments concerning this report, please contact me at (575) 234-7483.

Martin P. Navarrete, Acting Manager
Office of Quality Assurance

cc: w/attachment
 D. Moody, CBFO *ED
 M. Brown, CBFO ED
 L. Chism, CBFO ED
 M. Eagle, EPA ED
 S. Zappe, NMED ED
 C. Watkins, CTAC ED
 T. McKibbin, CTAC ED
 T. Bowden, CTAC ED
 P. Martinez, CTAC ED
 P. Gomez, CTAC ED

CBFO QA Records File
 CBFO M&RC

WIPP Operating Records, MS 452-09

*ED denotes electronic distribution

081011



U.S. DEPARTMENT OF ENERGY
CARLSBAD FIELD OFFICE

AUDIT REPORT
OF THE

PERFORMANCE DEMONSTRATION PROGRAM
AUDITED IN THREE LOCATIONS:

NAVARRO RESEARCH AND ENGINEERING
RICHLAND, WA, APRIL 29, 2008

NAVARRO RESEARCH AND ENGINEERING
ARVADA, CO, MAY 1, 2008

CARLSBAD FIELD OFFICE AND
CARLSBAD FIELD OFFICE TECHNICAL ASSISTANCE CONTRACTOR
CARLSBAD, NM, MAY 6-7, 2008

AUDIT NUMBER A-08-20



Prepared by:

Tamara D. Bowden
Tamara D. Bowden, CTAC
Audit Team Leader

Date: 10/8/08

Approved by:

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

Date: 10-8-08

1.0 EXECUTIVE SUMMARY

Carlsbad Field Office (CBFO) Audit A-08-20 was conducted to evaluate the adequacy, implementation, and effectiveness of the Waste Isolation Pilot Plant (WIPP) Performance Demonstration Program (PDP) management and oversight 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 CBFO *Quality Assurance Program Document* (QAPD). The audit was conducted in three locations: Navarro Research and Engineering in Richland, WA, on April 29, 2008; Navarro Research and Engineering in Arvada, Colorado, on May 1, 2008; and the CBFO and Carlsbad Field Office Technical Assistance Contractor (CTAC) in Carlsbad, NM, on May 6-7, 2008. The audit team concluded that the quality assurance (QA) and technical activities of the PDP were adequate, implemented, and effective. Programmatic direction and oversight activities by the U.S. Department of Energy (DOE)/CBFO and CTAC/Navarro, as specified in the PDP plans and CTAC implementing procedures were adequate, implemented, and effective. CBFO requires a PDP programmatic audit be conducted every three years; the last audit, CBFO Audit A-05-04, was conducted March 14 -24, 2005.

The audit team identified no conditions adverse to quality that required the issuance of a CBFO corrective action report (CAR). No isolated deficiencies were identified that required remedial action. One Observation was identified concerning a process that, if continued, could result in a potential CAR. One Recommendation was offered for CTAC/Navarro management consideration. The Observation and Recommendation are described in section 6.0.

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/Navarro Program Manager and PDP coordinators, including procurement, data scoring, and results analysis. The requirements for the PDP come from the HWFP, the Waste Acceptance Criteria (WAC), and the QAPD, and flow down into the PDP Management Plan, PDP Plans for Analysis of Simulated Headspace Gases, RCRA Constituent Analysis of Solidified Wastes, and Nondestructive Assay (NDA), and also into CTAC/Navarro and CBFO implementing procedures. The evaluation of the program documentation was based on the following documents:

DOE/CBFO-01-3107, Revision 4, *Performance Demonstration Program Management Plan*

DOE/CBFO-95-1076, Revision 6.1, *Performance Demonstration Program Plan for Analysis of Simulated Headspace Gases*

DOE/CBFO-95-1077, Revision 7, *Performance Demonstration Program Plan for RCRA Constituent Analysis of Solidified Wastes*

DOE/CBFO-01-1005, Revision 1, *Performance Demonstration Program Plan Nondestructive Assay of Drummed Wastes for the TRU Waste Characterization Program*

