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**CERTIFIED MAIL**  
**RETURN RECEIPT REQUESTED**

September 24, 1997

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

Dr. Sigfried Hecker, Director  
Los Alamos National Laboratory  
P. O. Box 1663, Mail Stop A100  
Los Alamos, New Mexico 87545

**RE: Request for Supplemental Information**  
**RCRA Facility Investigation Report**  
**Technical Area 1, Aggregates A, B, H, I & J**  
**Los Alamos National Laboratory**  
**NM0890010515**

Dear Mr. Todd and Dr. Hecker:

The RCRA Permits Management Program (RPMP) of the New Mexico Environment Department has reviewed the RCRA Facility Investigation Report (LAUR-96-3379) for Technical Area 1, Aggregates A, B, H, I & J dated March 26, 1996 and referenced by EM/ER:96-104 and requests supplemental information detailed in the attachment.

LANL must respond to the request for supplemental information within thirty (30) days of the receipt of this letter. If LANL does not submit a complete response to this request within thirty (30) calendar days, LANL should be advised that a Notice of Deficiency will be issued.



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Mr. Todd and Dr. Hecker  
September 24, 1997  
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Should you have any questions regarding this letter, please contact me or Mr. John Kieling, RPMP's LANL Facility Manager, at (505) 827-1558.

Sincerely,

  
Robert S. ("Stu") Dinwiddie, PH. D., Manager  
RCRA Permits Management Program

RSD:kth

attachment

cc w/ attachment:

- T. Baca, LANL EM-DO, MS J591
- T. Davis, NMED HRMB
- B. Garcia, NMED HRMB
- T. Glatzmaier, LANL DDEES/ER, MS M992
- K. Hill, NMED HRMB
- J. Jansen, LANL EM/ER, MS M992
- M. Johansen, DOE LAAO, MS A316
- J. Kieling, NMED HRMB
- M. Leavitt, NMED GWQB
- H. LeDoux, DOE LAAO, MS A316
- D. McInroy, LANL EM/ER, MS M992
- D. Neleigh, EPA 6PD-N
- J. Parker, NMED DOE OB
- G. Saums, NMED SWQB
- T. Taylor, DOE LAAO, MS A316
- S. Yanicak, NMED DOE OB, MS J993

File: Reading and HSWA LANL 1/1078/1/A, B, H, I & J  
Track: LANL, doc date, NA, DOE/LANL, HRMB/kth, RE, file

**ATTACHMENT**  
**Request for Supplemental Information**  
**RCRA Facility Investigation Report**  
**Technical Area 1, Aggregates A, B, H, I & J**  
**March 26, 1996**

The following potential release sites were presented in this document: 1-001(a, e, m & o); 1-003(a, d & e); 1-006(e & o); and 1-007(d, e & j).

**General Comment:** Although there are several tables in the RFI Report containing laboratory analytical results, the information is presented awkwardly and some information is missing.

For each PRS, LANL should provide a table which includes all laboratory analytical results, not just the results that are above SALs or background levels. The table should include the sampling interval (depth), the analytical method, the detection limit, the UTLs based on background concentrations for applicable constituents, and the SALs.

1. **1-007(e), Page 45, Section 5.1.10:** The report states, "SWMU 1-007(e) was not sampled...because it was inaccessible, but it was investigated and remediated during 1974-1976 Ahlquist radiological survey...Results from SWMU 1-007(d) show that Ahlquist's survey meets RCRA and radiological standards, and SWMU 1-007(e) is also recommended for NFA."

There is no evidence (i.e., analytical data) in this report to justify LANL's NFA recommendation for 1-007(e). If Ahlquist's survey on this site meets RCRA and radiological standards, LANL should summarize the investigation and present the confirmatory sampling results to support the NFA proposal; or if the site is inaccessible, LANL should request deferral of the investigation until the building is decommissioned.

As stated in the Work Plan, the suspected contaminants in 1-007(d) are different from that in 1-007(e), therefore, the results from the former cannot and do not apply to the latter.

2. **Page 57, 1st paragraph of Section 5.2.5.1:** The analytical results of a composite sample, which were composed of 4 to 7 discreet samples, do not identify the levels of contamination at each individual sampling location.

LANL should resample this PRS in order to obtain discreet grab samples. Compositing is unacceptable for the purpose of determining nature and extent of contamination.

