

LANL
General 91

Tig Team
Report
11/91

Los Alamos Town Site
Fact Sheet

Background

In the 1960's, DOE sold its original laboratory property to the city, county and private landowners. LANL has subsequently identified 60 SWMUs which are located on property owned privately or by the city and 40 SWMUs which are on County owned property. Many of these units have previously undergone a "cleanup" action, and part of these investigations will be to determine if residual material remains or if previous remediation was adequate. The HSWA permit requires the investigation of these off-site SWMUs. LANL notified all landowners in September 1991 of possible SWMUs on their property and held several public meetings concerning this issue.

Current Activities

Of the eight workplans to be submitted in May 1992, three of these workplans address the operable units (1071, 1078 and 1079) which cover the town site area. Listed below are the technical areas (TA) which comprise each operable unit.

- OU 1071 - TA-0 Miscellaneous Units - property owned by DOE, National Forest Service, GSA, San Ildefonso Pueblo, Los Alamos County and Private Individuals
 - TA-19 East Gate Laboratory Facility - DOE owned
 - TA-26 D Site Nuclear Material Storage Vault - DOE owned
 - TA-73 Los Alamos Airport Landfill Area - DOE owned
 - TA-74 Otowi Tract Buffer Zone - DOE owned

- OU 1078 - TA-1 Former Main Technical Area - property released to Los Alamos County and Private Individuals

- OU 1079 - TA-10 Bayo Canyon Firing Sites - Los Alamos County owned
 - TA-31 East Receiving Yard - property owned by Los Alamos County and private individuals
 - TA-32 Medical Research Laboratory - owned by Los Alamos County
 - TA-45 Radioactive Liquid Waste Treatment Plant - owned by Los Alamos County

The Townsite area is predominantly covered by TA-0. The following are historic operations or uses in this area: surface impoundments, container storage areas, landfills, surface disposal areas, Mortar impact areas, incinerator (no longer present, possible plume outfall), firing ranges, acid waste lines, sewage treatment plants, septic systems, golf course/ball fields, PCB transformers, former service stations/motor pool facility, excavations. Some of the areas owned by the county are used for recreation and include canyons where radionuclides and mixed waste contamination may occur.



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General

Many of these areas underwent previous decontamination and decommissioning actions in the 1970s and 1980s. The site where the original laboratory used to be, called the Common Area, has the most landowners primarily due to a number of condominiums using the site. No contamination is known to exist on private property which threatens the health and safety of local residents.

Townsite activities this year will consist predominantly of obtaining access from landowners, sampling at a few locations, conducting a rad survey of perimeter sites, developing plans for work at suspected mortar impact areas, and initiating a Townsite parcel basemap with the SWMU locations. Additional funding has been requested to initiate additional Townsite work this year.

FACT SHEET FOR LOS ALAMOS LABORATORY (LANL) HSWA PERMIT

Site Description

LANL is 43 square miles in size and is located adjacent to the town of Los Alamos (see attached maps). The facility is located on a mesa and canyon landscape, with relief averaging about 300 feet. The town of Los Alamos is located today on the original laboratory site and borders the facility to the north. The town of White Rock borders the facility to the southeast. Total population from these two towns is approximately 15,000 to 20,000 people.

The remaining borders are rural and most of this land is owned by Los Alamos County, the U.S. Forest Service, the National Park Service and the San Ildefonso Pueblo.

State RCRA Permit

The State (New Mexico Environment Department) permit has provisions for the proper handling, treating, and storing of hazardous waste. RCRA units at Los Alamos include a R&D incinerator, storage of waste in tanks and containers. DOE has appealed a portion of the permit pertaining to the R&D incinerator arguing the State has no authority to regulate radiation from the incinerator. Currently, this appeal lies in State Court.

EPA HSWA Permit

The HSWA permit issued in May 1990, required the investigation of 603 SWMU's. However, since issuance of the permit a total of 2200 SWMUs have been identified by LANL, and are being incorporated into RFI workplans. LANL will officially add these and any other additionally identified SWMUs to the permit during their next major modification request. LANL has 24 Operable Units which encompass 68 Technical Areas and include the 2200 SWMUs and 150 areas of concern.

RFI workplans for 10% of the SWMU's were due within one year of the effective date of the permit (5-23-90). This RFI workplan covered Technical Area-21 (TA) and a total of 112 SWMUs. TA-21 is the former plutonium processing facility and contains five material disposal areas. The workplan and NOD response were approved by EPA in January 1992.

By May 23, 1992 eight workplans will be submitted which address an additional 25% of the SWMUs (over 1000 SWMUs). This total of 35% will address the highest priority units. By May of 1993 workplans should be submitted to address 20% more of the SWMUs. Within four years after the effective date of the permit all remaining SWMUs should be included in workplans. The original permit required all CMS workplans for those SWMUs requiring a CMS to be submitted to EPA within 10 years; however, LANL has requested this be modified to 12 years.

In addition, there were some special permit conditions which require additional groundwater and unsaturated zone monitoring. Reports concerning the Perched Zone monitoring well installation and analytical results have been submitted to EPA, as well as a report on the extent of saturation in Mortandad Canyon.

Summary of Operable Units to be addressed in FY92

Each Operable Unit (OU) may contain several technical areas composed of a logical grouping of SWMUs.

