



GARY E. JOHNSON
GOVERNOR

State of New Mexico
ENVIRONMENT DEPARTMENT
Hazardous & Radioactive Materials Bureau
2044 Galisteo
P.O. Box 26110
Santa Fe, New Mexico 87502
(505) 827-1557
Fax (505) 827-1544



MARK E. WEIDLER
SECRETARY

EDGAR T. THORNTON, III
DEPUTY SECRETARY



CERTIFIED MAIL
RETURN RECEIPT REQUESTED

October 16, 1997

Mr. G. Thomas Todd, Area Manager
Los Alamos Area Office
Department of Energy
528 35th 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: Denial of RCRA Facility Investigation Report at TA-36
Potential Release Sites (PRSs) 36-001, 36-004(d), and 36-006
Dated June 21, 1996
Los Alamos National Laboratory
NM 0890010515**

Dear Mr. Todd and Dr. Hecker:

The RCRA Permits Management Program (RPMP) of the New Mexico Environment Department (NMED) has reviewed the TA-36 RFI Report (LA-UR-96-2139), dated June 21, 1996, and referenced by EM/ER: 96-357, and found it to be grossly deficient. The RFI Report contains sampling and data inaccuracies and omissions in the submittal. Therefore, RPMP denies approval of the above mentioned RFI Report and requires submittal of a new/revised RFI Report to correct for these inconsistencies and deficiencies. The attached comments shall be addressed in the development of the new Report. DOE/LANL shall submit a new/revised RFI Report to HRMB within thirty (30) calendar days of receipt of this letter.



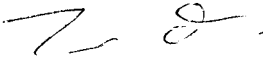
2341

TL

Mr. Todd and Dr. Hecker
October 16, 1997
Page 2

If you have questions concerning this letter, please contact myself or Mr. John Kieling, RPMP's LANL Facility Manager, at (505) 827-1561.

Sincerely,



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

RSD:jek

attachments

cc: T. Baca, LANL EM, MS J591
T. Davis, NMED HRMB
B. Garcia, NMED HRMB
T. Glatzmaier, LANL DDEES/ER, MS M992
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
D. Vanlandingham, EPA, 6PD-N
File: Reading and HSWA LANL 2/1130/36/36-001, 36-004(d), 36-006
Track: LANL, doc date, na, DOE/LANL, HRMB/jek, RE, File

A:\TA36.DEN

ATTACHMENT A
RCRA Facility Investigation Report
Technical Area 36, PRSs 36-001, 36-004(d), and 36-006
June 1996

GENERAL COMMENTS:

1. **Data Inconsistencies.** EPA Region VI requested the complete data files for all soil sample results (organic and inorganic) at PRSs 36-001, 36-004(d), and 36-006. The LANL Field Unit Project Leader (FUPL) forwarded tables with the requested data from the contractor. The data tables provided by the FUPL are not consistent with the limited data provided in the RFI report for TA-36. Arsenic and beryllium are not included in any discussion in the report. The FUPL stated that this was because all soil sample results were determined to be below background. However, the data provided by the contractor shows concentrations of arsenic and beryllium in excess of background for at least one soil sample. EPA Region VI also spoke with the contractor who worked on the RFI report and acknowledged the data inconsistencies between the data tables and the RFI report. On an August 4, 1997, telephone conversation, the contractor stated to EPA Region VI that a revised data table for TA-36 would be sent to EPA in several weeks. However, further review of the risk assessment in this RFI is ineffectual at this time.

2. **Summary Tables.** The RFI report should be a stand-alone document containing a tabulation of analytical results. Results should be provided in addition to the analyses request numbers that are supplied in the summary tables of this report. Due to the inconsistencies, of the report and the contractor's data, all data shall be submitted as an attachment to the report.

