

United States Government

Department of Energy

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

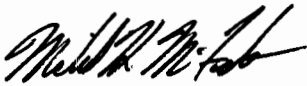
**DATE:** August 10, 1998  
**REPLY TO  
ATTN OF:** CAO:QA:SAV 98-0989 UFC 2300  
**SUBJECT:** Audit Report for CAO Audit A-98-11  
**TO:** Joe Epstein, General Manager, WID



The Carlsbad Area Office (CAO) performed Audit A-98-11 of the Westinghouse Waste Isolation Division on July 13-17, 1998. Except as noted in the Corrective Action Reports (CARs) 98-051 through 98-058, the audit team concluded that 1) the WID implementing procedures are adequate (the flowdown of requirements) in accordance with the WID Quality Assurance Program Description and 2) the WID procedures are being satisfactorily implemented and the processes evaluated are effective.

As a result of the audit, eight CARs were issued and were sent to you under separate cover.

If you have any questions or comments, please contact Sam Vega at (505)234-7423.

  
 Michael H. McFadden  
 Acting Manager

Attachment

cc w/attachment:

G. Basabilvazo, CAO  
 K. Hunter, CAO  
 A. Miner, CAO  
 B. Bennington, CAO  
 D. Brown, CAO  
 L. Chism, CAO  
 J. Klaus, CAO  
 W. Walker, CAO  
 T. Bowden, CTAC  
 M. Horseman, CTAC  
 J. Kenny, EEG  
 M. Eagle, EPA  
 ✓ S. Zappe, NMED



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U.S. DEPARTMENT OF ENERGY  
CARLSBAD AREA OFFICE

AUDIT REPORT

OF THE

WESTINGHOUSE WASTE ISOLATION DIVISION (WID)

CARLSBAD, NEW MEXICO

AUDIT NUMBER A-98-11

JULY 13-17, 1998

WIPP SITE QUALITY ASSURANCE PROGRAM



Prepared By: Samuel Vega  
Samuel Vega  
Audit Team Leader

Date: 7/30/98

Approved By: R. Dennis Brown  
R. Dennis Brown  
CAO QA Manager

Date: 8/5/98

## **1.0 EXECUTIVE SUMMARY**

Carlsbad Area Office (CAO) Audit A-98-11 was conducted to evaluate the adequacy, implementation, and effectiveness of the Westinghouse Waste Isolation Division (WID) quality assurance (QA) program. The assessment included the evaluation of technical and programmatic elements.

The audit was conducted at the WID facilities on July 13 through 17, 1998. Except as noted in CAO Corrective Action Report (CAR) 98-051, the audit team concluded that the adequacy of the WID quality assurance program (the flowdown of requirements from the WID Quality Assurance Program Description) has continued to be acceptable. Except as noted in CAO CARs 98-052 through 98-058, the audit team also concluded that the QA program has continued to be satisfactorily implemented in accordance with the WID Quality Assurance Program Description (WID QAPD) and WID implementing procedures. The technical areas evaluated also continue to be satisfactorily implemented and effective.

The audit team identified eight conditions adverse to quality that resulted in the issuance of eight CARs. In addition, eight deficiencies, isolated in nature and requiring only remedial corrective actions, were corrected during the audit. Four recommendations have been offered for management action and consideration. Two observations were identified in the areas of quality assurance audits and temporary engineering modifications. The audit team noted two exemplary practices being performed by WID personnel in the areas of groundwater sampling and the computerized tracking of measuring and test equipment (M&TE). CARs, CDAs, Observations, Recommendations, and Exemplary Practices are described in Section 6.0 of this report.

## **2.0 SCOPE**

The audit team evaluated the continued adequacy, implementation, and effectiveness of technical and quality assurance processes related to the WID quality assurance program.

The following elements were evaluated in accordance with the CAO and WID QAPDs:

- Organization
- Management Assessment
- Training
- Corrective Action
- Inspection
- Testing

Sample Control  
Work Control  
Document and Procedure Control  
Records  
Quality Improvement  
Design Control  
Software (procedures and WWIS records)  
Audits

The audit team evaluated activities within the following WID organizations:

Quality and Regulatory Assurance  
Engineering  
Environmental Monitoring  
Environmental Compliance and Support  
Technical Training  
Surface Maintenance  
Facility Operations  
WIPP Laboratories  
Design and Construction Engineering  
Document Services  
TRU Waste Programs  
Project Record Services

The evaluation of WID quality assurance documents for adequacy was based on the current revisions of the following documents:

CAO QAPD  
WID QAPD  
Related WID technical and quality assurance implementing procedures

### **3.0 AUDIT TEAM, WID OBSERVERS**

#### **CAO AUDIT TEAM**

Sam Vega	Audit Team Leader, CAO
Lea Chism	Auditor, CAO
Marlin Horseman	Auditor, CTAC
Jeff May	Auditor, CTAC
Wayne Ledford	Auditor, CTAC
Charles Riggs	Auditor, CTAC
Dee Scott	Auditor, CTAC

Sid Ailes

Auditor/Technical Specialist, CTAC

## **OBSERVERS**

Jim Kenney, EEG

Jim Klaus, CAO

Beth Bennington, CAO

## **4.0 AUDIT PARTICIPANTS**

WID individuals involved in the audit process are identified in Attachment 1. A preaudit conference was held in the WID Support Building Conference Room on July 13, 1998. A daily meeting was held with WID management and staff to discuss issues and potential deficiencies. The audit was concluded with a postaudit conference held in the WID Support Building Conference Room on July 17, 1998.