3. **1-001(a) and SWMU 1-003(a), Page 74, 7th Item:** LANL should conduct further investigations in the subsurface (at depths of 2 and 4 feet) near the sample locations where contaminant concentrations were elevated. Lead was found at a concentration of 425.6 mg/kg in a composite sample composed of seven surface soil samples. Another discrete surface sample also found lead at a concentration of 409 mg/kg. Since those samples were taken from 0-6 inches deep, subsurface contamination is suspected.
4. **1-003(a)- Bailey Bridge Landfill, Page 78, last paragraph:** The report states, "Mercury was detected...at an observed concentration of 32.9 mg/kg... However, mercury was detected at a concentration of only 9.46 mg/kg in a laboratory duplicate of this sample. The average of these two values (21.2 mg/kg) is less than the SAL for mercury..."
- a. The analytical results of the laboratory duplicate is not provided in the Report. LANL should provide all sampling results.
  - b. In addition, LANL should not average concentrations of contaminants in order to demonstrate that the concentration is below a SAL.
  - c. The analytical results of sample AAA1642 identified several inorganics at concentrations greater than their respective UTLs: chromium (24.2 mg/kg), lead (409 mg/kg), mercury (32.9 mg/kg), and silver (20 mg/kg). It is possible that the concentration identified in the laboratory duplicate (9.46 mg/kg) is a false negative. LANL should re-investigate both the surface and subsurface soils at a depth of 3 feet in the proximity of this sample.
5. **Page 79, 3rd paragraph:**
- a. The highest concentrations of several samples stated in this paragraph differed from those found in Table 5.2.6-1. Please explain.

	<u>Stated Concentration.</u>	<u>Table 5.2.6-1</u>
Benzo(a)anthracene	3.35 mg/kg	4.5 mg/kg
Benzo(b)fluoranthene	4.95 mg/kg	6.5 mg/kg
Benzo(k)fluoranthene	2.25 mg/kg	2.9 mg/kg
Chrysene	6.7 mg/kg	8.9 mg/kg
Indeno[1,2,3-cd]pyrene	0.9 mg/kg	1.6 mg/kg

- b. LANL should also explain why composite sampling results were not included in the discussion. The presumed concentration should be treated the same as the observed concentration.
  - c. Concentrations of benzo[a]anthracene, benzo[a]pyrene, benzo[b]fluoranthene and indeno[1,2,3-cd]pyrene exceeded their respective SALs. LANL should re-investigate the surface and subsurface soils at sampling locations 01-2075 and 01-2073.
  - d. The report states, "The samples in which PAHs were detected are within or adjacent to the main channel that drains surface-water runoff from mesa, and the presence of these PAHs is likely related to runoff from paved streets or parking lots rather than as a result of Laboratory operations. Given that these PAHs were detected in very few samples, further evaluation of these PAHs is not necessary."
    - i. LANL should provide documentation to support the assertion that the identified PAHs are not from Laboratory operations.
6. **SWMU 1-001(e), Page 80:** The report states, "SWMU 1-001(e) was not sampled during this RFI; however, the tank could not be located in the 1970s before housing was constructed over the site of the tank and the inlet and outlet lines."
- LANL should sample the outfall area and the tank's associated pipe line.
7. **SWMU 1-001(o):** The Report states that this PRS was sampled; however, no analytical results are provided and Figure 5.2.4-1 (see page 51) fails to identify the PRS or any sampling locations. LANL should present this information within the RFI Report.
8. **SWMU 1-003(e), Page 84, 2nd paragraph:** The Report states, "LANL ...collected fourteen (14) surface samples from the site at 0 to 6 inches deep. Three were sent to a fixed laboratory for TAL Metals and SVOC."

LANL shall submit a Phase II sampling plan to evaluate both the vertical and horizontal extent of contamination at this PRS. Full characterization of this PRS was not accomplished during this phase of the investigation.

9. **SWMU 1-001(m), Page 97, 3rd paragraph:** The Report states, "...If any of the samples collected had elevated concentrations of metals, they were submitted to a fixed laboratory for a full suite of analysis."
  - a. LANL should provide an explanation of what is meant by "**elevated concentration levels**," how these levels were derived, if the levels apply to all PRSs or this PRS only.
  - b. LANL should also provide the analytical results to support the NFA proposal.
10. **SWMU 1-003(d), Page 100, 2nd paragraph:** LANL should explain the following: "Further background comparisons were performed for arsenic...because of the low frequency of their detections above background UTLs and because of the high probability of false positive results given the UTLs."
11. **Page 102, 1st paragraph:** LANL should treat presumed concentrations (from composite samples) and observed concentration alike, and should not exclude presumed concentrations from the discussion.

Table 5.4.5-1 indicates that three samples [338 mg/kg (observed concentration), 690 mg/kg (presumed concentration) and 1,368 mg/kg (presumed concentration)] had concentrations greater than background UTL (315 mg/kg). Using only the observed concentration, LANL concluded that barium concentrations are probably within background.
12. **1-006(e), Page 114, 2nd paragraph:** The Report states, "...antimony and thallium had EQLs greater than their maximum reported background concentration in soil. There is no reason to believe that antimony or thallium are present at this site in concentrations greater than their background concentrations based on available knowledge of historic operations."

For completeness, LANL should provide the alluded to EQL values and background information for those two metals.