



Date: March 19, 1997  
Refer to: EM/ER:97-075



Mr. Benito Garcia  
NMED-HRMB  
P.O. Box 26110  
Santa Fe, NM 87502

**SUBJECT: RESPONSE TO THE NOD FOR TA-33, PRS 33-008(c) SAP  
(FORMER OPERABLE UNIT 1122)**

Dear Mr. Garcia:

Enclosed is a copy of the Los Alamos National Laboratory's response to the New Mexico Environment Department's Notice of Deficiency (NOD) concerning Technical Area 33, Potential Release Site 33-008(c) Sampling and Analysis Plan. A certification form signed by the appropriate officials is also enclosed. The enclosed response repeats each comment from the NOD for convenience in reviewing.

Please contact Roy Michelotti at (505) 665-7444 or Joe Mose at (505) 667-5808 if you have any questions regarding the response to the NOD.

Sincerely,

*Jorg Jansen*

Jorg Jansen, Program Manager  
LANL/ER Project

Sincerely,

*Theodore J. Taylor*

Theodore J. Taylor, Program Manager  
DOE/LAEO

JJ/TT/rfr

Enclosures: (1) Response to NOD for TA-33, PRS 33-008(c) SAP  
(2) Certification



Cy (w/ encs.):

D. Griswold, AL-ERD, MS A906  
J. Harry, EES-5, MS M992  
R. Michelotti, CST-18, MS E525  
J. Mose, LAAO, MS A316  
N. Naraine, DOE-HQ, EM-453  
D. Neleigh, EPA, R.6, 6PD-N (2 copies)  
C. Rodriguez, CIO/ER, MS M769  
T. Taylor, LAAO, MS A316  
J. White, ESH-19, MS K498  
EM/ER File (CT #C235), MS M992  
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## CERTIFICATION

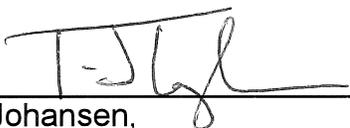
I certify under penalty of law that these documents and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violation.

Document Title: Response to the NOD for TA-33, PRS 33-008(c) Sampling and Analysis Plan

Name:  Date: 3-19-97  
Jorg Jansen, Program Manager  
Environmental Restoration Project  
Los Alamos National Laboratory

or

Tom Baca, Program Director  
Environmental Management  
Los Alamos National Laboratory

Name:  Date: 3/19/97  
Mathew Johansen,  
Acting Assistant Area Manager of  
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DOE-Los Alamos Area Office

or

Theodore J. Taylor, Program Manager  
Environment Restoration Program  
DOE-Los Alamos Area Office

**RESPONSE TO NOTICE OF DEFICIENCY  
FOR TECHNICAL AREA 33, POTENTIAL RELEASE SITE 33-008(c)  
SAMPLING ANALYSIS PLAN**

**SITE-SPECIFIC COMMENTS:**

**NMED COMMENT**

Page 3, last paragraph; in phrase "sample AAA2086 from a point 50 ft southwest of drainage," Should this state "southeast" instead of "southwest"? (Best Professional Judgment (BPJ))

**LANL RESPONSE**

You are correct; "southwest" is incorrect. A better description would have been, "50 ft southeast of the culvert."

**NMED COMMENT**

Page 4, Figure 1: Please explain:

- i) Two types of expressions (closed circle and open circle) were used to show potential borehole locations. What is the difference between them?

**LANL RESPONSE**

Closed circles indicate potential borehole locations and open circles indicate potential surface sediment sample locations, as signified in the figure's legend.

**NMED COMMENT**

- ii) Are the potential borehole locations different from the actual sample locations? Explain the difference.

**LANL RESPONSE**

Yes. Actual sample locations were expected to be different from the conceptual locations shown on the figures. As stated in Paragraph 1 of Section 2.2 on page 5, "...locations of these boreholes will be biased by geophysical survey results toward fill areas containing buried debris."

**NMED COMMENT**

- iii) The physical locations of buried area and trench areas showed in Figure 1 and showed in Figures 1 and 2 of Appendix A do not seem to match. Please explain and identify the corresponding areas in these figures in Appendix A.

**LANL RESPONSE**

Figure 1 of the sampling and analysis plan is a surface contour map. Figures 1 and 2 of the geophysical survey show the strength of electromagnetic fields over a smaller area. For your convenience, we have aligned Figure 1 from the plan and Figure 1 from the geophysical survey side by side on one page in the same orientation (Attachment A). Please note the difference in scale of the two figures. NOTE: Attachment A shows

portions of Figure 1 from the sampling and analysis plan and Figure 1 from the geophysical survey. The two areas of interest are shown in the same orientation, with north at the top of the page.

