TA-35

*State of New Mexico*
*ENVIRONMENT DEPARTMENT*
*Hazardous Waste Bureau*
*2905 Rodeo Park Drive East, Building 1*
*Santa Fe, New Mexico 87505-6303*
*Telephone (505) 428-2500*
*Fax (505) 428-2567*
*www.nmenv.state.nm.us*

BILL RICHARDSON
GOVERNOR

RON CURRY
SECRETARY

DERRITH WATCHMAN-MOORE
DEPUTY SECRETARY

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

March 10, 2003

Dr. John C. Browne, Director
Los Alamos National Laboratory
P.O. Box 1663, Mail Stop A100
Los Alamos, New Mexico 87545

Mr. Everett Trollinger, Project Manager
Office of Los Alamos Site Operations
Department of Energy
528 35th Street, Mail Stop A316
Los Alamos, New Mexico 87544

**RE: REQUEST FOR SUPPLEMENTAL INFORMATION FOR SAMPLING AND ANALYSIS PLAN FOR THE MIDDLE MORTANDAD/TEN SITE AGGREGATE LOS ALAMOS NATIONAL LABORATORY EPA ID No: NM0890010515 HWB-LANL-02-006**

Dear Dr. Browne and Mr. Trollinger:

The New Mexico Environment Department (NMED) has received Los Alamos National Laboratory and the Department of Energy (the Permittees) "Sampling and Analysis Plan for the Middle Mortandad/Ten Site Aggregate" dated March 29, 2002 and referenced by ER2002-0011. NMED has conducted review of the document and is requesting supplemental information. The comments are provided as an attachment to this letter. The Permittees must respond to the comments within thirty days of receipt of this letter.

5318

If you have any questions, please contact Neelam Dhawan at (505) 428-2540.

Sincerely,

John Young

John Young
LANL Corrective Action Project Leader
Permits Management Program

JRY:nmd

Attachment

cc: J. Bearzi, NMED HWB
N. Dhawan, NMED HWB
J. Parker, NMED DOE OB
S. Yanicak, NMED DOE OB, MS J993
L. King, EPA 6PD-N
B. Ramsey, LANL RRES-DO, MS J591
N. Quintana, LANL RRES-R, MS M992
D. McInroy, LANL RRES-R, MS M992
G. Lopez Escabedo, LANL RRES-R, MS M992
D. Gregory, OLASO, MS A316

File: Reading and HSWA LANL/TA35

## ATTACHEMENT

1. **Section 1.0, Introduction, Page 6;**
   **LANL STATEMENT:** "The ER Project has evaluated existing data, assessed potential impacts, and defined additional data needs for all PRSs at TA-35."
   **NMED COMMENT**: All PRSs are not included in this sampling and analysis plan (SAP). Table1.0-1 lists some of the solid waste management units (SWMUs) and areas of concern (AOCs) not included in this SAP. Please revise the statement to state it is a partial list. Additionally, Table 1.0-2 lists 32 potential release sites (PRSs) that have been approved for no further action (NFA), out of 32 sites only 5 were approved by NMED. The remaining 27 sites were either approved or are pending approval by DOE that is not recognized by NMED as a valid "NFA". NMED has not reviewed these sites to determine if any RCRA concerns exist at these sites and if they should be included in the investigation. If any of these sites are determined to have RCRA concerns, the sites will have to be evaluated to determine if samples proposed in the SAP will cover investigation of these sites or if new sampling locations need to be added to the SAP. Alternatively, the Permittees may submit documentation that demonstrates to NMED's satisfaction that these sites do not pose unacceptable risk to human health and the environment and do not need to be included in the SAP

2. **Table 2.1-1, Page 18-19;**
   **NMED COMMENT**: The 'Comments' column of Table 2.1-1 for PRSs 35-003(a)-99 and 35-003(j)-99 states repeatedly that no human health and ecological risk exists for these sites. the statement seems premature because the RFI Reports for these sites were either never submitted or never reviewed or approved by NMED. In addition, for some of these sites, confirmatory samples were not collected by the Environmental Restoration (ER) Project. Some of the data included in the SAP is being submitted to NMED for the first time and has not undergone any review. Additionally, Table 2.4-2 on page 114 indicates that vertical extent has not been defined for these sites and additional samples need to be collected. Revise the comment to state that available data indicates that there is no potential human health or ecological risk but further investigation may be necessary.

3. **Section 2.2.4.2, Comparison of Inorganic Chemicals with Background Values for the Pratt Canyon Subarea, Page 80;**
   **LANL STATEMENT**: "For the soil samples, four TAL metals (copper, lead, mercury and zinc) were detected above their background values in at least one sample."
   "For sediment, cadmium, copper, mercury and nickel were detected above their background values in at least one sample".
   **NMED COMMENT**: Cadmium was also detected above its background value in two of the samples as reported in the Table 2.2-20. Strontium was also reported as detected in 6 out of

10 samples, although no background value was reported for strontium in Table 2.2-20. Revise the statement.

