UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
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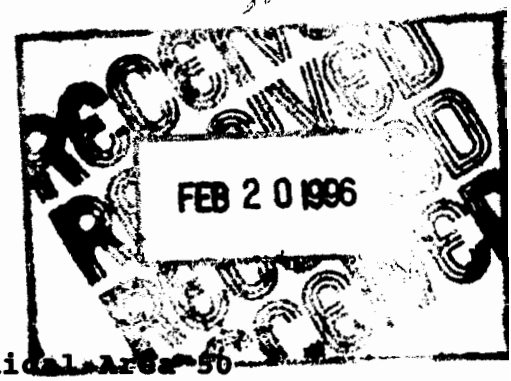

TA 50

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

Re: Notice of Deficiency, RFI Report for Technical Area 50
Los Alamos National Laboratory (NM0890010515)

Dear Mr. Garcia:

The Environmental Protection Agency (EPA) has reviewed Los Alamos National Laboratory's (LANL's) RFI Report for Technical Area 50 received October 18, 1995, and found it to be deficient.

Enclosed is a list of deficiencies which EPA recommends that LANL respond to within sixty days of transmittal by the New Mexico Environment Department.

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

needs to be incorporated for transmittal to Frank

TC

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List of Deficiencies
RFI Report for Technical Area 50
Los Alamos National Laboratory

Below are comments on the Los Alamos National Laboratory RCRA Facility Investigation (RFI) Report for Potential Release Sites 50-006(a), 50-006(C), 50-007 and 50-008 located in Operable Unit 1147 at former Technical Area 50.

1) **3.2.1 Background Comparison, p. 15:**

a. Analytes should not be eliminated from the screening process prior to comparison of detection limits to SALs. Also, risk due to background should be presented for all chemicals of concern eliminated which are above SALs.

b. To assure that the appropriate amount of samples have been analyzed, the largest hot spot which could have been missed using the comparison to background method of elimination should be presented.

2) **Figure 3-1, p. 17:**

a. The flow chart presented does not account for additive risk.

b. Comments have already been provided to LANL that it is inappropriate for LANL to compare organic measurements at LANL with Bradley urban background concentrations. This section should be revised, and any conclusions reached based on these comparisons need to be reevaluated.

3) **Section 3.2.2, p. 18:** The risk-based corrective action process proposed and agreed to by EPA uses SALs for chemical constituents based on EPA Region IX preliminary remediation goals for residential soil and tap water. These are not what are used in this document. Also, the process for addressing additive risk was addressed in issue 3 of a recent memo from LANL entitled "Follow-up Issues From Joint Risk Assessment Workshop" and should be used here. Information presented in this report needs to be reevaluated based on the above information.

4) **Section 3.2.3, p. 19:** The ecological screening assessment methodology presented, in particular the use of ESALs was withdrawn at the joint risk assessment workshop. A new ecological risk assessment procedure has not been submitted for EPA review since the meeting. Guidance can be supplied on appropriate ecological risk assessment procedure upon request.

5) **Sections 4.1 and 4.2:** The above comments also pertain to the sites associated with atmospheric releases and ten site canyon, and information related to these sites should be reevaluated based on the above comments. Additional specific comments are listed below.

6) **4.1 Aggregate 5: Sites Associated with Atmospheric Releases, p. 22:** The RFI report indicates that the PRSs in Aggregate 5 may have received air borne releases from various nearby source areas and goes on to indicate that much of the area has since been paved. A review of historical aerial photographs (available through EMSL-Las Vegas or elsewhere) should be conducted to define potential areas of airborne deposition which may require sampling.

7) **4.1.2 Field Investigation, p. 23:** Samples were collected from soils surrounding the buildings in unpaved areas. The presence of paving should not deter sampling potential source areas of contamination. As previously stated, a review of historical aerials should be conducted prior to developing sampling locations. The report indicates the area was surveyed to determine "natural" drainage channels to be used for potential sampling locations. Although surveying is useful for determining current drainageways, due to the development of the area over time, the historic drainage channels may have been altered significantly, which could only be determined by reviewing as-built drawings, if available, or historical aerials.

8) **4.1.2 Field Investigation, p. 25:** If air deposition of contaminants is the primary concern in this area, homogenizing the soil sample to a depth of six inches, as the report indicates, significantly dilutes the potential surface contamination. Explain why the stainless steel coring tool for collecting undisturbed samples, referred to in Chapter 5 of the RFI work plan, was not utilized.

9) **4.2.2 Field Investigation, p. 36:** The report indicates that samples were taken in the discharge paths at 0-6 inch sample depths and random samples to determine vertical migration were collected at 18-24 inch and 36- 42 inch intervals. The obvious gaps in the sampling (between 6-18 inches and 24-36 inches) greatly compromises the ability to adequately determine the extent of vertical migration of contamination and any judgements based on such data could be significantly flawed.

10) **4.2.3.1 Background Comparison, p. 37:** The report indicates that the Wilcoxon rank sum test was not conducted with regards to the Ten Site Canyon radionuclide analytical results, however no explanation is given. Please clarify.