

TA-20



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 6
1445 ROSS AVENUE, SUITE 1200
DALLAS, TX 75202-2733

MAR 06 1995

LANL 162/100 1106

Mr. Joseph C. Vozella
Acting Assistant Area Manager
Environment and Projects
Department of Energy
Los Alamos Area Office
Los Alamos, NM 87545

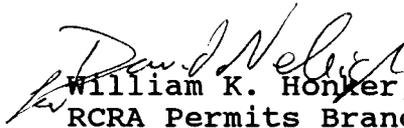
Re: Notice of Deficiency, RFI Reports 1B, 1C and Addendum 1B-1C
Operable Unit 1106
Los Alamos National Laboratory, NM0890010515

Dear Mr. Vozella:

The Environmental Protection Agency has completed review of the following documents for Operable Unit 1106: (1) RCRA Facility Investigation (RFI) Phase Report 1B, dated January 28, 1994; (2) RFI Phase Report 1C, dated March 1, 1994; and (3) Addendum to Phase Reports 1B and 1C, dated January 30, 1995. Enclosed is a list of deficiencies which addresses all three of these reports. Los Alamos National Laboratory (LANL) has 45 days from receipt of this letter to respond to these deficiencies.

Should you have any questions, please feel free to contact Ms. Barbara Driscoll at (214) 665-7441.

Sincerely,


William K. Honker, P.E., Chief
RCRA Permits Branch

Enclosure

cc: Mr. Benito Garcia
New Mexico Environment Department
Mr. Jorg Jansen
Los Alamos National Laboratory, MS M992



10186



**List of Deficiencies
Operable Unit 1106
RFI Reports 1B, 1C and Addendum 1B and 1C**

General Comments:

1. All figures as presented lack detail, either the scale needs to be revised so the reader can obtain a clear picture of sample locations, or larger figures need to be provided. For the majority of figures in these reports a revision of scale would be adequate to allow the reader a better view of actual sampling and outfall locations.

2. For all SWMUs which will have phase II sampling, a detailed sampling and analysis plan should be provided with detailed figures of sampling locations. LANL shall provide a schedule for submittal of these workplans.

3. LANL should indicate if contamination was found in laboratory blanks whenever constituents are eliminated due to possible laboratory contamination. This information should be presented for each unit summary, and the actual blank information should also be included in analytical tables.

EPA will not approve Class 3 permit modifications for the following units until the information related to blanks is provided by LANL:

21-024(a,f,g,h,l)

4. Both in FY92 and FY93 field investigations, quality assurance samples transferred to the Sample Coordination Facility (SCF) were arbitrarily batched separately from the corresponding field samples. This makes it impossible to efficiently correlate field samples with their associated quality assurance samples. If this situation has not already been corrected with SCF, then LANL should immediately put controls in place to ensure that this does not continue to occur. LANL shall provide documentation to EPA demonstrating that this practice by SCF has been discontinued, or how LANL will address the problem. This failure in procedures should invalidate any comparisons of sampling results to laboratory contamination.

In addition, quality control (QC) samples should not be separated from field samples and put into their own batch for analysis. QC samples should be analyzed in the same batch as the field samples for which they are supposed to provide quality control.

5. When LANL indicates that a risk assessment will be conducted because action levels are exceeded for radioactive constituents, are the hazardous constituents found in the sampling included in

the risk assessment?

6. LANL may request a Class 3 permit modification for the following units. As indicated below, several of these units will continue to be investigated due to their radioactive component.

21-024(j,k,m,n,o)
21-027(b,d)

Risk assessment to be conducted: 21-024(b), 21-024(e).

Corrective action for radioactive component: 21-024(d).

7. Decisions concerning the following units will be deferred until additional sampling has been conducted. LANL shall provide schedules for sampling of neighboring SWMUs and report schedules for these units.

21-006(b) 21-027(c)

8. The following units do not need to be added to the HSWA portion of the RCRA permit:

21-004(d) 21-019(a-m)
21-008 21-020(a,b)

Specific Comments:

Report 1B:

9. Of the 18 solid waste management units identified in this report only two are listed in the HSWA portion of the RCRA permit, 21-007 and 21-021. On Figure 1.3 which shows the locations of the SWMUs covered by this report, the location of these two SWMUs are not included for various reasons. LANL needs to submit the following information for the two listed units:

a. A figure indicating the location of the salamander incinerators as known, and the stack emissions which were covered by 21-021. Sampling points which relate to these SWMUs should be indicated and numbered.

b. Sampling results which relate directly to these two units. Results should be presented by sampling location and include the inorganic data. A table format would be helpful. EPA needs to evaluate individual sampling points in relation to these units, as opposed to the grouping of all results as was indicated in the report.

10. LANL should provide an explanation why Grid 1 samples were often extracted differently or analyzed by a different method than Grid 2 samples. Has LANL corrected this situation, and if

so are there now procedures in place to ensure that extraction methods and analytical methods for inorganics are standardized?

11. 2.3 Data Assessment Overview, p. 2-2, Assessment 2 - LANL refers to local background as the "Non-Process Area" on Map 2. The samples collected in the non-process area include samples in Los Alamos Canyon and on strata which is different than the process area. LANL needs to provide information to EPA which demonstrates that these sampling locations (those not on the mesa) are not compared with the process area locations. If these areas were combined with areas on the mesa top then LANL needs to remove the data from final results of the non-process area background.

