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**CERTIFIED MAIL  
RETURN RECEIPT REQUESTED**

July 29, 1997

Mr. G. Thomas Todd, Area Manager  
Los Alamos Area Office  
Department of Energy  
528 35th Street  
Los Alamos, New Mexico 87544

Mr. Sigfried Hecker, Director  
Los Alamos National Laboratory  
P. O. Box 1663, MS A100  
Los Alamos, New Mexico 87545

**RE: Request for Supplemental Information  
Sampling and Analysis Plan  
Potential Release Site 21-016(a, b, c)  
Los Alamos National Laboratory  
NM0890010515**

Dear Mr. Todd:

The Resource Conservation and Recovery Act Permits Management Program (RPMP) of the Hazardous and Radioactive Materials Bureau (HRMB) has reviewed the Sampling and Analysis Plan for PRSs 21-016(a, b, c), dated March 1, 1996, and referenced by EM/ER: 96-094 and found it to be insufficient. The NMED Department of Energy (DOE) Oversight Bureau and the US Environmental Protection Agency (EPA) provided technical comments which were considered in staff review. LANL must respond to the request for supplemental information noted in Attachment A within thirty (30) calendar days of the receipt of this letter. If DOE/LANL does not submit a complete response to the request for supplemental information or submit the information within thirty (30) calendar days a Notice of Deficiency will then be issued.



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Mr. Todd and Dr. Hecker  
July 29, 1997  
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Should you have any questions regarding this letter, please contact me or Mr. John Kieling, HRMB's LANL Facility Manager, at (505) 827-1558.

Sincerely,



Robert S. (Stu) Dinwiddie, Ph.D., Manager  
RCRA Permits Management Program  
Hazardous and Radioactive Materials Bureau

RSD:jek

cc: T. Baca, LANL EM, MS J591  
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S. Yanicak, NMED DOE OB, MS J993  
File: Reading and HSWA LANL 1/1106/21-016(a,b,c)  
Track: LANL, doc date, NA, DOE/LANL, RPMP/kth, RE, File

**ATTACHMENT A**  
**Request for Supplemental Information**  
**Sampling and Analysis Plan (SAP) for PRS 21-016(a, b, c)**

**General Comment:**

1. Clarify if composite sampling was used. Composite sampling should not be used in this investigation.
2. 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.

**Specific Comments:**

1. **Page 8, Section 1.4, Paragraph 1; "The presence of RCRA Contaminants, primarily metals,..."**  
The RFI Work Plan list organics, solvents and oils in addition to metals in Table 16.3-IX. These waste types should be included in this sentence.
2. **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.
3. **Page 14, Section 2.2.1, Paragraph 2; "If no RCRA chemicals are detected in these boreholes, this information will be used as a basis to further limit the analysis of inorganic, semivolatile organic compounds (SVOCs), and volatile organic compounds (VOCs) in the remaining MDA T boreholes."** and **Page 19, Section 2.3, Paragraph 2; "Core samples will be collected from the upper 50 ft of the borehole 1 (beneath absorption bed 1) and from the entire length of boreholes 21 and 22 (beneath building TA-21-257) at 10 ft intervals and analyzed by a fixed lab for SVOCs.** The list of COCs should not be limited or reduced based on the analytical results of these boreholes. This TA has had a long history which included a variety of processing and waste handling methods and waste materials. Before the list is limited, each of the absorption beds, the shaft area, and the retrievable waste storage area should be investigated for the entire suite of possible COCs.

4. **Page 18, Section 2.2.6:** Borehole #16 is discussed as having an "initial depth of 50 ft." However, in Table B-1, the final depth is listed as 150 ft. LANL shall provide the criteria for extending the depth from 50 ft. to 150 ft.
5. **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)

HRMB is concerned with the data quality and data accuracy of the mobile laboratory and fixed laboratory. Data with such poor accuracy may not be appropriate to be 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 laboratory outside of the LANL with better data quality.

6. **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.
7. **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. At least one fixed laboratory analyses is needed for each borehole.
8. LANL should drill at least one borehole in Absorption Bed 3 to an initial depth of at least 50 feet bgs.