



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

*See -
Please forward
these comments
to DOE/LANL by 12/15/97
Randy
11/22/97*

5/11/98/49 NDA-AB

October 31, 1997

Mr. Benito Garcia, Chief
Hazardous and Radioactive Materials Bureau
New Mexico Environment Department
P.O. Box 26110
Santa Fe, NM 87502



Re: NOD and NFA Recommendations for TA-49 Potential Release
Sites RFI Report
Los Alamos National Laboratory (NM0890010515)

Dear Mr. Garcia:

The Environmental Protection Agency (EPA) has reviewed the RFI Report for Potential Release Sites (PRSS) located in Areas 5, 6, 10, and 11 of Technical Area (TA) 49 at Los Alamos National Laboratory (LANL). EPA concurs with No Further Action (NFA) recommendations for 5 of these sites, as adequate phase I investigations have revealed that RCRA-regulated contaminants are not present at significant levels above background. EPA recommends removing these PRSS from the LANL RCRA/HSWA permit. EPA believes that the remaining sites require further investigation or interim action.

A list of deficiencies is attached. Should you have any questions, please feel free to contact Mr. David Vanlandingham at (214) 665-2254.

Sincerely,

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

Enclosure



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Summary of EPA Review
RFI Report for TA-49 Potential Release Sites

Potential Release Sites where No Further Action (NFA) seems appropriate:

PRS 49-002
PRS 49-005(a)
PRS 49-005(b)
PRS 49-006
PRS 008(b)

Potential Release Sites where NFA may not be appropriate:

PRS 49-004 (Extent of low-level radiological contamination
 should be defined)

PRS 49-008(a) (Extent of Lead and PCB contamination should
 be defined)

PRS 49-003 (Deviation from Workplan: SVOC analysis
 required)

PRS 49-008(c) (Radiological contamination of small surface
 area should be addressed)

List of Deficiencies
RFI Report for Technical Area 49 Potential Release Sites (Areas
5, 6, 10, and 11)
Los Alamos National Laboratory (NM0890010515)

General Comments

1. EPA approved the Workplan (*RFI Work Plan for Operable Unit 1144, 1992*) for this report as an adequate Phase I investigation plan. The objective of a Phase I RFI is to determine, at a minimum, the presence or absence of contamination at each Potential Release Site (PRS). The presence of analytes at significant levels above background was established at PRSs 49-004, 49-008(a), 49-003, and 49-008(c); however, contaminants of potential concern (COPCs) were eliminated at each PRS based on "qualitative risk assessments" (Executive Summary, p. ii). EPA believes that a Phase I investigation may not necessarily yield adequate data with which to accurately characterize the contamination at a site or to conduct a representative risk screen or assessment. A Phase II investigation should be designed to further establish the nature and extent of any constituent found above background in the Phase I RFI. Once the nature and extent of COPCs have adequately been characterized at a site, a qualitative risk assessment may be utilized to determine what remediation measures, if any, are required to restore the site to background conditions. EPA will not concur with a No Further Action (NFA) decision until any COPC found in a Phase I investigation has been thoroughly characterized for nature and extent of contamination and found to be of acceptable risk to human health and ecological receptors.

2. LANL appears to confuse a screening assessment with a baseline risk assessment. The purpose of a screening assessment is to determine if analytes are present above background levels at a site. Any analyte present at significant levels above background indicates a contaminant release to the environment and is designated as a COPC. The nature and extent of each COPC (and any daughter constituents) must either be adequately characterized in a Phase I RFI or then be carried forward into a Phase II RFI. Once the nature and extent of all COPCs present at a site have been characterized, a baseline risk assessment may then be utilized to quantify the risk posed to human health and the environment by the presence, quantity, and possible transmission of contaminants.