## **5.0 SUMMARY OF AUDIT RESULTS**

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

The audit team concluded that, except for the areas identified in CAO CAR 98-051, the WID QA Program has continued to be adequate in meeting the requirements of the CAO QAPD, Revision 1 and the WID QAPD, Revision 16, Change 6. The audit team concluded that the QA Program and those technical programs audited continue to be satisfactorily implemented, except as noted in CAO CARs 98-052 through 98-058. For the technical areas evaluated (Paragraphs 5.2.1 through 5.2.6 of this report), WID processes continue to be effective.

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

WID implementing procedures included in the audit are identified in Attachment 2. A summary table of audit results is provided as Attachment 3. Details of audit activities, including specific objective evidence reviewed, are contained within the audit checklists.

#### **5.2.1 Design Control**

WID design control activities were evaluated by the audit team. This evaluation included a review of Engineering Change Orders, Engineering Change Proposals, design output documents, equipment registers, and specifications. The WID configuration control program was reviewed in accordance with the guidelines provided in DOE Standard, DOE-STD-1073-93, *Guide for Operations Configuration Management Program*. During this evaluation, one CAR (CAR 98-056), one deficiency that was

corrected during the audit (CDA 2), and one Observation (Observation 1) were identified. This area was determined to be satisfactorily implemented and effective.

### **5.2.2 Sample Control**

The WID sample control process was evaluated. The evaluation included a review of sample control activities relative to environmental monitoring (biotic, vegetation, soil, air, and groundwater sampling); environmental compliance and support (hazardous waste sampling); and RCRA permitting (confirmatory VOC sampling). During this evaluation, one Exemplary Practice was identified (Exemplary Practice 1), one deficiency was identified and corrected during the audit (CDA 1) and one recommendation was made for improving WID's Sample Control Program (Recommendation 1). This area was determined to be satisfactorily implemented and effective.

### **5.2.3 Inspection and Testing Controls**

Inspection and testing activities were evaluated during the audit. The evaluation included a review of the WID metrology program for measuring and test equipment (MT&E), source and receipt inspection activities, completed work packages, nondestructive examination, and start-up testing. During this evaluation one CAR was initiated (CAR 98-057) and one deficiency was identified and corrected during the audit (CDA 3). One Exemplary Practice was identified (Exemplary Practice 2). The Metrology Group has developed and implemented an exceptional method for tracking and control of equipment usage and status. This area was determined to be satisfactorily implemented and effective.

### **5.2.4 Transportation**

The audit team reviewed WID transportation activities. The evaluation included a review of HAZMAT shipments, receipt and shipment of TRUPACT-II's, TRUPACT-II loading, trailer preparation, TRUPACT II maintenance and testing, and activities associated with the Central Monitoring Room Operations (CMRO). One deficiency was identified and consequently corrected by WID (CDA 4). This area was determined to be satisfactorily implemented and effective.

### **5.2.5 WID Work Process Controls**

WID work process controls were evaluated. This review included the evaluation of activities associated with the WID control of system lineups, equipment tagout/lockout, waste handling inspections, the maintenance instruction manual and the associated work documents, corrective and preventive maintenance, and stores inventory control.

During this evaluation one condition adverse to quality was identified (CAR 98-052). This area was determined to be satisfactorily implemented and effective.

#### **5.2.6 WWIS Records**

The control of WIPP Waste Information System (WWIS) records was evaluated, including the backup of WWIS data, the control of archive copies of the database, software modifications, software verification and validation, and software revision information. One condition adverse to quality was identified (CAR 98-053). This area was determined to be satisfactorily implemented and effective.

#### **5.2.7 Records**

The audit team evaluated the control of QA records. This evaluation included a review of the development and maintenance of organizational Records Inventory and Disposition Schedules (RIDS), the training of records coordinators, the control and storage of records, record correction, the validation of records, and other associated activities performed by Project Records Services. Two deficiencies were Corrected During the Audit (CDA 6 and 7). One observation was noted (Observation 2). This area was determined to be satisfactorily implemented and effective.

#### **5.2.8 Documents**

The evaluation of document control included a review of the document change process; activities of the Document Review Committee; WIPP specification preparation; the review, approval, and cancellation of WID controlled documents; and the document distribution process. During this evaluation, one condition adverse to quality was identified (CAR 98-058) and one deficiency was identified and Corrected During the Audit (CDA 8). An adequacy issue was noted during the evaluation and was included in the adequacy CAR (CAR 98-051). A recommendation was made to review procedures and remove any restrictive time limits to perform tasks (Recommendation 3). This area was determined to be satisfactorily implemented and effective.

