



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
1445 ROSS AVENUE, SUITE 1200
DALLAS, TX 75202-2733

*File
7/22/97
123*

July 22, 1997



Mr. Benito Garcia, Chief
New Mexico Environment Department
Hazardous and Radioactive Materials Bureau
2044A Galisteo St.
Santa Fe, New Mexico 87505

RE: Review of Los Alamos National Laboratory RCRA RFI Report for Potential Release Sites (PRSS) in Technical Area 1, Aggregates A, B, H, I, and J; EPA I.D. No. NM0890010515

Dear Mr. Garcia:

The Environmental Protection Agency (EPA) has completed a technical review of Los Alamos National Laboratory (LANL) RCRA RFI Report for Potential Release Sites (PRSS) in Technical Area 1, Aggregates A, B, H, I and J, dated March 26, 1996. The EPA has found parts of the Report to be deficient and enclosed is a list of deficiencies.

Based upon the soil sample results presented in the report, EPA recommends that two (2) sites be removed from LANL current RCRA/HSWA permit (See Summary Page). If you have any questions or need additional information, please contact Allen T. Chang of my staff at (214) 665-7541.

Sincerely yours,

David W. Neleigh
David W. Neleigh, Chief
New Mexico/Federal Facilities
Section

Enclosure



8/11/97 1459 A.B.H.I.J

12

Review Summary

This RFI Report dated March 26, 1996 includes information on the following SWMUs:

PRSS 1-001(a,e,m,o)
PRSS 1-003(a,d,e)
PRSS 1-006(e,o)
PRSS 1-007(d,e,j)

Sites Where No Further Action (NFA) Appears Appropriate

Based upon the information provided, no RCRA hazardous constituents were found in these sites, therefore, EPA tentatively agrees with the NFA proposals for the following sites:

SWMU 1-007(d)
SWMU 1-007(j)

Sites Where Additional Information is Needed

Additional information or further investigation is required for the following sites:

SWMU 1-001(a)
SWMU 1-003(a)
SWMU 1-003(d)
SWMU 1-003(e)
SWMU 1-006(o)
SWMU 1-006(e)

Site Analysis Information is Unavailable at this time

There are no site specific analytical results and/or historical data to support their NFA justification for the following sites:

SWMU 1-001(e)
SWMU 1-001(m)
SWMU 1-001(o)
SWMU 1-007(e)

**LIST OF DEFICIENCIES
LOS ALAMOS NATIONAL LABORATORY (LANL)
RFI REPORT FOR PRSs IN TA-1**

GENERAL COMMENT

1. Although there are several tables in the RFI report containing laboratory analytical results, the way the information is presented is very awkward to review and some information is missing. For each SWMU, please include the following:

A table which includes all laboratory analytical results, not just the results that are above SALs or background levels. The table should include the sampling interval (depth), the analytical method, the detection limit, the UTLs based on background concentrations for applicable constituents, and the SALs. **(Best Professional Judgement, (BPJ))**

SITE-SPECIFIC COMMENTS

Aggregate A (Loma Vista Drive Property)

SWMU 1-007(e)

1. Page 45, Section 5.1.10: The report states, "SWMU 1-007(e) was not sampled...because it was inaccessible, but it was investigated and remediated during 1974-1976 Ahlquist radiological survey...Results from SWMU 1-007(d) show that Ahlquist's survey meets RCRA and radiological standards, and SWMU 1-007(e) is also recommended for NFA."

There is no evidence (i.e. analytical data) in this report to justify LANL's NFA recommendation for SWMU 1-007(e). If Ahlquist's survey on this site meets RCRA and radiological standards, LANL shall delineate the investigation and present the confirmation results to support the NFA request; or if the site is inaccessible, LANL may request NMED/EPA to delay investigation until the building is decommissioned.

Since the suspected contaminants in SWMU 1-007(d) are different from that in SWMU 1-007(e) as stated in the Work Plan, the results from the former do not apply to the latter. **(BPJ)**

Aggregate B (Bailey Bridge)

2. Page 57, 1st paragraph of Section 5.2.5.1: Result of a composite sample, which were composed of 4 - 7 samples from various sampling locations, does not reveal the levels of contamination at each individual sampling location.

When the approved work plan did not specify sample method, it always meant grab samples, not composite samples. NMED/EPA have persistently requested LANL not to use composite samples. If composite sample is planned, LANL should discuss it in the work plan and define the number of soil samples to make a composite sample. LANL must resample these sample locations using grab sample. **(BPJ)**

SWMU 1-001(a) and SWMU 1-003(a)

3. Page 74, 7th Item: Lead was found in a composite sample (from seven surface soil samples) at a presumed concentration of 425.6 mg/kg. Another discrete surface sample also found lead at an concentration of 409 mg/kg. Since those samples were taken from 0-6 inches deep, NMED/EPA suspect that subsurface contaminations may exist. LANL shall investigate the proximity of the sample location and sample at 2 ft and 4 ft deep from surface. **(BPJ)**

SWMU 1-003(a)- Bailey Bridge Landfill

4. Page 78, last paragraph: The report states, "Mercury was detected...at an observed concentration of 32.9 mg/kg... However, mercury was detected at a concentration of only 9.46 mg/kg in a laboratory duplicate of this sample. The average of these two values (21.2 mg/kg) is less than the SAL for mercury..."