DOE/CBFO-01-1006, Revision 1, *Performance Demonstration Program Plan for Nondestructive Assay of Boxed Wastes for the TRU Waste Characterization Program*

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

CTAC Management Procedure (MP) 2.5, Revision 2, *Conduct of the Headspace Gas Performance Demonstration Program*

CTAC MP 2.6, Revision 1, ICN #1, *Conduct of the RCRA Performance Demonstration Program*

CTAC MP 2.7, Revision 2, *Conduct of the Nondestructive Assay Performance Demonstration Programs*

3.0 AUDIT TEAM AND OBSERVERS

The following people performed or observed the audit:

AUDITOR/TECHNICAL SPECIALIST

Tamara D. Bowden	Lead Auditor, CBFO/CTAC
Paul Gomez	Auditor, CBFO/CTAC
Porf Martinez	Auditor, CBFO/CTAC

OBSERVERS

None

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 brief meeting was also held at each site at the conclusion of audit activities to discuss issues and deficiencies. A post-audit meeting was conducted with the CBFO in Carlsbad, NM.

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 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

The details of the audit activities, along with the specific objective evidence reviewed, are contained in the audit checklists.

5.2.1 CBFO Management and Overview

CBFO's oversight of the PDP was audited in Carlsbad, NM. The audit team reviewed task plans, approval letters of PDP participation, e-mails and memoranda between the CBFO and contractors, document reviews and approvals of the Management Plan and PDP Plans, determination of quality levels, and PDP QA records packages at the CBFO Mail and Records Center (M&RC). Scoring reports and other documentation are approved and sent by the CBFO as specified in CTAC MPs 2.5, 2.6, and 2.7 (resolving CAR 05-021). CBFO management and oversight of the PDP were determined to be adequate, implemented, and effective.

5.2.2 CTAC/Navarro Management and Overview

Technical oversight and coordination of the PDP by CTAC/Navarro was audited at the Navarro offices in Richland, WA; Arvada, CO; and Carlsbad, NM. E-mails providing documentation of completion for required actions were retained on computer hard drives, backed-up, and saved on disk. This resolves Observation 1 of the previous audit stating, "*A computer crash could cause the loss of documentation*".

Sound flow-down of authority regarding approval of documentation and procedures was observed. This resolves Observation 2 of the previous audit stating, "*There were conflicting requirements regarding approval authority for CTAC MPs*".

Training records, procurement documentation, document preparation and control documentation, and PDP QA records were also reviewed. The technical oversight and coordination of this program was determined to be adequate, implemented, and effective.

5.3 Technical Activities

5.3.1 Headspace Gas Analysis

The Navarro HSG PDP Coordinator ensures preparation and distribution of PDP samples; audits the sample preparation contractor; and receives, evaluates, and scores analytical data submitted by the 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 Cycles 21A and 22A, including travelers, scoring reports, training records, software, and transmittal documentation, were reviewed. E-mails providing documentation of completion of required actions were retained on computer hard drives, which were backed up and retained. This resolves the previous audit Observation 1 stating, "*A computer crash could cause the loss of documentation.*" Scoring reports and other documentation are approved and sent by the CBFO as specified in CTAC MP 2.5 (resolving CAR 05-021). The Navarro HSG Program Coordinator adequately and effectively implemented the HSG PDP.

5.3.2 RCRA Constituent Analysis

Navarro RCRA PDP Coordinator

The Navarro RCRA PDP Coordinator ensures preparation and distribution of PDP samples; audits the sample preparation contractor; and 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 Cycles 12A, 13A, and 14A, including travelers, worksheets, scoring reports, training records, software, procurement, and transmittal documentation were reviewed. The audit team verified continued corrective actions were being implemented as a result of CBFO CAR 05-021 issued during the previous audit.

The audit team concluded that the PDP RCRA plan for drummed waste was adequate and the RCRA PDP is being satisfactorily implemented and effective.