#### **5.2.9 Organization**

WID QA program activities and organizational responsibilities were evaluated. This evaluation included a review to assure that a management system was in place, including the policies and procedures needed to implement the WID QAPD; that management has in place a system for the verification of quality; that the Q&RA Manager has sufficient independence and freedom to effectively perform WID quality functions; and that a system is in place to resolve differences of opinion involving quality assurance program requirements. An adequacy issue was identified relative to

the lack of requirements in WID Position Descriptions for line management to satisfy the QAPD requirements. The deficiency was included in CAR 98-051. This area was determined to be satisfactorily implemented and effective.

#### **5.2.10 Management Assessment**

The audit team evaluated WID management assessment activities. The self-assessment program is described in WID Management Policy 1.20, *Assessments, Cognizant Staff Manager*. These activities included the scheduling, completion, and follow-up of WID internal self-assessments and an independent management assessment performed by West Valley Nuclear Services (September 25, 1997). The independent management assessment concluded that the WID quality assurance program was "mature and implemented".

Generally, the assessment program was satisfactorily implemented and effective. However, based on a sample of three organizations, assessment reports are not being sent to the WID General Manager nor the Quality and Regulatory Assurance Organization, as required by MP 1.20 (CAR 98-054).

#### **5.2.11 Grading**

The WID process used to grade quality activities was evaluated. Quality grading activities are identified in several WID procedures (e.g., audit, document review, procurement, engineering, and other procedures). There is no single procedure that describes the overall grading process. The processes identified in the various procedures were determined to be effective and satisfactorily implemented. The CAO QAPD, however, requires CAO approval of the WID grading procedure and this has not occurred (CAR 98-055).

#### **5.2.12 Audits**

The audit team evaluated the WID audit process as defined in WID procedure WP 13-QA.03, Revision 1, Change 1, *Quality and Regulatory Assurance Department Assessment Program*. The review included an evaluation of the WID audit scheduling process, the conduct of internal and external audits, the preparation of WID audit reports, and follow-up of identified findings. The qualification and certification of auditors and lead auditors was evaluated as part of the training review. Two formal Changes (numbers 2 and 3) to the procedure were issued during the audit to correct adequacy issues. One Recommendation (Recommendation 2) was identified to prepare a matrix to help ensure that all elements of the WID QAPD have been audited. This area of the WID QA program was determined to be satisfactorily implemented and effective.



### **5.2.13 Corrective Action**

The audit team evaluated the WID processes for trending, work suspension and stop work, nonconformance reporting, event investigation and root cause analysis, and the use of hold tags. Management policy, MP 1.2, Revision 1, *Work Suspension and Stop-Work Direction*, currently in place, does not fully describe the process and is incomplete in providing direction on how the work suspension and stop work processes are to be implemented. This condition was identified in the adequacy CAR (CAR 98-051). A Recommendation to clarify a note in the Nonconformance Report procedure was identified by the audit team (Recommendation 4). Q&RA Administrative Program procedures require a semi-annual trending report be issued and distributed to WID department managers and the WID General Manager. This had not been done but was Corrected During the Audit (CDA 5).

The findings and observations identified during CAO Surveillance S-98-06, Conduct of Operations, were reviewed to verify correction of the findings. There was sufficient evidence that these concerns have been resolved. The corrective action area was determined to be implemented and effective.

### **5.2.14 Training**

The audit team reviewed WID personnel qualification and certification processes. This evaluation included verification of appropriate training and qualification of inspectors, surveillants, auditors, instructors, and non-destructive evaluation (NDE) personnel; the performance of biennial reviews of qualification cognizant managers; activities performed by the Qualification Boards; and the implementation of the Systematic Approach to Training (SAT). This area was determined to be satisfactorily implemented and effective.

## **6.0 CARS, CDAS, OBSERVATIONS, RECOMMENDATIONS, AND EXEMPLARY PRACTICES**

### **6.1 Corrective Action Reports**

#### **6.1.1 CAO CAR 98-051**

Adequacy issues were identified for several procedures.

### **6.1.2 CAO CAR 98-052**

Fault Tree Analysis results for system lineups are not maintained in the cognizant operations area, as required by procedure WP 04-AD 3005, *Administrative Control of System Lineups*.

### **6.1.3 CAO CAR 98-053**

A software verification and validation report has not been prepared, as required by the procedure WP 05-WA.05, *WIPP Waste Information System Software Verification and Validation Plan*.

### **6.1.4 CAO CAR 98-054**

Copies of management assessments are not being distributed to the WID General Manager and Q&RA, as required by procedure MP 1.20, *Assessments*.

### **6.1.5 CAO CAR 98-055**

While the quality grading process(es) used at WID are effective, the grading procedure has not been approved by CAO, as required by the CAO QAPD.