<u>OU</u>	<u>Principal Contaminants</u>	<u>Types of Site</u>
OU-1071 -	Radionuclides/Petroleum Products/High Explosives	Contaminated Areas/ Incinerator/Firing Range Landfill/USTs
OU-1079	Radionuclides/Metals/ Solvents/Acids/High Explosives	Contaminated Areas/ Landfill/Septic System
OU-1078	Radionuclides/Metal/Organics Waste Lines/Septic Systems/ Disposal Areas	Contaminated areas
OU-1049	Radionuclides/Hazardous Wastes	Contaminated Canyons
OU-1122	Radionuclides/Metals (including Beryllium, Mercury, Lead, Uranium)	Contaminated Areas/ Firing Sites/Burn Pit/ Material Disposal Areas Septic Systems/Outfalls
OU-1129	Radionuclides/High Explosives/Waste Oil/ Heavy Metals/Solvents	Contaminated Areas/Septic Systems/Outfalls/Firing Point
OU-1147	Radionuclides/Waste Oil Heavy Metals/Acids/ Solvents	Contaminated Areas/ Septic Systems/Material Disposal Area C
OU-1148	Radionuclides/High Explosives/Hazardous Waste	Contaminated Areas/ Material Disposal Areas G, H, J, and L

Tiger Team Assessment
Los Alamos National Laboratory
November 1991

Findings:

1. LANL ground water sampling procedures are not consistent with guidance documents.

- A. The QAPP does not contain formal chain-of-custody procedures.
- B. QAPP should specify calibration necessary for standardization and equipment checks.
- C. QAPP specifies sample acidification prior to filtration for all chemical analysis, which is opposite of OSWER 9950.1 requirements for metal analysis.
- D. The QAPP does not directly address sample collection techniques to minimize agitation and aeration.
- E. The QAPP manual does not address field decontamination procedures for sampling equipment.
- F. The QAPP manual does not directly address the need for refrigeration for sulfate, nitrite, and semi-volatile organic compounds.
- G. Well purging requirements are not addressed in the QAPP.

* ESD Office of Quality Assurance reviewed this QAPP. Their comments were sent to LANL from EPA.

2. Three sampling events conducted by LANL were observed with numerous observations concerning an overall lack of formality and inadequate field sampling protocols.

3. LANL does not have a contaminated soil and sediments control program. The procedures to support containment of residual contamination areas in Mortandad Canyon may not be adequate to fulfill the requirements of the HSWA Module of the RCRA Part B Permit.

- A. The sediment traps in Mortandad Canyon are in need of maintenance.
- B. No sediment traps are located in Pueblo or Los Alamos Canyons to prevent offsite migration of sediments to San Ildefonso Pueblo reservation.
- C. No sediment traps are located in Bayo Canyon to contain contamination from the disposal site of the former LANL radiochemistry laboratory. This land is currently owned by the Los Alamos County.
- D. TA-14 and TA-15 located adjacent to Canon de Valle Canyon and TA-36, adjacent to Patrillo Canyon, are posted for radiological control due to the "potential for soil contamination" from depleted uranium (DU) firings. Studies indicate that DU contamination transport by surface water and vertically in soil and sediment is occurring. There are no sediment traps located in T-14, TA-15, or TA-36 to

retain contaminated sediments from a rain-induced surface water event.

* Findings B, C and D were not areas covered in the permit.

4. Abandoned or inactive monitoring wells, piezometers, neutron moisture probe access tubes, and boreholes are not adequately closed or sealed to protect the environment.

5. LANL has not developed or implemented a Waste Minimization Program that complies with applicable requirements. The 1989 Waste Management Site Plan did not address many of the items listed in Module VII of the permit.

6. The LANL Fenton Hill Site (TA-57) is generating and shipping hazardous wastes without an EPA ID number. * An EPA ID number has been obtained for this site.

7. Authority for delegation signatory responsibility for RCRA permits lacks appropriate authority. A letter dated November 1, 1984, signed by the LANL Director and sent to EPA Region 6, designated the Director of Technical Support or his designee as having signatory authorization for "all reports, application, and revisions submitted under the RCRA program." Only the Director of Technical Support is considered by LANL to be a senior executive, and therefore empowered to sign permit applications.

8. LANL and Los Alamos Area Office (LAAO) are not meeting the intent for timely, monthly management status and quarterly technical progress reports established in the May 23, 1990, HSWA Module.

A. The Environmental Restoration (ER) Program, who are responsible for generating these reports were delinquent in two reporting requirements:

1. The most recent monthly management status report was submitted in April, 1991, approximately 6 months behind the permit requirement; 2. The most recent quarterly technical progress report, including the quarter ending March 1991, was submitted approximately 2 quarters after the required submittal date.

B. When interim measures are implemented as a short-term remedial remedy, the ER program has assumed that EPA approval is not necessary prior to field work. An April 1991 letter from LAAO to the EPA reaffirms LANL's and DOE's positions. The HSWA permit should be modified to reflect this.

10. The schedule for completion of the RFI/CMS process in the ER program Installation Work Plan is inconsistent with the schedule specified in the HSWA Module of the RCRA Part B Permit. LANL has submitted a letter to EPA requesting a Class I Permit Modification to change their CMS schedule from 10 to 12 years; however this

change has not been approved. *EPA responded to Mod request asking LANL to clarify their request as it was too ambiguous.