



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 6  
1445 ROSS AVENUE, SUITE 1200  
DALLAS, TX 75202-2733

*Stu  
Please see  
me at the  
well...  
submit report  
8/20/97*

*MSWA, DALLAS TX 8/11/97/36-001, 36-004(d), 36-006*



August 20, 1997



Mr. Benito Garcia, Chief  
Hazardous and Radioactive Materials Bureau  
New Mexico Environment Department  
P.O. Box 26110  
Santa Fe, NM 87502

Re: Notice of Deficiency for the RFI Report for Potential  
Release Sites 36-001, 36-004(d), and 36-006  
Los Alamos National Laboratory (NM0890010515)

Dear Mr. Garcia:

The Environmental Protection Agency (EPA) has reviewed the RFI Report for Potential Release Sites 36-001, 36-004(d), and 36-006 at Los Alamos National Laboratory (LANL) and has found the report to be deficient. EPA has noted sampling data inaccuracies and omissions in this submittal. EPA recommends that this report be denied and rewritten.

Should you have any questions, please feel free to contact Mr. David Vanlandingham at (214) 665-2254 or Mr. Michael Morton at (214) 665-8329.

Sincerely,

*David W. Neleigh*

*for*

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

Enclosure



2336

*TK*

List of Deficiencies  
RFI Report, Potential Release Sites 36-001, 36-004(d), and 36-006  
Los Alamos National Laboratory

**General Comments**

1. **Data Inconsistencies.** Michael Morton requested the complete data files for all soil sample results (organic and inorganic) at Potential Release Sites (PRSS) 36-001, 36-004(d) and 36-006. Mr. Gene Gould of ICF Kaiser, contractor on these sites, forwarded tables with the requested data. The data tables provided by Mr. Gould are not consistent with the limited data provided in the RFI for TA-36. Arsenic and beryllium are not included in any discussion in the RFI. ICF Kaiser stated that this was because all soil sample results were determined to be below background. However, the data provided by ICF Kaiser shows concentrations of arsenic and beryllium in excess of background for at least one soil sample. Mr. Morton also spoke with Mr. Richard Merinda, also with ICF Kaiser, 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, Mr. Merinda stated to Mr. Morton 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. **Page 3-4. Screening Assessment.** The multiple chemical evaluation (MCE) as outlined is interpreted to retain chemicals of potential concern (COPCs) with normalized values  $\geq 0.1$  SAL (screening action level) when the cumulative normalized values are greater than 1.0. However, an MCE should not be needed for carcinogens and radionuclides when the  $1E-4$  to  $1E-6$  carcinogenic risk range is employed and the SAL is set at  $1E-6$ . In addition, if a single non-carcinogen independently exceeds the SAL (i.e., cumulative normalized value  $> 1.0$ ) in a given sample, all COPCs with a normalized value  $\geq 1.0$  found in that sample should be retained, rendering the MCE process unnecessary.

**Specific Comments:**

1. **Page 4-1, 4.1.1 Inorganic Analyses.** 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. EPA believes that, unless LANL can submit information concluding otherwise, this value greatly exceeds the holding time and may impact the quality of mercury analysis. PRS 36-001 may need to be resampled for mercury.

2. **Page 5-10, Table 5.1.5-1.** 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 nondetect. However, the data provided by the contractor shows 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 nondetect 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, copper. Further, 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.

3. **Page 5-10, Table 5.1.5-1.** 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 0236-96-0021).

4. **Page 5-11, Table 5.1.6-1.** 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 710mg/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.

5. **Page 5-11, 5-12.** EPA requests that Tables 5.1.5-2 and 5.1.6-1 also include the sampling locations in addition to the sample IDs.

6. **Page 5-12, Table 5.1.6-1.** 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 3.28mg/kg of bis(2-ethyl-hexyl)phthalate, since this value is higher than the value of 1.73mg/kg, also listed in the contractor data. Furthermore, several constituents are listed in the RFI as nondetect. The contractor data lists these constituents as both detect and nondetect for certain samples. EPA believes that all detected data should be summarized in the RFI, as this will yield the most conservative approach to the screening assessment.

7. **Page 5-42, 5.4.7.1 Screening Assessment.** EPA 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 was present as 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, EPA recommends that chromium be retained as a COPC.

8. **Page 5-43, 5.4.10 Conclusions and Recommendations.** 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. This must first be done before performing a risk assessment. LANL shall investigate the extent of chromium contamination by sampling in areas immediately adjacent to and downgradient of sampling location 36-3145.