### **6.1.6 CAO CAR 98-056**

Annual system walkdowns have not been documented by all cognizant engineers, as required by WID procedure WP 09, *Engineering Conduct of Operations*.

### **6.1.7 CAO CAR 98-057**

WID work packages have not received a Level III Start-up Test Engineer's sign-off for evaluation and approval of the test results, as required by WID procedure WP 09-SU.01, *WIPP Start-Up Program*.

### **6.1.8 CAO CAR 98-058**

Document Services has been following-up overdue "periodic reviews", with phone calls rather than placing the condition on the Systematic Tracking and Action Reporting (STAR) system, as required by WID procedure WP15-PS 3002, *Review, Approval, and Cancellations of WID Controlled Documents*.

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

1. Samples collected by the WID Environmental Compliance and Support organization (EC&S) are required to be stored in a controlled area under lock and key if they are to be left onsite overnight prior to shipment to the analytical laboratory (WP 02-EC.05, *Quality Assurance Project Plan for WIPP Site Effluent and Hazardous Materials Sampling*, Section 2.8.1). The area used by EC&S to store the samples was separated by a row of cabinets from an open office area. There was approximately 20 inches of space between the top of the cabinets and the ceiling of the office trailer. Access to the samples by unauthorized personnel would be relatively easy. EC&S personnel agreed that, in the future, when samples need to be stored overnight, they will use the EC&S Management Office for sample storage. This office is lockable with hard walls.
2. When a temporary modification is installed, the cognizant engineer is required to sign the "Fieldwork Completed" line of the Engineering Change Order (ECO). This was not done for ECO 9038 which authorized a temporary change to the motor control circuitry for exhaust fan 41-B-835. The cognizant engineer verified that the modification had been installed and signed the "Fieldwork Completed" line during the audit.
3. NDE personnel qualification cards were prepared in accordance with a previous procedural revision. As a result, a required form was missing and all information identified in the current procedure was not provided. The issue was resolved by a memo to file stating that the intent of the missing form is satisfied by information contained on the old revision of the form which was included in the file. All required information is now contained on the reference form.
4. WP 06-1, *WID Transportation Program*, Revision 4, Section 4, states:  
"Transportation of transuranic waste is addressed by WP 06.2, *WIPP TRU Waste Transportation Manual*. However, WP 06-2 was canceled and replaced by DOE-CAO 96-1055, *Transuranic Materials Transportation Guide* on 2/19/98.

WID performed an evaluation to determine if DOE-CAO 96-1055 should be referenced in WP 06-1 and if the deletion of WP 06-2 had any impact on WP 06-1. It was determined that DOE-CAO 96-1055 is primarily applicable to generator sites shipping TRU Waste to the WIPP. WID determined that the deletion of WP 06-2 has no impact on WID TRU Waste management and receipt procedures. This evaluation was documented.

Procedure Change Notice, Change No. 3 to WP 06-1, Revision 4, was issued to delete the reference to WP 06-2 in WP 06-1.

5. WP 13-QA.04, *Quality and Regulatory Assurance Department Administrative Program*, Revision 0 requires a semi-annual Quality Assurance Trend Analysis Report (QATAR) be issued to all WID department managers and the WID General Manager with a summary provided to the CAO Manager. Although the procedure has been in place since May 23, 1997, a QATAR has never been issued. The report was issued when this was brought to the attention of the WID Q&RA group.
6. Several NCR files had inappropriate corrections made to them, i.e., some were lined out but not initialed and dated and some were initialed and dated but no line drawn through the incorrect wording. All files were corrected and verified when this was brought to the attention of Q&RA.
7. The list used to control access to the QA files identified three individuals with designated access; however, all QA personnel were using the files. Individuals not on the list were using the files without a proper escort. Also, the files were not locked. The files are now locked when not in use and the access list has been revised to include all appropriate personnel.
8. One of the procedures in Operator Handbook #131 did not have the latest change (PCN 3 instead of PCN 4). The latest change was then placed in the Handbook during the audit. Operations and Document Services did a check to make sure that each Operator Handbook had the proper documents assigned with the latest change.

### **6.3 Observations**

1. Based on interviews with Engineering personnel, the requirements for temporary change control are not clearly understood by the people involved in the process. This appeared to be the cause of the deficiency related to the temporary modification authorized by ECO 9038 (CDA 2). Personnel involved in temporary modifications, including cognizant engineers, engineering management, and engineering file resource personnel have not received sufficient indoctrination on the requirements for control of temporary modifications. This could lead to future deficiencies.
2. During the Audit it was noted that a newly created organization (Design and Construction Engineering) does not have a Records Inventory and Disposition Schedule (RIDS). The newly assigned and recently trained records coordinator is in the process of developing a RIDS for the organization. This RIDS needs to be completed as quickly as possible.

