



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
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JUN 18 1996

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

**RE: Technical Review of Los Alamos National Laboratory (LANL)
Sampling and Analysis Plan (SAP) for Potential Release Site
(PRS) 21-016(a,b,c), EPA I.D. No. NM0890010515**

Dear Mr. Garcia:

The Environmental Protection Agency (EPA) has completed a technical review of LANL SAP for PRS 21-016(a,b,c), located in Technical Area 21, Los Alamos National Laboratory. The SAP is dated March 1, 1996. EPA has found the SAP to be deficient. Enclosed is a list of deficiencies for which EPA recommends that LANL be allowed sixty days to respond.

If you have any questions or need additional information, please contact Mr. Allen T. Chang of my staff at (214) 665-7541.

Sincerely yours,


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

Enclosure



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**LIST OF DEFICIENCIES
LOS ALAMOS NATIONAL LABORATORY (LANL)
SAMPLING AND ANALYSIS PLAN (SAP) FOR PRS 21-016(A,B,C)**

1. Page 10, Section 2.1: The differences between this SAP and the one presented in the TA-21 RFI Work Plan, which was approved in 1991, are the number of boreholes to be drilled and sampled, sampling intervals, number of samples to be collected, and types of analysis to be performed. However, this SAP only discusses the number of boreholes. LANL needs to provide detailed information on all parts of the sampling. (Best Professional judgement (BPJ))
2. Page 19, Section 2.2.6: Borehole #16 is discussed as having an "initial depth of 50 ft." However, in Table B-1, the TD is listed as 150 ft. LANL shall provide the criteria for extending the depth from 50 ft. to 150 ft. (BPJ)
3. Page 21, 2nd Paragraph: LANL shall explain the meaning of the following sentences: "All fixed laboratory data should have an accuracy of \pm 30 percent or better." (2nd Paragraph) and "The MCAL data (for VOCs and metals) should have an accuracy of \pm 50 percent or better." (3rd Paragraph)

EPA is concerned that the data quality and data accuracy of the mobile laboratory, fixed laboratory and the MCAL. Data with such poor accuracy may not be appropriate for use in the decision-making process. LANL shall reduce the use of its mobile laboratory due to its imprecise quality assurance/quality control measures unless it can now demonstrate a better rate of accuracy. If the data quality and accuracy of those laboratories can not be improved, LANL shall have all samples analyzed by a reputable outside laboratory with better data quality. (BPJ)

4. Page 24, 5th Paragraph: The Plan states that field quality control samples will be collected in accordance with LANL Environmental Restoration (ER) Quality Assurance Project Plan (QAPP), which has not been finalized or approved. LANL shall follow the QAPP which has previously been approved until NMED approves the new QAPP. (BPJ)
5. Table B-1 indicates that a great deal of "Field Screening" data will be collected. This is in contrast to a lesser amount of field laboratory analyses and an even lesser amount of fixed laboratory analyses. LANL shall address how the field screening data will be used, and if the field screening data will be used to modify the location samples which will be sent for laboratory analyses. (BPJ)
6. LANL should drill at least one borehole in Absorption Bed 3. (BPJ)

7. Generally, flow of water and contaminants in volcanic tuffs can be dominated by fracture flow. This plan does not seem to take fracture flow into consideration. Fracture flow can result in contaminant migration and distribution that is very different from that predicted from simple vertical seepage. LANL shall detail how fracture flow will be addressed. (BPJ)