

LA-SUB--96-36

LOS ALAMOS NATIONAL LABORATORY  
ENVIRONMENTAL RESTORATION PROGRAM GROUP  
AUDIT REPORT  
for  
UNDERGROUND STORAGE TANK REMOVAL

AUDIT ER-92-04

JULY 22 - AUGUST 11, 1992

**DISCLAIMER**

This report was prepared as an account of work sponsored by an agency of the United States Government. Neither the United States Government nor any agency thereof, nor any of their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights. Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency thereof. The views and opinions of authors expressed herein do not necessarily state or reflect those of the United States Government or any agency thereof.

Prepared By:

Paul J. Kelly  
Audit Team Leader

Date: 8/31/92

Approved By:

\_\_\_\_\_  
QPPL

Date: \_\_\_\_\_

**MASTER**

DISTRIBUTION OF THIS DOCUMENT IS UNLIMITED

*ole*

## 1.0 INTRODUCTION

Audit ER-92-04 was conducted on activities being performed by Waste Management (EM-7), Environmental Protection (EM-8), and Environmental Restoration (EM-13) groups for the Los Alamos National Laboratory's (Los Alamos) Underground Storage Tank Removal Program.

## 2.0 INDIVIDUALS CONTACTED

Name	Attended Preaudit Meeting	Contacted During Audit	Attended Postaudit Meeting
S. Bodenstein	X	X	X
J. Carmichael		X	X
E. Cole	X		X
L. Maassen			X
A. Norris	X		
K. Warthen	X	X	X

## 3.0 AUDIT TEAM MEMBERS

Name	Title	Attended Preaudit Meeting	Attended Postaudit Meeting
J. Day	Auditor	X	
P. Gillespie	Audit Team Leader	X	X

## 4.0 AUDIT SCOPE

The scope of this audit was limited to an evaluation of the implementation of the State of New Mexico requirements for underground storage-tank removal. Activities were evaluated using requirements specified in the State of New Mexico Environmental Improvement Board Underground Storage Tank Regulations, EIB/USTR.

Documentation packages for two tanks were reviewed. Documents examined included various notification letters to the State, UST Release Reports, Tank Closure Worksheets, Analytical Reports, and miscellaneous correspondence. No areas of noncompliance to state requirements were identified in the documents examined.

## 5.0 OBSERVATIONS

Although this audit was conducted to evaluate only the implementation of the State of New Mexico requirements for underground storage tank removal, it was noted that in some instances, activities were being performed that may not meet the requirements stated in the Environmental Restoration Quality Program Plan (QPP) Criterion 2.0, "Organization," and Criterion 6.0, "Instructions, Procedures, Plans and Drawings." These activities are identified only as observations and should be investigated further by the responsible organization.

### OBSERVATION 1

The individuals in EM-7 and EM-8 are commended for their efforts in the tank removal program. These individuals have been instrumental in assuring compliance with State requirements; however, it appears that the responsibility for the implementation of the underground storage-tank removal program is divided among several groups in various divisions. Each group's priorities do not always coincide with the priority of the tank removal program. Coordinating the work among these groups and the State of New Mexico for tank removal is a time consuming and complex task. Managing the removal effort for each tank and maintaining the overall schedule to meet State regulations is very difficult because of the many organizations involved.

EM-13's responsibilities for the Underground Storage Tank Removal Program are not clearly defined. It is difficult to determine which EM-13 individual has decision-making authority and responsibility for providing technical direction to the various groups that implement the tank removal program.

To improve efficiency and assure the continued success of the Underground Storage Tank Removal Program, it is recommended that a single organization be given the responsibility and authority for its implementation.

### OBSERVATION 2

Although Los Alamos was implementing the requirements of the State of New Mexico Underground Storage Tank Program satisfactorily, the implementation of various requirements was not prescribed in Los Alamos documented procedures or instructions. Los Alamos procedure SOP-EM7-D&D-001, R02, addresses the removal of underground storage tanks and requires that Section VIII of the New Mexico regulations be followed for tank closure, but does not address requirements such as, time limits for temporary closure, 30-day notifications for permanent closure, and record-retention requirements.

It is recommended that the requirements of the State of New Mexico Environmental Improvement Board Underground Storage Tank Regulations be reviewed, and a Los Alamos procedure be written to address requirements and interfaces that are not contained in SOP-EM7-D&D-001.

## **6.0 DEFICIENCIES**

No deficiencies were identified during this audit.

## **7.0 PROGRAM ADEQUACY AND EFFECTIVENESS**

EM-7 and EM-8 personnel were knowledgeable regarding the requirements of the State of New Mexico Underground Storage Tank Program and presented objective evidence to support their understanding and implementation of these requirements. The overall implementation of the State of New Mexico Underground Storage Tank Program is considered adequate and effective.

The audit team appreciated the cooperation and professionalism of the EM-7 and EM-8 staffs during the audit.