#### 6.4 Recommendations

1. At the time of the audit, original records for groundwater sampling performed by the Environmental Monitoring organization were offsite with a data validation vendor. No copies of the records were retained onsite. Although the records will be returned to WID when data validation is completed, it is recommended that, in the future, WID retain copies of these types of records onsite.
2. WID internal audits are structured to evaluate processes, not QAPD activities. While this approach can be effective, it does not assure that all WID QAPD activities are included. The audit team recommends that WID audit procedure WP 13-QA.03 be revised to require an annual review to assure that all WID QAPD activities have been covered, or that a justification for not performing an evaluation of the activities is provided. Such a matrix was prepared and was acceptable for FY98, but the evaluation should be done each year.
3. The audit team recommends that WID review its implementing procedures and remove restrictive time requirements, where appropriate. As an example; the corrective action procedure requires "verification of corrective actions are determined, documented, and submitted for approval within 10 working days of issuance." All samples evaluated (six) during the audit were late because of this seemingly overly restrictive requirement.
4. The audit team recommends that the Note in the middle of page four of WID Procedure WP 13-QA 3004, Revision 0, Change1, *Nonconformance Report*, be clarified relative to the meaning of the identified evaluation of two similar occurrences within a six month period becoming a CAR. Currently the Note can be read to mean a CAR is required in all such cases. This is not the intent of the Note.

#### 6.5 Exemplary Practices

1. A groundwater sampling event conducted by WID Environmental Monitoring was witnessed during the audit. Environmental Monitoring uses a sampling trailer with the necessary connections to route the groundwater being sampled into the trailer. This allows the sample bottles to be filled inside the trailer; greatly reducing the possibility of contaminating the samples with soil or airborne dust that could contain manmade or natural radionuclides.
2. WID Metrology Group's computerized MT&E tracking system is an exceptional method for maintaining equipment usage and status and enhances the MT&E program.

## **7.0 LIST OF ATTACHMENTS**

Attachment 1: Personnel Contacted During the Audit

Attachment 2: Procedures Audited

Attachment 3: Summary Table of Audit Results

**PERSONNEL CONTACTED DURING THE AUDIT**

<b>WID/D&amp;Z PERSONNEL CONTACTED</b>				
<b>NAME</b>	<b>ORG/TITLE</b>	<b>PRE-AUDIT MEETING</b>	<b>CONTACTED DURING AUDIT</b>	<b>POST AUDIT MEETING</b>
Mansour Akbarzadeh	WIPP Labs/ES&H		X	
James Allen	Q&RA/Quality Eng/Level III		X	
Royce Allen	Design and Construction/WID/Eng	X		
W. W. Allen	Mgr. Assurance Programs/WID/Q&RA			X
Allen Alonen	D&Z/PRS		X	
Roque Alvarez	Design and Construction Eng		X	
Melvin Balderram	WID/Env Mon/Assoc Scientist		X	
Don Barnett	WID/Eng C&M		X	
Leroy Bostick	Operations Mgr/Zone Z		X	
Danny Brewer	Ops		X	
Jerry Burns	Facility Operation Shift Mgr		X	
Lisa Campos-Hernandez	WID/Eng		X	
Adela Cantu	RCRA Permitting/VOC/Sr. Scientist		X	
Julia T. Caplinger	WID Controller		X	
R. V. Carrasco	Ops/HWO/Transp Eng		X	
Scott Cassingham	Mgr Tech Trng/HR	X		X
R. R. Chavez	Ops/HWO/Team Leader		X	X
Barbara Compton	D&Z/PRS		X	
J. J. Cotton	Ops/Waste Ops Mgr		X	
Nikki Cox	Ops/WID		X	X
L. J. Dalton	WID Q&RA	X		

<b>WID/D&amp;Z PERSONNEL CONTACTED</b>				
<b>NAME</b>	<b>ORG/TITLE</b>	<b>PRE-AUDIT MEETING</b>	<b>CONTACTED DURING AUDIT</b>	<b>POST AUDIT MEETING</b>
Peter Damm	QA Auditor/WID Q&RA	X		
Jayne Davis	Mgr. Design and Construction/WID/Eng	X		X
Anthony Donner	Radio Chemistry/ES&H		X	
Kevin Donovan	Mgr ES&H/WID	X		
Tom J. Ferguson	Mgr QA Oversight/WID/Q&RA	X	X	X
Anthony Fernandez	Ops/DS		X	
Bill Foster	WID/Env Mon/Assoc Scientist		X	
Jon Rodney Fuston	WID/Ops		X	
J. J. Garcia	Eng/WID	X		
Elizabeth Gilbert	WID/Eng/Sec		X	
Ray Gouffey	WID/Ops		X	
Debra Gregg	Inspect. Sve Team Leader/WID/Q&RA	X	X	
Barbara L. Ground	WID/Eng/Self-Assessment Admin.		X	X
R. L. Harvey	Q&RA/PA Coordinator		X	
Kathy Hernandez	EC&S/ES&H/Env Tech		X	
David Haar	Deputy Eng Mrg/WID			X
E. G. Hess	TWP/WID	X	X	
S. B. Jones	Env Mon Mgr/WID/ES&H	X	X	X
Irene Joo	WIPP Labs/ES&H		X	
Steve Kouba	EC&S/ES&H/Mgr		X	
Sandra Krause	WID/Eng Staff Assistance		X	
John Lee	Deputy General Manager			X