3. Chromium concentrations, although always reported in the form of total Chromium, must always be considered in the hexavalent chromium form unless laboratory analysis proves justification for otherwise. This assumption should also be used in subsequent risk screens and assessments. Chromium was

eliminated from PRS 49-005(a) as a COPC based upon this assumption. Although EPA agrees that concentrations of chromium found at PRS 49-005(a) may not warrant further investigation, chromium concentrations approaching the hexavalent chromium SAL (31mg/kg) may necessitate the need to conduct phase II sampling.

Specific Comments

4. 5.2.2 Description. The description should include site-specific information, such as the depth to the leachfield lines at PRS 49-003. Furthermore, the history of these PRSs should be all-inclusive rather than referring to the Workplan for further detail.

5. 5.2.4.2 Soil Sampling. LANL documents the lack of SVOC testing at PRS 49-003 as a deviation from the Workplan. LANL states that "the primary contaminants from laboratory operations at this site would have been radionuclides." However, page 6.2-6 of the Workplan emphasizes the types and amounts of organics used in the radiochemistry operations. EPA disagrees with the rationale that areas of organic contamination will be co-located with areas of significant radiological contamination. LANL should follow the approved Workplan analytical suite by resampling the site for SVOCs. EPA can not concur with No Further Action for PRS 49-003.

6. 5.2.4.2 Soil Sampling. Combining data from PRSs 49-003 and 49-008(c) in sample summary tables and sample results tables confuses the review process. PRS 49-008(c) is stated to include only surface samples, however Tables 5.2.4-2 and 5.2.4-3 show that subsurface samples were taken at the interim storage area and the small-scale shot area of PRS 49-008(c). In addition, Table 5.2.5-1 incorrectly categorizes Sample ID 0549-95-0096 as a surface sample rather than a subsurface sample.

7. 5.2.11 Conclusions and Recommendations. The combined Phase I investigations of PRS 49-008(c) (leachfield surface samples) and PRS 49-003 (leachfield subsurface samples) have adequately demonstrated that radiological contamination at Location IDs 49-8039, 49-8040, and 49-8042 is confined to the surface. However, EPA believes that No Further Action for PRS 49-008(c) may not be appropriate, as Americium-241 and Plutonium-239/240 concentrations are significant and may warrant corrective measures.

8. 5.3.6 Evaluation of Radionuclides. EPA believes that LANL has not adequately characterized the extent of Uranium and Cesium-137 contamination at sample locations 49-6221 through 49-6227 in PRS 49-004. Rather than recommending No Further Action,

EPA believes analyzing subsurface samples in this limited area as a phase II investigation is appropriate.

9. 5.4.4.2 Soil Sampling. A summary of the analysis performed on samples taken at the former transformer stations (49-5090 through 49-5093) was omitted. Because these samples are considered to be a part of PRS 49-008(a), they should have been included in Table 5.4.4-1.

10. 5.4.8 Risk-Based Screening Assessment. The extent of Lead and PCB contamination at PRS 49-008(a) must first be determined before conducting a risk-based screening assessment. EPA believes that, although PCB concentrations in surface samples are below the TSCA cleanup level, subsurface samples may reveal PCB contamination at greater concentrations. EPA also believes that further investigation of the Lead contamination in the vicinity of Location ID 49-5007 is necessary, and removing the congealed lead may be necessary as an interim action. LANL claims that "the grid size and sampling locations... are adequate to determine the nature of contamination from these PRSs, as described in the work plan." However, the Workplan was designed for phase I sampling only, and the surface area of lead contamination at Location ID 49-5007 could be as high as 1600 sq ft without elevating concentrations above background in other surface samples. The extent of lead contamination at this PRS may be easily determined by analyzing surface and subsurface samples collected up to 10 ft away from Location ID 49-5007. Until the PCB and Lead contamination at PRS 49-008(a) is addressed, EPA can not concur with a No Further Action recommendation.

11. 5.5.8 Risk-Based Screening Assessment. LANL should not make conclusions regarding risk after a phase I investigation. It is more appropriate to recommend No Further Action for PRS 49-008(b) due to the fact that an adequate phase I investigation has shown no evidence of a contaminant release because no constituents were found at significant levels above background.