12. Assessment 3 - Table 2-4 - LANL cannot use the mean of all the non-process area sampling results to compare with process area results. There needs to be differentiation based on strata type and geochemistry.

Filter Building:

13. 4.3 Data Assessment Overview, p. 4-2 - What does LANL mean by the sentence, "No hazardous constituents were identified at levels of concern". How are levels of concern defined?

14. 4.4 Conclusions and Recommendations, p. 4-3 - The third paragraph indicates that no RCRA hazardous constituents were detected in the filter buildings investigation which contradicts the statement above in 4.3. Appendix E indicates that volatiles were detected in the filter buildings. Were these volatiles also detected in the laboratory blanks? There should have been discussion of this in the report.

Appendix A:

15. A.1.1 Revision of Sampling Plan - When significant problems such as those indicated in part A.1.1 Revision of Sampling Plan, resulted in major changes from the approved sampling plan, LANL should notify EPA in writing of the problems and the proposed solutions for an approved modification to the work plan.

16. A.3.2 Regional Background Concentrations, p. A-11 - The national study by Shacklette and Boemgen, 1984, is too general and should not be used by LANL for background comparisons. Background should be documented locally for the facility. In addition, the depth of collection for the Los Alamos study is different. Text should indicate which analytical methods were used for all studies.

17. A.6 Non-Process Area Inorganics Baseline, p. A-18 - What is the source of the regional background data which sampling data from TA-21 is being compared to? Is the data from the Longmire

background study combined with other studies?

18. Appendix B: B.5 Deposition Layer Inorganics, p. B-13 - Text indicates that four arsenic outliers are near TSTA, are these locations being addressed under the investigation of another SWMU? If yes, then LANL should indicate which investigation will address this unit, and the schedules for those investigations.

19. Map 2: The legend does not indicate what the black square symbols indicate. LANL shall provide this information.

Report 1C:

20. Recommendation for Further Action, p. 2-9 - Detection limits should not be revised upwards to correlate with action levels. The QAPjP as prepared should be followed, unless there is a programmatic decision to change portions of the QAPjP with approval by EPA.

21. Chapter 6: 21-022(h) 6.1.3 Data Assessment, p. 6-4 - a. LANL makes the assumptions that the samples which contained the semi-volatile organics are related to widespread environmental contaminants or polyaromatic hydrocarbons typical of paving materials. These semi-volatiles cannot be attributed to anthropogenic causes until a risk assessment has been conducted to demonstrate anthropogenic causes.

b. In addition, what is the schedule for the associated sump to be sampled? Should this have occurred in the FY93 field sampling along with the other units in Report 1C?

22. Chapter 9 - SWMU 21-026(d) - Several semi-volatiles were detected above SALs, and cannot be dismissed as indicative of contamination from paving materials. LANL should conduct a risk assessment for this site.

Addendum 1B and 1C:

23. Grid Extension, 2.4 Conclusions, p. 2-4 - LANL cannot dismiss the presence of semivolatiles above action levels due to anthropogenic reasons without conducting a risk assessment to ensure this is the actual source of the semivolatiles.

24. 4.1.4 Conclusions and Recommendations, SWMU 21-011(k), p. 4-5 - The second sentence in this section is incorrect; because, a risk assessment would not take into account the synergistic nor antagonistic effects of different constituents. Rather in a risk assessment the additive effects of different constituents would be evaluated. LANL needs to substantiate their assumption that the metals of concern included in the multiple constituent evaluation exert different toxicological effects.

- 25. 4.2.1 Site Summary, SWMU 21-023(c), p. 4-14** - The multiple constituent analysis performed on the metal with concentrations above background for this site exceeded one. LANL must either use the chromium results as analyzed and pursue further action for metals, or resample and determine the actual amount of hexavalent chromium.
- 26. 7.1 SWMU 21-024(c) - a.** A release from the outfall has been identified; therefore, LANL should also examine any piping from the septic tank for leaks. The septic tank if in place should also be sampled if not filled in.
- b.** LANL should provide an explanation for the carbon disulfide observed in the 15-20 foot interval.
- c.** In followup sampling, several samples should be located at the 18-24 inch depth to ensure that the vertical extent of contamination has been determined.
- 27. 7.2 SWMU 21-027(a)** - LANL needs to include some sample locations at the 6-18 inch depth when resampling occurs in the drainage ditch; because, the vertical extent of contamination has not been determined for the chromium.
- 28. 8.1 SWMU 21-024(i) - a.** The data related to the organic compounds identified should be provided.
- b.** LANL has not adequately identified the extent of contamination. Sample 21-1397 has the highest levels of arsenic, and is located furthest down the drainage ditch. Additional, samples should be collected in the drainage ditch below Sample 21-1397. The depth of sampling should be the same three depths previously used.
- 29. Appendix I: Item 16 p. J-22** - Text indicates that SWMU 21-024(i) is proposed for NFA with a corrective action for radioactivity. However, Chapter 8 of Addendum 1B and 1C proposes a risk assessment for this SWMU. Other portions of the "Open Issues" portion of Appendix I are incorrect.