<b>WID/D&amp;Z PERSONNEL CONTACTED</b>				
<b>NAME</b>	<b>ORG/TITLE</b>	<b>PRE-AUDIT MEETING</b>	<b>CONTACTED DURING AUDIT</b>	<b>POST AUDIT MEETING</b>
M. W. Lipscomb	Q&RA Mgr./WID	X		X
Dorothy Magby	WID Contoller		X	
Brian L. Marshall	Systems Spec/WID/Cont	X		
Trisha Mashaw	WID/Eng	X		
Ken Mikus	Waste Ops		X	
Karen Mikus	Team Leader Comm/WID			X
Darrell Miller	WID/Ops		X	
Ann Morissette	Team Leader/PRS/WID	X	X	X
Karen Morris	Env Mon/ES&H/Eng		X	
Grady Morris	WID/Controller		X	
Gary R. Morrison	WID/Eng/Med & AB Mgr		X	
Mary Ann Mullins	Q&RA		X	
Candance Nance	Ops/Eng Tech		X	
Steve Offner	WID/Eng		X	
Paul Orr	Facility Oper/CMRO		X	
Carla Pineda	Ops/DS/Sec		X	
G. M. Polley	Ops/WH/Mgr		X	
Philip Porter	OPS/WID		X	X
Lisa Proctor	WID/Ops		X	
David Reber	Mgr. Ops/WID/ES&H	X		
Ron Richardson	Team Leader, Groundwater, Env Mon	X	X	
S. P. Youngerma	WID/Maint/Ops		X	X
Hadi Sayath	WID/Q&RA			
Happy Scheel	WID/Ops		X	

<b>WID/D&amp;Z PERSONNEL CONTACTED</b>				
<b>NAME</b>	<b>ORG/TITLE</b>	<b>PRE-AUDIT MEETING</b>	<b>CONTACTED DURING AUDIT</b>	<b>POST AUDIT MEETING</b>
<b>Subhash Sethi</b>	Deputy Operations Mgr.			X
<b>Roger Simmons</b>	Env Mon/ES&H/Env Spec		X	
<b>Leo Sims</b>	Ops/HWO/Transp Eng		X	
<b>George Smith</b>	Q&RA	X		
<b>Tammy Standard</b>	Staff Assistant/WID/Q&RA	X		
<b>J. R. Stroble</b>	Mgr. RCRA Permitting/WID/ES&H	X		
<b>Craig Suggs</b>	Mgr. Doc. Services/WID/Ops	X	X	
<b>L. W. Treadway</b>	Eng/DC		X	
<b>Mike Trefren</b>	WID/Q&RA/Tech Coord	X	X	X
<b>Rebecca Walker</b>	Comm Team Leader/WID	X		
<b>Tom Ward</b>	Eng/TWP		X	
<b>George Williams</b>	WID/Q&RA/QA Eng. Sr.		X	X
<b>Crystal Yeager</b>	Ops/DS		X	

Documents Reviewed During Audit 98-011

Activities	Applicable WID Documents
Quality Assurance Program and Organization	WID QAPD WP 13-1, Rev 16, CN 6, <i>Quality Assurance Program Description</i>
Personnel Qualification and Training	WP13-QA.02, Rev 0, PCN 1, <i>Quality and Regulatory Assurance Department Training Manual</i> WP14-TR.01, Rev 1, PCN 1, <i>WIPP Training Program</i> WP14-TR3307, Rev 1, PCN 1, <i>Qualification Programs</i> WP14-TR3308, Rev 1, PCN 0, <i>On-The-Job Training</i>
Quality Improvement	MP1.2, Rev 1, PCN 0, <i>Work Suspension and Stop-Work Direction</i> WP13-QA3001, Rev 0, PCN 0, <i>Issuing Hold Tags</i> WP13-QA3003, Rev 2, PCN 2, <i>Corrective Actions Program</i> WP13-QA3004, Rev 0, PCN 1, <i>Nonconformance Report</i> WP15-MD3102, Rev 0, PCN 1, <i>Event Investigation and Root Cause Analysis</i> WP 13-QA.04, Rev 0, PCN 1, <i>Q&amp;RA Administrative Program</i>
Documents	MC9.14, Rev 4, PCN 0, <i>Document Review Committee</i> WP09-08, Rev 3, PCN 0, <i>WIPP Specification Preparation</i> WP15-PS3002, Rev 1, PCN 6, <i>Review, Approval, ;and Cancellation of WID Controlled Documents</i> WP15-PS3003, Rev 1, PCN 6, <i>Document Change Process</i> WP15-PS3103, Rev 0, PCN 7, <i>Document Distribution</i>
Records	WP15-PR, Rev 1, PCN 0, <i>Records Management Program</i> WP15-PR3002, Rev 1, PCN 1, <i>Records Filing, Inventorying, Scheduling, and Dispositioning</i>

