

**ENVIRONMENTAL
RESTORATION
PROJECT**

Los Alamos National Laboratory/University of California
Environmental Science and Waste Technology (E)
Environmental Restoration (ER) Project, MS M992
Los Alamos, New Mexico 87545
(505) 667-0808/FAX (505) 665-4747



U.S. Department of Energy
Los Alamos Area Office, MS A316
Environmental Restoration Program
Los Alamos, New Mexico 87544
(505) 667-7203/FAX (505) 665-4504

Date: December 19, 2001
Refer to: ER2001-1047

Mr. John Young, Corrective Action Project Leader
Permits Management Program
NMED – Hazardous Waste Bureau
2905 Rodeo Park Drive East
Building 1
Santa Fe, NM 87505-6303



**SUBJECT: SUBMITTAL OF RESPONSE TO REQUEST FOR SUPPLEMENTAL
INFORMATION (RSI), RCRA FACILITIES INVESTIGATION REPORT
ADDENDUM FOR SOLID WASTE MANAGEMENT UNIT SMWU
3-010(a), NM0890010515, HWB-LANL-01-005**

Dear Mr. Young:

Enclosed are two copies of the Los Alamos National Laboratory (LANL) Environmental Restoration (ER) Project's Response to your RSI to RFI Report Addendum for SWMU 3-010(a). The ER Project Office received the RSI on October 25, 2001. A 60-day extension was requested November 5, 2001 (ER2001-0923). Your office granted a 45-day extension to January 9, 2002 in a letter dated November 3, 2001.

If you have any questions, please contact Gabriela Lopez Escobedo at (505) 665-7352 or David Gregory at (505) 667-5808.

Sincerely,

Julie A. Canepa, Program Manager
Environmental Restoration Project
Los Alamos National Laboratory

Sincerely,

Mat Johansen, Project Manager
Department of Energy
Los Alamos Area Office

JC/MJ/nr



Los Alamos An Equal Opportunity Employer/Operated by the Uni



5659

45WH LANL 01/11/03
03-010(a)

Mr. John Young
ER2001-1047

-2-

December 19, 2001

Enclosure: Response to RSI (ER2001-1027)

Cy (w/enc):

M. Kirsch, E/ER, MS M992
D. Hickmott, EES-6, MS M992
D. McInroy, E/ER, MS M992
D. Gregory, LAAO, MS A316
G. Lopez Escobedo, E/ER, MS M992
S. Yanicak, NMED-OB
D. Neleigh, EPA Region 6
D. Goering, NMED- HWB
E/ER File, MS M992
RPF, MS M707

Cy (w/o enc):

J. Canepa, E/ER, MS M992
J. Parker, NMED-DOE-OB
J. Bearzi, NMED-HWB

**Response to
"Request for Supplemental Information,
RFI Report Addendum for
Solid Waste Management Unit 3-010(a)"**

This document responds to a letter regarding "Request for Supplemental Information, RFI Report Addendum for Solid Waste Management Unit 3-010(a)," dated October 22, 2001, from the New Mexico Environment Department (NMED) Hazardous Waste Bureau (HWB) (HWB-LANL-01-005), to the Los Alamos National Laboratory (LANL) Environmental Restoration (ER) Project. To facilitate review of this response, NMED's comments are included *verbatim* below. The comments are divided into general and specific categories as presented in the letter. LANL's responses follow each NMED comment.

GENERAL COMMENTS

NMED Comment

1. *In the "Plan for Characterization of Groundwater, Surface Water, and Sediments at SWMU 3-010(a)," dated December 14, 1999, LANL had agreed to "characterize a zone of saturation (groundwater) in tuff by developing and sampling well B1/MW1 near TA-3-30." However, in HWB's response to "Response to the Notice of Deficiency for the RFI Report for SWMU 3-010(a)," dated December 1, 1999, HWB states that the characterization of the groundwater include development and subsequent sampling of MW-1. This does not preclude LANL from performing other activities necessary for fully characterizing the extent of groundwater contamination at the SWMU, such as installing additional wells if warranted. LANL shall install at least 2 additional monitoring wells to meet the following objectives:*

- *Determine the extent of groundwater contamination.*
- *Determine the direction of groundwater flow in the tuff.*
- *Identify any other potential sources for groundwater contamination. If the sources of contamination is other than SWMU 3-010(a), LANL shall notify HWB as to how it will investigate the new contamination source.*
- *Identify any potential connectivity of the groundwater in the tuff to deeper zones of groundwater.*

LANL shall perform quarterly monitoring of B1/MW1 and the subsequent wells for two years. The analytical suite shall include VOCs, SVOCs, the 23 TAL metals, isotopic plutonium, tritium, gross alpha/beta, and gamma spectroscopy.