5.3.3 Nondestructive Assay

Navarro NDA PDP Coordinator

The Navarro NDA PDP Coordinator ensures preparation of the NDA sample drums and boxes, and receives, evaluates, and scores assay data submitted by the NDA PDP participants. Based on the scoring results, the NDA PDP coordinator identifies in the scoring report the "pass/fail" status of each participant. The audit team reviewed QA documentation for PDP Sample Cycles 13A and 14A, including preparation of PDP NDA sample drums, travelers, worksheets, scoring report, training records, software, procurement, and transmittal documentation. The audit team also reviewed QA

documentation for PDP Sample Cycles B7A, B6A, and B6A Rev. 1, including preparation of PDP NDA standard waste boxes, travelers, worksheets, scoring report, training records, software, procurement, and transmittal documentation.

The Excel worksheets used by the NDA PDP Coordinator are validated 100% by a coordinator other than the one who entered the data. This resolves the previous audit CAR 05-020 stating, "*Neither Excel worksheet used by the NDA PDP Coordinator had been validated*", and resolves the QAPD requirement that all values be checked by other means.

The audit team verified continued corrective actions were being implemented as a result of CBFO CARs 05-020, 05-021, 05-022, 05-023, and 05-024, issued during the previous audit.

The audit team concluded that the PDP NDA plans for both drummed and boxed wastes were adequate, and the NDA PDP is being satisfactorily implemented and effective.

5.4 Quality Elements

Quality elements were evaluated as related to the technical aspects of the PDP. These included overviews of organization, training, procurement, implementing documents, document control, corrective actions, quality records, and assessments. The quality records system used by the CBFO at the M&RC was able to locate records using their database of records. The quality elements were being satisfactorily addressed.

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

6.1 Corrective Action Reports

During the audit, the audit team may identify conditions adverse to quality (CAQs) and document such conditions on CARs.

Condition Adverse to Quality (CAQ) -Term used in reference to failures, malfunctions, deficiencies, defective items, and nonconformances.

Significant Condition Adverse to Quality -A condition which, if uncorrected, could have a serious effect on safety, operability, waste confinement, TRU waste site certification, compliance demonstration, or the effective implementation of the Quality Assurance (QA) program.

No significant conditions adverse to quality were identified during the audit.

6.2 Deficiencies Corrected During the Audit (CDA)

During the audit, the audit team may identify CAQs. Once a determination is made that the CAQ is not significant, the audit team member, in conjunction with the Audit Team Leader (ATL), determines if the CAQ is an isolated case requiring only remedial action and therefore can be corrected during the audit. Upon determination that the CAQ is isolated, the audit team member, in conjunction with the ATL, evaluates/verifies any objective evidence/actions submitted or taken by the audited organization and determines if the condition was corrected in an acceptable manner. Once it has been determined that the CAQ has been corrected, the ATL categorizes the condition as a CDA according to the definition below.

CDAs – Isolated deficiencies that do not require a root cause determination or actions to preclude recurrence. Correction of the deficiency can be verified prior to the end of the audit. Examples include one or two minor changes required to correct a procedure (isolated), one or two forms not signed or not dated (isolated), and one or two individuals that have not completed a reading assignment.

No CDAs were identified during this audit.

6.3 Observations and Recommendations

During the audit, the audit team may identify potential problems or suggestions for improvement that should be communicated to the audited organization. The audit team members, in conjunction with the ATL, evaluate these conditions and classify them as Observations or Recommendations using the following definitions:

Observation – A condition that, if not controlled, could result in a CAQ.

Recommendations – Suggestions that are directed toward identifying opportunities for improvement and enhancing methods of implementing requirements. Once a determination is made, the audit team member, in conjunction with the ATL, categorizes the condition appropriately.

6.3.1 Observations

One Observation was presented to PDP management.

