

HSJDA LANL 2/1084/15

MAY 23 1996

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

Re: NOD on RFI Report for Technical Area 15
Los Alamos National Laboratory (NM0890010515)

Dear Mr. Garcia:

The Environmental Protection Agency (EPA) has reviewed Los Alamos National Laboratory's (LANL) RFI Report for Technical Area 15 dated November 1, 1995, and found it to be deficient. Enclosed is a list of deficiencies which LANL needs to address.

Should you have any questions, please feel free to contact Ms. Barbara Driscoll at (214) 665-7441.

Sincerely,

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

Enclosure

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**List of Deficiencies
RFI Report for Technical Area 15
Los Alamos National Laboratory**

This deficiencies address the following Los Alamos National Laboratory RCRA Facility Investigation (RFI) Report for Potential Release Sites 15-004(a-d, f), 15-008(a, b), 15-009(e, j), C-15-004, 15-007(b), and 15-012(b). All comments are considered best professional judgement.

General Comments:

1. It is important to note that this particular RFI report is much more concise, well written and better organized than similar reports which have been recently reviewed. In addition, this reports' presentation of graphics depicting sampling locations, the descriptive tables utilized to summarize quality control issues, tables comparing data to action levels, as well as the presentation of all analytical results, including those below action levels, is much improved over previous reports. Also, the multiple chemical evaluation, with regard to additive affects of all inorganic and organic contaminants observed, is well presented and useful in determining impacts from individual PRSs. Although several specific comments and questions are provided below, this report is noticeably superior to past submittals (no response needed).

2. LANL has agreed to evaluate risk and carry forward COPCs where the sample concentrations of a COPC exceeded the screening action level (SAL) but were less than the background level. Of the arsenic samples taken at PRC 15-004f, E-F Aggregate, the maximum is 5.2 mg/Kg and the average is 3.7 mg/Kg. Of the 54 samples listed in Appendix A, twenty (20) sample analyses exceed the LANL's arsenic SAL of 0.38 mg/Kg by more than a factor of 10. LANL should calculate risk for arsenic which should be provided in the baseline risk assessment. The cancer residential soil value is 3.2E-1 mg/Kg. The Region 9 PRG cancer industrial soil value is 2.0 mg/Kg. The non-cancer residential soil value is 2.2E+1 mg/Kg.

LANL should carry forward to the risk assessment any COPC where the sample concentration exceeded the SAL but is less than the natural background level. In the risk assessment, the risk for these chemicals should be calculated and reported.

Specific Comments:

1. **1.3 Field Activities, p. 1-16:** The report indicates soil samples were collected via hand auger. Were samples collected from the disturbed auger cuttings or was a core barrel or split spoon advanced beyond the bottom of the auger hole to collect an undisturbed sample?
2. **Table 3-1, p. 3-2:** The holding time for mercury was exceeded and the data is rejected. Is resampling planned?
3. **Table 3-2:**
 - a. **Page 3-3:** The holding time for high explosives was exceeded and the data is rejected. Is resampling planned?
 - b. **Page 3-4:** The holding time for mercury was exceeded. Why is the data not qualified as "R" (rejected) ?
 - c. **Page 3-5:** The tetryl recovery was below acceptable recovery for the QC sample and the data is rejected. Is resampling planned?
 - d. **Page 3-6:** The holding time for mercury was exceeded and the data is rejected. Is resampling planned?
4. **Table 3-4, p. 3-7:** The surrogate recoveries were less than acceptable for acid semivolatiles. Is resampling planned?
5. **Table 3-5, p. 3-8:** The holding time for mercury was exceeded and the data is rejected. Is resampling planned?
6. **Table 3-6, p. 3-9:** The antimony recovery was below acceptable recovery for the QC sample. Is resampling planned?
7. **Table 3-7, p. 3-10:** The holding time for mercury was exceeded and the data is rejected. Is resampling planned?
8. **Table 3-8, p. 3-11:** The holding time for mercury was exceeded and the data is rejected. Is resampling planned?
9. **3.1.2 Organic Analysis, p. 3-13:** Explain why organic analysis was not conducted for PRS 15-004(a,d), PRS 15-004(b,c), PRS 15-004(f) and PRS 15-008(a).
10. **3.2.3.1 Ranking of Landscape Condition and Receptor Accessibility to COPCs, p. 3-21:** Provide additional rationale for a score of zero for potential accessibility by biological receptors. Unless totally enclosed PRS, a "potential" accessibility would exist for birds and mammals.

11. **3.3 Risk Assessment Methodology, p. 3-22:** Explain why no human health risk assessments are presented in this report.
12. **4.3.3.1, Organics, p.4-27:** Only two samples taken below the former transformer location at AOC 15-004 were analyzed for PCBs. The report states that no PCBs were measured but the data is not reported. However, it appears that both samples were taken from approximately the same location within the AOC 15-004 area (see Figure 1-7, page 1-11), yet this area appears to be approximately 20 x 15 feet on Figure 4-6, page 4-45.

The PCB results should be reported in the appendices with other data results. LANL should state why two samples from the same location of this PRC are sufficient. Information on the sample depths of PCB soil samples should be provided.

13. **4.3.3.1 Multiple Chemical Evaluation (MCE), p. 4-28:** Since the non-carcinogenic SAL has been exceeded in the E-F Aggregate for several inorganics (copper and manganese) and a normalized value would already exceed 1 for each of these inorganics, a MCE should consider the total contribution of all non-carcinogenic analytes and to what degree each analyte contributes to the total potential hazard.

Each individual inorganic should be investigated for its percent contribution to a normalized value of 1 and the decision to continue to include an inorganic as a COPC be based on some percentage contribution to a normalized value of 1 that the risk manager agrees to.

14. **4.3.3.1 Multiple Chemical Evaluation (MCE), p. 4-46:** Tables 4-11 lists the normalized values of the MCE for the E-F Aggregate for the cumulative maximum normalized value for the entire site. Table 4-12 lists the normalized values of the MCE for the E-F Aggregate for the sample area within the entire site with the highest normalized value. Given this, the values in Table 4-12 should be either equal to or less than the values in Table 4-11. This is not the case for antimony. The normalized values for these inorganics should be re-evaluated to verify no additional flaws exist.

LANL needs to verify values and correct these tables where appropriate.

15. **4.3.3.4 Ecotoxicological Screening Assessment, p. 4-47:** LANL may need to reevaluate the ecotoxicological effects of this site once an eco-risk approach has been agreed to by all parties.
16. **4.4.2 Field Investigation, p. 4-60:** Why is the 6 to 18 inch interval not sampled?

17. **4.6 PRS 15-012(b) Operational Release, p. 4-86: Did any of the washing involve solvents?**
18. **4.7.2 Field Investigation, p. 4-95: When will the addendum referenced in the paragraph be submitted?**