Documents Reviewed During Audit 98-011

Activities	Applicable WID Documents
	<p>WP15-PR3003, Rev 1, PCN 0, <i>Disposal of Nonpermanent Records</i></p> <p>WP15-PR3007, Rev 0, PCN 1, <i>Receipt of Records Boxes at CAO Records Holding Facility</i></p> <p>WP15-PR3011, Rev 0, PCN 1, <i>Retrieving Records From the Carlsbad Area Office Records Holding Facility</i></p> <p>WP15-PR3014, Rev 0, PCN 1, <i>Project Records Services Storage Configuration</i></p> <p>WP 15-PR3005, Rev 2, PCN 0, <i>Records Transfer and Retrieval</i></p> <p>WP 15-PR3006, Rev 0, PCN 1, <i>Records Inventory and Disposition Schedule Review and Approval</i></p> <p>WP 15-PR3013, Rev 0, PCN 2, <i>Destruction of Nonpermanent Records WWIS System Records (QA Records Only)</i></p> <p>WP 05-WA.02, Rev 0, PCN 2, <i>WIPP Waste Information System Program</i></p> <p>WP 05-WA.04, Rev 0, <i>WIPP Waste Information System Software Quality Assurance Program</i></p> <p>WP 05-WA.05, Rev 0, <i>WIPP Waste Information System Software Verification and Validation Plan</i></p> <p>WP 05-WA.08, Rev 0, <i>WIPP Waste Information System Configuration Management Plan</i></p>
Work Processes	<p>WP 04-AD3005, Rev 0, PCN 3, <i>Administrative Control of System Lineups</i></p> <p>WP 04-AD3011, Rev 2, PCN 4, <i>Equipment Tagout/Lockout</i></p> <p>WP 05-WH1011, Rev 2, PCN 2, <i>Surface Transuranic Mixed Waste Handling Area Inspections</i></p> <p>WP 10-2, Rev 1, PCN 9, <i>Maintenance Operations Instructions Manual</i></p> <p>WP 10-WC3002, Rev 3, PCN 5, <i>Corrective Maintenance</i></p> <p>WP 10-WC3004, Rev 2, PCN 3, <i>Preventive Maintenance</i></p> <p>WP 15-PM3517, Rev 1, PCN 1, <i>Stores Inventory Control</i></p>
Design Control	<p>WP09, Rev 2, PCN 8, <i>Engineering Conduct of Operations</i></p> <p>WP09-9, Rev 3, PCN 1, <i>WID Operational Configuration Management Plan</i></p> <p>WP09-CN3003, Rev 1, PCN 1, <i>As-Built Drawings: Process and Control</i></p> <p>WP09-CN3007, Rev 1, PCN 2, <i>Engineering and Design Document Preparation and Change Control</i></p>

Documents Reviewed During Audit 98-011

Activities	Applicable WID Documents
	WP09-CN3018, Rev 1, PCN 0, <i>Design Verification</i> WP09-CN3021, Rev 1, PCN 5, <i>Component Indices</i> WP09-CN3022, Rev 0, PCN 4, <i>Engineering Document Control and Distribution</i> WP09-CN3023, Rev 0, PCN 2, <i>Design Classification Determination</i> WP09-CN3024, Rev 1, PCN 1, <i>Configuration Management Board/Engineering Change Proposal</i> WP09-CN3031, Rev 0, PCN 0, <i>Engineering Calculations</i> WP 09-CN3034, Rev 0, PCN 0, <i>Configuration Management Determination</i>
Inspection and Testing	WP10-AD.01, Rev 0, PCN 0, <i>Metrology Program</i> WP10-AD3028, Rev 0, PCN 4, <i>Calibration and Control of Measurement and Test Equipment</i> WP10-AD3029, Rev 0, PCN 1, <i>Calibration and Control of Monitoring and Data Collection Equipment</i> WP10-AD3030, Rev 0, PCN 1, <i>Calibration Label Application and Control</i> WP13-QA1001, Rev 1, PCN 0, <i>Liquid Penetrant Examination -Visible Solvent Removable</i> WP13-QA1002, Rev 1, PCN 0, <i>Visual Inspection</i> WP13-QA1003, Rev 1, PCN 2, <i>Quality Assurance Inspections</i> WP13-QA1004, Rev 1, PCN 0, <i>Magnetic Particle Examination</i> WP13-QA1082, Rev 0, PCN 5, <i>TRUPACT- II Container Leak Test (see Item 20 of transportation checklist)</i> WP09-SU.01, Rev 0, PCN 1, <i>WIPP Start-Up Test Program</i>
Management Assessment	MPI.20, Rev 2, PCN 0, <i>Assessments</i>
Independent Assessment	WP13-QA.03, Rev 1, PCN 1, <i>Quality and Regulatory Assurance Department Assessment Program</i>
Sample Control	WP02-307, Rev 1, PCN 1, <i>RES soil Sampling Procedures</i>