According to Table 2.2-20 for sediments, cadmium was not detected above its background value. Additionally, the detection limit for cadmium was not above its background value as reported in Table 2.2-20. Explain the discrepancy between the text and table.

4. **Section 2.3.3.3.1, Pratt Canyon Setting, Page 107;**
**LANL STATEMENT**: "The available data support the model element of infiltration into fill material and the underlying tuff and indicate that fracture flow may not be a significant transport mechanism beneath the bench in upper Pratt Canyon."
**NMED COMMENT**: Provide data that supports this statement. Samples collected at depth (133.5 to 134.5 ft) in the Pratt Canyon indicated presence of elevated uranium isotopes. Provide references of any studies that demonstrated that fracture flow is not a significant pathway for transport of contaminants in the Pratt Canyon. This statement may not be true for all types of historic releases into the environment.

5. **Section 2.4.1, Page, 109;**
**NMED COMMENT**: Fix the typographical error in third paragraph, it should be HPT not HTP.

6. **Table 2.4-2, Page 113-115;**
**NMED COMMENTS**: For PRS 35-011(d), revise the 'Data Gap Conclusions' column, remove the check marks for alpha spectroscopy, gamma spectroscopy, strontium and tritium. Samples do not need to be analyzed for these contaminants based on the process knowledge.

For PRS 35-004(a), Appendix B states that four samples were taken but Table 2.4-2 and Table C-1.1-1 report that only two samples were analyzed for alpha spectroscopy. Explain the discrepancy.

For PRS 35-009(a), operations at TA-35-2, the building associated with the septic system, included use of lanthanum-140, plutonium and lithium tritide. Add tritium to analyses because lithium tritide was used at the associated laboratory. The samples to be taken from the toe of the slope should also be analyzed for tritium to define extent.

For PRS 35-003(j)-99, plutonium-239 was not detected in the deepest sample (6ft), but was detected at 6.6 pCi/g at 5ft. Additional samples may be needed to define the vertical extent.

For PRS 35-004(h), metals should have been included in the analysis because previous results were from XRF analyses. Revise the column, the number of samples under the column for 'Number of fixed laboratory samples for Inorganics', should be zero not four. Table C-1.1-1 also indicates that samples were not analyzed for fixed laboratory analysis for metals.

7. **Table 2.4-3, Page 116;**
**NMED COMMENT:** For PRSs 35-004(m) and 35-016(n), since Cs-137 and Eu-152 were detected in the surface samples, gamma spectroscopy should be added to the analyses for samples to be taken at the toe of the slope to define the extent of contamination.

8. **Table 2.4-4, Page 119-120;**
**NMED COMMENTS:** For PRS 35-016(f), Appendix B states that PCBs were detected but the table reports that PCBs were not detected. Explain the discrepancy and revise the text to indicate the accurate statement.

For PRS 35-016(o), add alpha spectroscopy, gamma spectroscopy and tritium analyses to the samples to be taken at the alluvial fan because these contaminants were detected in the surface samples taken at the outfall. The extent of the contamination must be defined.

9. **Table 2.4-5, Page 121;**
**NMED COMMENT:** For PRS 35-016(k)-00, gamma activity was detected in the catch basin at PRS 35-016(l) in 1988. Change the 'n' to 'y' in the column for 'COPCs Expected at the PRS' for gamma spectroscopy.

10. **Table 2.4-6, Page 124;**
**NMED COMMENT:** For PRS 35-010(e), metals and SVOCs were detected in the sand filter beds that were the source of the discharge, 'n' in the column labeled 'COPCs Expected at the PRS' should be changed to 'y' for metals and SVOCs. Additional samples are not required because the SVOCs and metals were detected at very low levels in the filter beds.

11. **Section 3.1.2, Risk Assessment and Exposure Models, Page 130;**
**LANL STATEMENT:** "The TA-35 mesa top will be evaluated as continuing industrial land (LANL 1998, 57224)."
**NMED COMMENT:** Currently this approach is acceptable for interim measures, but SWMUs and AOCs being proposed for NFA must meet residential risk criteria.

12. **Section 3.1.2.2, Ecological Receptors and Exposures, Page 131;**
**NMED COMMENT:** The sampling results will presumably be screened against the LANL ecological screening action levels (ESLs) for the appropriate terrestrial receptors. The table of potential pathways includes a number of exposure pathways for ecological receptors that are not considered in the development of the screening levels that will be used to screen the site. The LANL ESLs, like NMED ecological screening guidelines, consider only soil ingestion and ingestion of material incorporated into food items (plus external radiation for radionuclides). In the SAP ecological risk is not being considered for the mesa top because >90% of the area is developed (covered by buildings, parking lots, or gravel). Hillside, canyon, and mesa top sampling results should all be compared to ecological screening levels,

except for: samples at greater than five feet below ground surface, samples under existing buildings, and samples under existing pavement. Any hazard quotients greater than one can then be discussed with NMED to determine if they warrant any type of action at the site. This comment does not require a response at this time but should be considered when risk assessment is conducted for the site.