This laboratory duplicate is not listed anywhere in the report. Please list the results of all other duplicate sample results if you are going to use the data. LANL's justification as averaging the two values in order to show that the resulting value is below SAL is not appropriate. The analytical results of this sample (Sample ID. AAA1642) found several inorganics higher than their respective UTLs such as: chromium (24.2 mg/kg), lead (409 mg/kg), mercury (32.9 mg/kg), and silver (20 mg/kg). It is highly possible that the concentration of this laboratory duplicate (9.46 mg/kg) could be a false negative. LANL shall re-investigate both surface and subsurface (3 ft deep) in the proximity of this sample location. **(BPJ)**

5. Page 79, 3rd paragraph: a) The highest concentrations of several samples stated in this paragraph differed from those found in Table 5.2.6-1. Please explain.

	<u>Stated Conc.</u>	<u>Table 5.2.6-1</u>
Benzo(a)anthracene	3.35 mg/kg	4.5 mg/kg
Benzo(b)fluoranthene	4.95 mg/kg	6.5 mg/kg
Benzo[k]fluoranthene	2.25 mg/kg	2.9 mg/kg
Chrysene	6.7 mg/kg	8.9 mg/kg
Indeno[1,2,3-cd]pyrene	0.9 mg/kg	1.6 mg/kg

Besides, LANL shall explain why results of composite samples were not included in the discussion. Presumed concentration shall be treated equally as the observed concentration.

b) Concentrations of Benzo[a]anthracene, Benzo[a]pyrene, Benzo[b]fluoranthene and Indeno[1,2,3-cd]pyrene exceeded their SALs. LANL must re-investigate Locations 01-2075 and 01-2073 and sample both surface and subsurface.

c) The report states, "The samples in which PAHs were detected are within or adjacent to the main channel that drains surface-water runoff from mesa, and the presence of these PAHs is likely related to runoff from paved streets or parking lots rather than as a result of Laboratory operations. Given that these PAHs were detected in very few samples, further evaluation of these PAHs is not necessary."

LANL shall provide evidence to demonstrate that PAHs are not from Laboratory operations. **(BPJ)**

SWMU 1-001(e)

6. Page 80: The report states, "SWMU 1-001(e) was not sampled during this RFI; however, the tank could not be located in the 1970s before housing was constructed over the site of the tank and the inlet and outlet lines."

LANL shall consider to sample the outfall area and pipe line of the tank. Without any supportive data, NMED/EPA can not grant NFA to this site without supportive data. **(BPJ)**

SWMU 1-001(o)

7. No supportive data was given in the report to justify LANL's NFA recommendation for this site. LANL stated the site was sampled, however, Figure 5.2.4-1 (see page 51) does not show any sample locations within the boundary of SWMU 1-001(o); in fact, it did not show the site either. Please identify the sample locations and analytical results. **(BPJ)**

Aggregate H (Surface Disposal Site Southeast of Los Alamos Inn)SWMU 1-003(e)

8. Page 84, 2nd paragraph: It states, "LANL ...collected fourteen (14) surface samples from the site at 0 to 6 inches deep. Three were sent to a fixed laboratory for TAL Metals and SVOC."

This is an old surface disposal site, which was used some forty years ago. The scope of the investigation shall cover both lateral and vertical mobilization because COPCs might infiltrate down to subsurface. NMED/EPA are not convinced that LANL has fully characterized the site. LANL shall submit a sample plan regarding subsurface sampling for this SWMU. (BPJ)

Aggregate I (Can Dump Site)SWMU 1-001(m)

9. Page 97, 3rd paragraph: The report states, "...If any of the samples collected had elevated concentrations of metals, they were submitted to a fixed laboratory for a full suite of analysis."

Please explain what were the "elevated concentration levels" and how the levels were chosen. If the levels apply to all sites or this site only. The NMED/EPA acknowledge that there are no analytical results to support NFA determination. (BPJ)

SWMU 1-003(d)

10. Page 100, 2nd paragraph: LANL states, "Further background comparisons were performed for arsenic...because of the low frequency of their detections above background UTLs and because of the high probability of false positive results given the UTLs." Please explain what this means. (BPJ)
11. Page 102, 1st paragraph: LANL conducted background comparisons and concluded that barium concentrations are probably within background.

NMED/EPA disagree the conclusion. Three samples in Table 5.4.5-1 showed that barium concentrations are higher than background UTL (315 mg/kg). There are: 338 mg/kg (observed concentration), 690 mg/kg (presumed concentration) and 1368 mg/kg (presumed concentration). LANL should treat presumed concentrations (from composite sample) and observed concentration alike, and should not exclude presumed concentrations from the discussion. (BPJ)

Aggregate J (Ashley Pond)SWMU 1-006(e)

12. Page 114, 2nd paragraph: The report states, "...antimony and thallium had EQLs greater than their maximum reported background concentration in soil. There is no reason to believe that antimony or thallium are present at this site in concentrations greater than their background concentrations based on available knowledge of historic operations."

LANL shall provide the EQL values and background information of those two metals. **(BPJ)**