3. **Screening Assessment, Section 3.5.1, Page 3-4.** Please revise this section to replace the MCE concept with the outlined human health-based screening assessment procedure below:

The screening assessment should compare the maximum concentration or activity of each contaminant at the site to a screening action level (SAL), which is a risk-based concentration calculated using a conservative target risk. SALs for carcinogens are calculated based on lower end of the 1E-04 to 1E-06 "risk range" to account for multiple carcinogenic contaminants. Because SALs for noncarcinogens do not account for chemical mixtures, if more than one non-carcinogen is expected at the site, then the non-carcinogenic chemical SAL should be divided by 10. Therefore, contaminants can be screened out or eliminated from further evaluation as contaminants of potential concern (COPCs) if maximum detected concentrations or activities of contaminants, in a given medium, are below 1E-06 cancer risk SAL or below 0.1 hazard quotient SAL. Remaining contaminants should be carried through a risk assessment.

4. Background Concentrations. The use of the maximum detected concentrations for constituents with low frequency of detection (i.e., antimony, cadmium, mercury, selenium, and thallium) is inappropriate for determining constituent concentrations representative of natural background. Indicate the reference(s) for the background concentrations for antimony, mercury, cadmium, thallium, and selenium.

5. Analytical Comparison to UTLs and SALs. All analytical data and comparisons to background UTLs and SALs should be provided in tabular form.

6. Ecological Risk Assessment. The report shall include an ecological screening assessment or risk assessment. Risk to ecological receptors shall be evaluated before sites are proposed for No Further Action (see also comment number 3).

SPECIFIC COMMENTS:

1. Screening Assessment, Section 3.5.1, Page 3-4. The following sentence: "If no COPCs remain after this step, then no further action (NFA) may be proposed based on human health concerns" should be rephrased to include ecological health and other concerns among possible NFA criteria.

2. Ecological Assessment, Section 3.6, Page 3-5. Please identify and discuss criteria used to determine the potential for ecological receptors to become exposed to contaminants associated with the site. In addition, please identify and briefly discuss in this section the decision logic used to address landscape conditions and receptor access determination. Because information provided in Table 2.4-1 (Biological Survey, Section 2.4, Page 2-6) clearly indicates that the site has a potential to pose an excessive ecological risk, this risk should be evaluated and appropriate risk mitigation measures applied to the site.

3. Inorganic Analyses, Section 4.1.1, Page 4-1. LANL states that the data from eight mercury samples are usable because the holding time was not grossly exceeded. However, mercury is listed in the RFI (page 1-5) as a COPC, and proper QA/QC is of utmost importance for this metal. The original holding time of 28 days was exceeded by 21 to 31 days. PRS 36-001 should be resampled for mercury.

4. Table 5.1.4.5-2 Page 5-8. See general comment 2.

5. Table 5.1.5-1, Page 5-10. The inorganic results for PRS 36-001, MDA AA listed on Table 5.1.5-1 do not coincide with the sampling data results provided by the contractor. For instance, Table 5.1.5-1 reports that the antimony concentration for sample ID AAB1955 and AAB1956 as non-detect. However, the data provided by the contractor show antimony concentrations of 5.4 and 5.6 mg/kg, respectively. In addition, Table 5.1.5-1 reports that the antimony concentrations for sample IDs 0236-96-0008, -0023, -0024 and -0025 as non-detect while the contractor data reports sample values of 7.5, 18.5, 0.87 and 0.85 mg/kg, respectively. The copper concentration at sample

ID 0236-96-0021 is listed in the RFI report as 718 mg/kg while the contractor's data reports the soil copper value for this sample ID as 3,253 mg/kg (exceeding the SAL). These type of inconsistencies continue with other inorganics including barium, chromium, and copper. Furthermore, data are listed for samples in the contractor's data that are not listed in the RFI report. Many sample IDs in the provided table do not have a sample value listed.