**13. Section 3.2.1.3, Sample Collection and Analysis, Page 134;**
**NMED Comment:** Fix the typographical error 'PRS 35-009(a)-99' is indicated; however, it should read 'PRS 35-003(a)-99'.

For PRS 35-002, additional borehole is needed. Samples taken at borehole BH-5 will help in defining the extent, but will not be sufficient to evaluate the residual contamination at this site. Confirmatory samples taken at MDA X were not ER samples but taken by HSE-8. The samples should be analyzed for metals, radionuclides and tritium.

**14. Table 3.2-1, Page 136;**
**NMED COMMENT:** Fix the typographical error 'PRS 35-009(a)-99' is indicated; however, it should read 'PRS 35-003(a)-99'.

**15. Table 3.2-1, Page 136;**
**NMED Comment:** Include gamma spectroscopy analyses to the samples to be taken from TR-8 to define the extent of contamination. Eu-152 and Cs-137 were detected in the samples taken at the mesa top. See comment 10.

**16. Table 3.2-2, Page 145;**
**NMED COMMENT:** For PRSs 35-009(b) and 35-004(g), fix the typographical error. AH-11 in the column of 'Description of Sample Locations' should indicate AH-1.

PRSs 35-016(c) and 35-016(d) are part of a consolidated unit 35-016(c)-00; add a side bar to the table depicting it as a consolidated unit.

**17. Figure 3.2-4, Page 149;**
**NMED COMMENT:** Show the location of proposed auger hole AH-1 and label TR-10 on the Figure 3.2-4.

**18. Table 3.2-3, Page 156;**
**NMED COMMENT:** For PRS 35-016(o) (outfalls 2 and 3), tritium should be added to the analytical suite for TR-22, TR-23, and TR-25. Tritium was detected in previous samples and could have migrated down the slope/down canyon.

**19. Section 4.1, Geomorphic and Topographic Mapping, Page 172;**
**LANL STATEMENT**: "Laboratory-derived contaminants are expected to occur in the active depositions but not in the inactive depositions."

**NMED COMMENT:** The contamination from active depositions could have migrated down to inactive depositions over the years. Based on field observations, the Permittees, should investigate inactive depositions at selected locations to ensure that the assumption made in above statement is accurate.

**20. Section 5.1, Project Scheduling and reporting Requirements, Page 180;**
**LANL STATEMENT**: "Implementation of this SAP will be directed by the industrial sites (IS) Team of the Remedial Actions Focus Area (RAFA) of the LANL ER Project. No date has been determined for beginning implementation of this SAP, and no schedule for the work is provided here."
**NMED COMMENT:** The project schedule should be included in the SAP. The Addendum to the SAP should be submitted to NMED by 9/30/03 and Investigation Report should be submitted to NMED by 2/28/05.

**21. Appendix A, Page A-6;**
**NMED COMMENT:** Explain why two separate definitions are provided for AOCs in the SAP and indicate which one will be utilized in this document.

**22. Appendix B, Site Descriptions, pages B-5 and B-6;**
**NMED Comment:** Fix the typographical error, 'PRS 35-009(e)-99' should instead indicate 'PRS 35-003(a)-99', please note that there are several references to PRS 35-009(e)-99 throughout the document.

**23. Appendix B, Site Descriptions, pages B-7;**
**NMED Comment:** Correct the typographical error; 'lithium titride' is spelled as 'lithium tritide'.

**24. Appendix C, Existing Data, Page C-8;**
**NMED Comment:** For PRS 35-009(a), correct the depths for samples with ID numbers 0435-96-0051 and -0052. Table C-1.1-1 indicates that these samples were taken at the depth of 0-8 feet (pages, C-8, C-18 and C-24).

**25. Appendix D, Ecological Scoping Checklists;**
**NMED Comment:** Appendix D contains the four ecological checklists for the site. The checklist for the mesa top does not address the potential for contaminants at edge of mesa to impact hillside ecological receptors or erode into canyons impacting canyon receptors. The checklist for the slope/canyon notes heavy erosion on the upper slopes that might result in contaminant transport. This checklist indicates that the SAP will address the distribution of contaminants potentially migrating down the slope. The checklist for the Mortandad Canyon subarea indicates that the canyon bottom is riparian and contains flowing water most of the year. Therefore, aquatic ecological receptor screening levels should be used in addition to the

terrestrial ones if aquatic receptors are present in this subarea (the checklist indicates aquatic insects such as caddis flies are present). The Pratt Canyon subarea checklist indicates a small area of cattails in the canyon; this area should be evaluated to determine if Pratt Canyon should be assessed for aquatic receptors.

**26. Appendix E, Spoke Plots;**

**NMED COMMENT:** The spoke plot for inorganics for PRS 35-016(m) does not show sampling locations for samples 35-02093 and 35-02094. Add these sampling locations to the spoke plot.