## **8.0 REQUIRED ACTION**

None required; however, action is recommended as stated in the observations identified in this report.

LANL YUCCA MOUNTAIN SITE CHARACTERIZATION PROJECT AUDIT CHECKLIST		
AUDIT NO.: ER-92-04	ORG. AUDITED: EM-7, EM-9, EM-13	DATE(S) OF AUDIT: 07/22-08/11/92
DOCUMENT/REVISION IN WHICH REQUIREMENTS OR INSTRUCTIONS ARE REFERENCED: EIB/USTR		
Item No.	Section or Paragraph	Requirement or Instruction
		The requirements below are contained in Section VIII of the State of New Mexico Environmental Improvement Board Underground Storage Tank Regulations, EIB/USTR
1	801(a)	At least 30 days before beginning either permanent closure or a change-in-service under paragraphs (b) and (c) of this section, or within another reasonable time period determined by the division, owners and operators must notify the division of their intent to permanently close or make the change-in-service, unless such action is in response to corrective action.
2		The required assessment of the excavation zone under 802 must be performed after notifying the division but before completion of the permanent closure or a change-in-service.
3	801(b)	To permanently close a tank, owners and operators must empty and clean it by removing all liquids and accumulated sludges.
4		All tanks taken out of service permanently must also be either removed from the ground or filled with an inert solid material.
5	801(c)	Before a change-in-service, owners and operators must empty and clean the tank by removing all liquid and accumulated sludge and conduct a site assessment in accordance with 802.
6	802(a)	Before a permanent closure or a change-in-service is completed, owners and operators must measure for the presence of a release where contamination is most likely to be present at the UST site.
7		In selecting sample types, sample locations, and measurement methods, owners and operators must consider the method of closure, the nature of the stored substance, the type of backfill, the depth to ground water, and other factors appropriate for identifying a release.

LANL YUCCA MOUNTAIN SITE CHARACTERIZATION PROJECT AUDIT CHECKLIST		
AUDIT NO.: ER-92-04		ORG. AUDITED: EM-7, EM-9, EM-13
DATE(S) OF AUDIT: 07/22-08/11/92		
DOCUMENT/REVISION IN WHICH REQUIREMENTS OR INSTRUCTIONS ARE REFERENCED: EIB/USTR		
Item No.	Section or Paragraph	Requirement or Instruction
8	802(b)	If contaminated soils, contaminated ground water, or free product as a liquid or vapor is discovered under paragraph (a) of this section, or by any other manner, owners and operators must begin corrective action in accordance with USTR Parts XII and XIII.
9	804	Owners and operators must maintain records in accordance with USTR 504 that are capable of demonstrating compliance with closure requirements under this Part VIII.
10		The results of the excavation zone assessment required in 802 must be maintained for at least 3 years after completion of permanent closure or change-in-service in one of the following ways:
11	(a)	By the owners and operators who took the system out of service
12	(b)	By the current owners and operators of the UST system site; or
13	(c)	By mailing these records to the division if they cannot be maintained at the closed facility.

## LOS ALAMOS ENVIRONMENTAL RESTORATION AUDIT CHECKLIST RESULTS

AUDIT NO.: ER-92-04

ORG. AUDITED: EM-7, EM-8, EM-13

DATE(S) OF AUDIT: 07/22-08/11/92

DOCUMENT/REVISION IN WHICH REQUIREMENTS OR INSTRUCTIONS ARE REFERENCED: EIB/UST

Item No.	Results (S, U, NA)*	Results of Investigation	Individual(s) Contacted	Document(s) Examined
1	S	DOE notified the State of New Mexico on 4/28/92 of tank closures for TA-3-MP-3 (CLOSURE 6/1/92)  TA-59-6 (CLOSURE 6/6/92)	J. Carmichael S. Bodenstein	<ul style="list-style-type: none"> <li>Record packages for: TA-3-MP-3 TA-59-6</li> <li>Notification letter from DOE (Bellows) to the State of New Mexico (Moreland)</li> </ul>
2	S	Tank Closure Worksheet for TA-3-MP-3, 6/1/92  Tank Closure Worksheet for TA-59-6, 6/6/92		<ul style="list-style-type: none"> <li>Tank Closure Worksheet TA-3-MP-3, dated 6/1/92</li> <li>Tank Closure Worksheet TA-59-6, dated 6/6/92</li> </ul>

\* S = Satisfactory, U = Unsatisfactory, NA = Not Applicable

Auditor's Signature:

Paul J. Miller

Date:

8/11/92

## LOS ALAMOS ENVIRONMENTAL RESTORATION AUDIT CHECKLIST RESULTS

AUDIT NO.: ER-92-04

ORG. AUDITED: EM-7, EM-8, EM-13

DATE(S) OF AUDIT: 07/22-08/11/92

DOCUMENT/REVISION IN WHICH REQUIREMENTS OR INSTRUCTIONS ARE REFERENCED: EIB/UST

Item No	Results (S, U, NA)*	Results of Investigation	Individual(s) Contacted	Document(s) Examined
3	S	Documented on Tank Closure Worksheets (See "Documents Examined")		<ul style="list-style-type: none"> <li>Notification to State (30 day - Part XIII, 1206A) for tank TA-3-MP-3, dated 7/1/92</li> </ul>
4	S	TA-3-MP-3 and TA-59-6 removed from ground		<ul style="list-style-type: none"> <li>EPA 7530, Part II 207B dated 6/15/92 for TA-3-MP-3</li> </ul>
5	S	Documented on Tank Closure Worksheet (See "Documents Examined")		<ul style="list-style-type: none"> <li>EPA 7530, Part II 207B, dated 7/24/92 for TA-59-6</li> </ul>
6		TA-3-MP-3 5 Samples taken (Analytical request #12951)		<ul style="list-style-type: none"> <li>UST Release Incident Report dated 6/1/92 for 6/1/92</li> </ul>

\* S = Satisfactory, U = Unsatisfactory, NA = Not Applicable

Auditor's Signature:

Paul J. Hill

Date:

8/11/92



LOS ALAMOS ENVIRONMENTAL RESTORATION AUDIT CHECKLIST RESULTS				
AUDIT NO.: EIR-92-04		ORG. AUDITED: EM-7, EM-8, EM-13		DATE(S) OF AUDIT: 07/22-08/11/92
DOCUMENT/FEVISION IN WHICH REQUIREMENTS OR INSTRUCTIONS ARE REFERENCED: EIB/UST				
Item No.	Results (S, U, NA)*	Results of Investigation	Individual(s) Contacted	Document(s) Examined
6 (6+)	S	TA-59-6 2 Samples taken (Analytical Request # 12974)		
7	S	Guidelines provided by the New Mexico Environmental Department Document titled "UST SOIL/WATER SAMPLING & DISPOSAL GUIDELINES", dated 5/28/92		

\* S = Satisfactory, U = Unsatisfactory, NA = Not Applicable

Auditor's Signature: Paul M. [Signature]

Date: 8/11/92

LOS ALAMOS ENVIRONMENTAL RESTORATION AUDIT CHECKLIST RESULTS				
AUDIT NO.: EIR-92-04		ORG. AUDITED: EM-7, EM-8, EM-13		DATE(S) OF AUDIT: 07/22-08/11/92
DOCUMENT/REVISION IN WHICH REQUIREMENTS OR INSTRUCTIONS ARE REFERENCED: EIB/UST				
Item No.	Results (S, U, NA)*	Results of Investigation	Individual(s) Contacted	Document(s) Examined
8	S	Notification to the State to initiate Perx <del>XII</del> for TA-3-MP-3. Contamination indicated. No contamination indicated for T1959-6.		
9	S	Records on file		
10	S	Included in file		
11 12 AND 13	S	Records maintained by owners		

\* S = Satisfactory, U = Unsatisfactory, NA = Not Applicable

Auditor's Signature: Paul J. Miller

Date: 8/11/92

LOS ALAMOS ENVIRONMENTAL RESTORATION AUDIT CHECKLIST RESULTS				
AUDIT NO.: ER-92-04		ORG. AUDITED: EM-7, EM-8, EM-13		DATE(S) OF AUDIT: 07/22-08/11/92
DOCUMENT/FEVISION IN WHICH REQUIREMENTS OR INSTRUCTIONS ARE REFERENCED: EIB/UST				
Item No.	Results (S, U, NA)*	Results of Investigation	Individual(s) Contacted	Document(s) Examined
		<p>OBSERVATION 1</p> <p>it appears that EM-13 responsibilities need to be better defined. It is difficult to determine which EM 13 individual has authority and the responsibility for the UST program</p> <p>It is recommended that responsibilities for the UST program be clearly defined</p>		

\* S - Satisfactory, U - Unsatisfactory, NA - Not Applicable

Auditor's Signature: Paul J. Dillig

Date: 8/11/92

LOS ALAMOS ENVIRONMENTAL RESTORATION AUDIT CHECKLIST RESULTS				
AUDIT NO.: ER-92-04		ORG. AUDITED: EM-7, EM-8, EM-13		DATE(S) OF AUDIT: 07/22-08/11/92
DOCUMENT/FEVISION IN WHICH REQUIREMENTS OR INSTRUCTIONS ARE REFERENCED: EIB/UST				
Item No.	Results (S, U, NA)*	Results of Investigation	Individual(s) Contacted	Document(s) Examined
		<p><u>OBSERVATION 2</u></p> <p>State requirements were being met, but several items were not addressed in Los Alamos procedures. Recommend that a procedure be written to address requirements and describe interfaces.</p>		

\* S = Satisfactory, U = Unsatisfactory, NA = Not Applicable

Auditor's Signature: Paul J. Alley

Date: 8/11/92