6. **Table 5.1.5-1, Page 5-10.** No data are provided for aluminum, arsenic, cadmium, or selenium in this table or the report although data submitted by the contractor provides sample results for these inorganics at PRS 36-001, MDA AA. Some arsenic and beryllium soil sample concentrations listed in the data provided by the contractor exceed background and the SAL (for example, sample ID 0236-69-0021).
7. **Table 5.1.6-1, Page 5-11.** This table states that no SAL exists for trichlorofluoromethane. The EPA Region 6 Human Health Media-Specific Screening Levels lists a residential soil SAL of 710 mg/kg for trichlorofluoromethane. However, this SAL is well above the measured value and should not affect the RFI decision to drop this organic from the list of potential COPCs.
8. **Table 5.1.5-2, Page 5-11 and Table 5.1.6-1, Page 5-12.** HRMB requests that the tables include the sampling locations in addition to the sample IDs.
9. **Table 5.1.6-1, Page 5-12.** This table is inconsistent with the contractor data, and omits organic constituents found at PRS 36-001. For example, sample 0236-96-0012 should be shown as having a value of 3.28 mg/kg of bis(2-ethyl-hexyl)phthalate, since this value is higher than the value of 1.73 mg/kg, also listed in the contractor data. Furthermore, several constituents are listed in the RFI as non-detect. The contractor data lists these constituents as both detect and non-detect for certain samples. HRMB believes that all data (detect and non-detect) should be summarized in the new RFI report. This will yield the most conservative approach to screening assessment.
10. **Page 5-14, Paragraph 2; "The future site use is assumed to be continued Laboratory operations and, therefore, no exposure scenarios were evaluated." and Page 5-19, Section Risk Characterization, Paragraph 1; "The site-specific PRGs were calculated based on an intrusive industrial scenario..."**. A residential land use should be calculated in addition to the preferred land use scenario (intrusive industrial).
11. **Section 5.3.4.4, Page 5-31, Paragraph 4; "The berm was also hand augered to determine if it contained burned material, but only construction fill material was present."** Indicate the number of auger holes placed in the berm and provide a figure representing the locations of the auger hole locations. Provide a description of the materials which were visible in the construction fill material.
12. **Table 5.3.4.4-4, Page 5-34.** See general comment 2.
13. **Page 5-34 and 5-35, Sections 5.3.5, 5.3.6, 5.3.7, and 5.3.7.1.** See general comment 5.

14. **Figure 5.4.4.2-1, Page 5-38.** This map should show the Eenie firing pad for reference.
15. **Section 5.4.4.5, Page 5-39, Paragraph 1; “The debris itself was screened but not sampled.”** Indicate the screening methods and analytes used and provide the results of the screening. Also provide the detection limits for the screening methods used.
16. **Figure 5.4.4.2-1, Page 5-40.** Indicate if the canyon has been checked for debris in the watercourse below the designated PRS. Since the debris covers such a steep slope directly above a seasonal watercourse, surface water samples should be collected above and below PRS 36-006 and analysed for the same constituents at the PRS.
17. **Section 5.4.7.1 Screening Assessment, Page 5-42.** HRMB believes that assuming all chromium found in an investigation is present as hexavalent chromium (chromium VI) is the most conservative approach to a screening assessment. LANL states that the assumption was made that all chromium present was trivalent chromium (chromium III) based on site use. LANL should either provide conclusive data or elaborate further on site history to prove that all chromium present is trivalent. In addition, the RFI makes reference to a site-specific PRG which may be found in Appendix C, yet Appendix C is missing from the report. Regardless, HRMB recommends that chromium be retained as a COPC. Provide Appendix C within the new/revised report.
18. **Section 5.4.7.2, Page 5-43; “This PRG was calculated based on nonintrusive industrial (surface soil) scenario using standard EPA default parameters.”** A residential land use should be calculated in addition to the preferred land use scenario (non-instrusive industrial).
19. **Section 5.4.10 Conclusions and Recommendations, Page 5-43.** The Phase I investigation determined that chromium is present at concentrations above SAL at PRS 36-006. The purpose of a phase II investigation is to determine the nature and extent of all COPCs present. LANL shall investigate the extent of chromium contamination by sampling in areas immediately adjacent to and downgradient of sampling location 36-3145.