Documents Reviewed During Audit 98-011

Activities	Applicable WID Documents
	<p>WP02-310, Rev 3, PCN 3, <i>Biotic Sampling Procedures</i>  WP02-EC.05, Rev 0, PCN 2, <i>Quality Assurance Project Plan for WIPP Site Effluent and Hazardous Materials Sampling</i>  WP02-EC.06, Rev 0, PCN 4, <i>WIPP Site Effluent and Hazardous Materials Plan</i>  WP02-EC1001, Rev 1, PCN 1, <i>Characterization Sampling, Shipping and Documentation</i>  WP02-EM1001, Rev 0, PCN 8, <i>Sewage System Discharge Monitoring and Compliance</i>  WP02-EM1012, Rev 0, PCN 6, <i>Airborne Particulate Sampling</i>  WP02-EM1019, Rev 0, PCN 0, <i>Vegetation Sampling</i>  WP02-EM 3001, Rev 0, PCN 0, <i>Administrative Process For Environmental Monitoring Programs</i>  WP12-VC1620, Rev 0, PCN 0, <i>VOC Sampling Canister Handling and Sampling</i>  WP 12-VC.01, Rev 0, PCN 1, <i>Confirmatory Volatile Organic Compound Monitoring Plan</i></p>
Software Requirements (adequacy only)	<p>WP 16-IT3117, Rev 0, PCN 1, <i>WIPP Computer Software Quality Assurance</i>  WP 09-CN3035, Rev 0, PCN 0, <i>CMS Software Configuration</i></p>
Transportation	<p>WP-06-1, Rev 4, PCN 2, <i>WID Transportation Program</i>  WP-06-3, Rev 4, PCN 4, <i>Transportation Communications and TRANSCOM Tracking System Guidelines</i>  WP-06-HM1020, Rev 2, PCN 1, <i>TRUPACT-II Receipt</i>  WP-06-HM1040, Rev 0, PCN 2, <i>Empty TRUPACT-II Receipt</i>  WP-06-HM1104, Rev 3, PCN 0, <i>Empty TRUPACT-II Shipment</i>  WP-06-HM3111, Rev 0, PCN 0, <i>Return of TRU Waste to the Generator</i>  WP-05-WH1001, Rev 3, PCN 2, <i>TRUPACT-II Loading</i>  WP-05-WH1005, Rev 2, PCN 2, <i>Loading TRUPACT-II Trailer</i>  WP-05-WH1015, Rev 2, PCN 1, <i>Preparation of an Empty TRUPACT-II for Shipment</i>  WP-05-WH1032, Rev 1, PCN 0, <i>Payload Transportation Data</i></p>

Documents Reviewed During Audit 98-011

Activities	Applicable WID Documents
	WP-05-WH1080, Rev 0, PCN 3, <i>TRUPACT-II verification Leak Checks</i> WP-05-TM3001, Rev 2, PCN 1, <i>TRUPACT-II Maintenance Program</i> WP-06-HM3107, Rev 0, PCN 0, <i>Transportation: 24 Hour Emergency Response</i> WP 09-TW.01, Rev 0, PCN 1, <i>QA Program Plan for Type "B" Packaging</i> WP 13-QA1082, Rev 0, PCN 5, <i>TRUPACT-II Container Integrity Leak Test</i>

**CAO Audit A-98-11 Detail Summary**

Program Elements	No. of Pages	Concern Classification				QA Evaluation		Technical
		CARs	CDAs	Obs	Rec	Adequacy	Implementation	Effectiveness
						98-051		
Organization	4					A	S	E
Document Control, Procedure	1	98-058	8		3	A	S	E
Training	9					A	S	E
Records	15	98-052	6,7	2	1	A	S	E
Audits	11				2	A	S	E
Corrective Actions	31		5		4	A	S	E
Inspection and Testing	19	98-057	3			A	S	E
Sample Control	10		1			A	S	E
Transportation	14		4			A	S	E
Management Assessment	5	98-054				A	M	E
QA Program	3	98-055				A	S	E
Design Control	3	98-056	2	1		A	S	E
WWIS (Records Only)	N/A	98-053				A	S	E
Work Processes	9					A	S	E
<b>TOTALS</b>	<b>143</b>	<b>8</b>	<b>8</b>	<b>2</b>	<b>4</b>	<b>A</b>	<b>S</b>	<b>E</b>

**Definitions**

E = Effective  
 S = Satisfactory  
 I = Indeterminate

M = Marginal  
 N/A = Not Applicable  
 U = Unsatisfactory

CAR = Corrective Action Report  
 CDA = Corrected During Audit  
 NE = Not Effective

Obs = Observation  
 Rec = Recommendation  
 A = Adequate  
 NA = Not Adequate



**CAO Audit A-98-11 Detail Summary**