6.3.2.2 Observation Number 1

CBFO Quality Assurance Records were not readily retrievable. There was an access list posted on/near the file cabinet, but the alternate Records Custodians were unable to locate a key to the file cabinet to access the records. Eventually, CBFO was able to locate a key to access the applicable FireKing file cabinet that contained the PDP records.

6.3.2 Recommendations

One recommendation was presented for PDP management consideration.

6.3.2.1 Recommendation Number 1

The Headspace Gas Analysis Performance Demonstration Program Approval Status Summary through Completion of Cycle 21A does not have a time stamp on it documenting when it was generated. The audit team recommends that a time stamp is used at the point of generation.

7.0 LIST OF ATTACHMENTS

Attachment 1: Personnel Contacted During the Audit
Attachment 2: Procedures Audited

PERSONNEL CONTACTED DURING AUDIT A-08-20

Personnel Contacted During the Audit Navarro Research and Engineering, Richland, WA April 29, 2008				
Name	Org/Title	Preaudit Meeting	Contacted During Audit	Postaudit Meeting
Berta Oates	CTAC/Navarro RCRA PDP Coordinator	X	X	
Cliff Watkins	CTAC/Navarro PDP Manager and HSG PDP Coordinator	X	X	X

Personnel Contacted During the Audit Navarro Research and Engineering, Arvada, CO May 1, 2008				
Name	Org/Title	Preaudit Meeting	Contacted During Audit	Postaudit Meeting
Terry McKibbin	CTAC/NDA PDP Coordinator	X	X	
Cliff Watkins	CTAC/Navarro PDP Manager and HSG PDP Coordinator	X	X	X

Personnel Contacted During the Audit CBFO in Carlsbad, NM May 6-7, 2008				
Name	Org/Title	Preaudit Meeting	Contacted During Audit	Postaudit Meeting
Deb Biscaino	L&M Technologies/ Records Clerk		X	
Mike Brown	CBFO/ Transportation Packaging Manager/PDP Appointee	X	X	X
Melinda H. Durden	Navarro/ Contracts Specialist		X	

Personnel Contacted During the Audit CBFO in Carlsbad, NM May 6-7, 2008				
Name	Org/Title	Preaudit Meeting	Contacted During Audit	Postaudit Meeting
Lolly Espinoza	L&M Technologies/ Records Clerk		X	
Alberta Farmer	L&M Technologies/ Records Clerk		X	
Monica Martinez	CTAC/Navarro/ Procurement Coordinator	X	X	X
Cliff Watkins	CTAC/Navarro PDP Manager	X	X	X

Procedures Audited During Audit A-08-20

NUMBER	PROCEDURE NUMBER AND REVISION	TITLE
1.	DOE/WIPP-02-3122, Rev. 6.1	Transuranic Waste Acceptance Criteria for the Waste Isolation Pilot Plant
2.	DOE/CBFO-01-3107, Rev. 4	Performance Demonstration Program Management Plan
3.	DOE/CBFO-95-1076, Rev. 6.1	Performance Demonstration Program Plan for Analysis of Simulated Headspace Gases
4.	DOE/CBFO-95-1077, Rev. 7	Performance Demonstration Program Plan for RCRA Constituent Analysis of Solidified Wastes
5.	DOE/CBFO-01-1005, Rev. 1	Performance Demonstration Program Plan Nondestructive Assay of Drummed Wastes for the TRU Waste Characterization Program
6.	DOE/CBFO-01-1006, Rev. 1	Performance Demonstration Program Plan for Nondestructive Assay of Boxed Wastes for the TRU Waste Characterization Program
7.	CTAC MP 2.5, Rev. 2	Conduct of Headspace Gas Performance Demonstration Program
8.	CTAC MP 2.6, Rev. 1, ICN #1	Conduct of the RCRA Performance Demonstration Program
9.	CTAC MP 2.7, Rev. 2	Conduct of the Nondestructive Assay Performance Demonstration Programs
10.	CBFO MP 4.5, Rev. 2	Generating, Receiving, Storing, and Controlling Active CBFO Project Records