LANL Response

1. There is evidence to believe that the saturated zone at the location of B1/MW1 does not represent more than a thin shallow saturated zone in the fill below the paved area in and around SM-30. To meet the requirement of the HWB RSI, LANL proposes to conduct site-characterization activities using a phased approach. This idea was presented to Mr. John Young and Ms. Darlene Goering of NMED HWB during a December 4, 2001, meeting. At the meeting, Mr. Young and Ms. Goering agreed that a phased approach for characterizing the shallow groundwater zone around the location of monitoring well B1/MW1 was appropriate. LANL will use non-intrusive techniques to conduct additional characterization activities, as required by NMED HWB, to help determine the extent of groundwater contamination, the direction of groundwater flow in the tuff, and to identify any potential connectivity of the groundwater in the tuff to deeper zones of groundwater. The first phase of the

characterization activities will use non-intrusive techniques such as geophysics. The results of geophysical techniques will then be reviewed in collaboration with NMED to make decisions about subsequent phases, if any are needed. Ideally, decisions about the need to drill additional wells on-site—and, if any are needed, where to site them—will be made using results from the geophysical characterization.

LANL does not believe that groundwater sampling at B1/MW1, or at additional monitoring wells, would provide definitive information about a different source of detected contamination (third bullet of NMED's General Comment 1). LANL will use the proposed phased approach to ensure that data collected are directly related to answering NMED HWB's questions. Also, potential deeper groundwater contamination from operations at TA-3 as a whole will be investigated by the drilling efforts of the Groundwater Focus Area through implementation of the "Hydrogeologic Workplan." The proposed location for regional well R-17 in Twomile Canyon is approximately 4800 ft southeast of PRS 3-010(a). R-17 is currently planned to be started in FY 05.

LANL proposes that quarterly monitoring at B1/MW1 not start until after the non-intrusive characterization phase has been completed. LANL also proposes that monitoring be performed only if, after using non-intrusive characterization methods, it is deemed necessary to drill additional wells.

NMED Comment

2. *The highest levels of sediment contamination were found upstream of the SWMU. LANL shall provide an explanation for the contamination. If the contamination source is other than SWMU 3-010(a), LANL shall notify HWB as to how it will investigate the new contamination source.*

LANL Response

2. LANL does not believe that these data are indicative of a new contamination source but instead are representative of Cs-137 levels found elsewhere on LANL property and are consistent with background values for fallout radionuclides. The concentration of Cs-137 pCi/g reported for the sample in question is similar to the levels for Cs-137 reported in "RFI Report for Field Unit 1, SWMU 3-010(a)" (ER Project 1995, 46195.5, Appendix A, Table A-2). Although this sample is a sediment sample, its location relative to the drainage area and its closeness to the fill materials that make up the mesa top in this area warrant consideration regarding selection of an applicable background value. Further investigation of the sediments at this site are not warranted given that levels of Cs-137 reported at this site are not different from background values for fallout radionuclides elsewhere at Los Alamos.

SPECIFIC COMMENTS

NMED Comment

1. *Section 5.0, Conclusions and Recommendations, Page 14, Table 5.0-1: LANL shall provide the data for composite sample AAA-2375 in the final report.*

LANL Response

1. Data for composite sample AAA-2375 were provided in "RFI Report for Field Unit 1, SWMU 3-010(a)," Appendix A, Table A-2, "All Detected Analytes by Sample ID" (ER Project 1995, 46195.5). However, the results will be included in the final report as required by NMED HWB.

REFERENCE

ER Project (Environmental Restoration Project), April 1995. "RFI Report for Field Unit 1, SWMU 3-010(a)," Los Alamos National Laboratory report LA-UR-95-1485, Los Alamos, New Mexico. (ER Project 1995, 46195.5)