#### **NMED COMMENT**

- iv) According to the figure, there are total 12 potential sample locations; however, on Page 5, Section 2.2, it states, "Samples will be collected from a minimum of four boreholes located within the disposal areas. Why does the number of sample locations reduces from 12 to four. (BPJ)

#### **LANL RESPONSE**

Please note the plural "disposal areas." The sampling plan would have been more clear had it stated, "Samples will be collected from a minimum of four boreholes located within the primary disposal area and four boreholes located in the area southeast of the culvert. In addition, four surface samples will be collected from the drainage, for a total of 12 sampling locations."

#### **NMED COMMENT**

On Page 5, last paragraph, the plan specifies "a minimum of 4 boreholes located within the disposal areas." On Page 9, second paragraph and last paragraph, the plan specifies a minimum of 4 boreholes in each the primary disposal area and the area south of the culvert. A minimum of 4 boreholes in **each area** is necessary and the Page 5 reference should be clarified.

Further, 2 of the 4 boreholes in the primary disposal area shall be located to sample the bottom of the ravine as it existed prior to placement of the fill. (BPJ)

#### **LANL RESPONSE**

Please see Response 2(iv) above. Four boreholes were drilled in the primary fill area. Four borehole locations were identified in the area southeast of the culvert. However, only three surface samples were collected because the area was so near bedrock and field screening by x-ray fluorescence did not reveal elevated concentrations of inorganics. This modification did not affect the VCA decision even though no contamination was found in the area. Only surface samples were collected from the drainage channel, which is near bedrock. During this sampling campaign, 23 soil samples were collected from 13 locations at PRS 33-008(c).

The culvert occupies the bottom of the ravine. No samples were taken underneath the culvert. One sample was collected inside the culvert. A surface sample was collected in the bottom of the ravine immediately below the exit of the culvert. Possible contamination under the culvert will be addressed by the VCA.

#### **NMED COMMENT**

Page 9, 3rd paragraph: Since SVOCs could stay in the soil longer than VOCs, the borehole cores screening shall include SVOC besides radioactivity and VOCs, as specified in Table 2.2-1. (BPJ)

### **LANL RESPONSE**

At present, there are no field screening methods for SVOCs. (Such methods certainly would be valuable.) All samples were analyzed for SVOCs at commercial, licensed laboratories.

### **NMED COMMENT**

Clarify the meaning of terms "soil" and "fill". In some places it appears terms are interchangeable. In other usages, it seems fill may refer to covered waste; e.g., on page 5, statement is made that samples will include soil and fill. (BPJ)

### **LANL RESPONSE**

The term *fill* is intended to indicate soil that was moved from another site to level the ground over the culvert. The PRS is considered composed of fill rather than of native soil. Delineating fill from soil is an important aspect of the plan.

The term *soil* refers to native, undisturbed earth surrounding the PRS.

We believe we used these terms in the proper context in the sampling and analysis plan, with the exceptions of boilerplate statements in Section 1.0 concerning sample transport and in Sections 2.0 and 3.3 concerning laboratory analyses.

## **APPENDIX A: GEOPHYSICAL INVESTIGATION**

### **NMED COMMENT**

What information is contoured on Appendix A, Figures 1 and 2? What are the Units? (BPJ)

### **LANL RESPONSE**

The figures in Appendix A show the results of geophysical surveys. The contour lines and black areas indicate the strength of electrical or conductance fields generated by metallic objects, such as the culvert and fence posts. White holes within the black areas are an artifact produced when the signals are so intense that the detectors cannot process the data; these white areas represent solid metal. The techniques are described on page 7 of Appendix A.

Units are millivolts (Fig. 1) and milliSiemens per meter (Fig. 2), as indicated in the title at the top of the each figure. A milliSiemen is a unit of conductance.

### **NMED COMMENT**

Maps attached to Appendix A need directional orientation. (BPJ)

### **LANL RESPONSE**

On both figures, direction is indicated by the axis legends *Southing Distance* for the x-axis, *Easting Distance* for the y-axis. North is to the left in the direction of the negative southing values. Please note that Attachment A aligns Figure 1 of the geophysical survey to Figure 1 of the sampling plan such that north is toward the top of the page.

**NMED COMMENT**

Page 4: 5th paragraph: "...outline on Figure 2 (TDMD Data)," Should Figure 2 be Figure 1? (BPJ)

**LANL RESPONSE**

You are correct.

**NMED COMMENT**

Page 5, Section 2.4: Although TDMD and EM data indicated no buried objects or debris are expected to occur below the trenches, the bottom of the trenches might deposit hazardous chemicals. Therefore, soil samples from 2-ft below the bottom of the trench area must be included in the sampling and analysis plan to characterize the possible presence of COPCs. (BPJ)

**LANL RESPONSE**

There is no trench, as was indicated by the geophysical data and as was confirmed by spade work done by the field crew. The feature is a shallow drainage ditch on the mesa surface. One surface sample was taken at the lower end of the ditch. No contamination was detected.

