



TA16



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Date: January 17, 2007
Refer to: EP2007-0013

Mr. James Bearzi
NMED-Hazardous Waste Bureau
2905 Rodeo Park Drive East, Building 1
Santa Fe, NM 87505-6303

**SUBJECT: RESPONSE TO NOTICE OF APPROVAL WITH DIRECTION
INVESTIGATION REPORT FOR INTERMEDIATE AND REGIONAL
GROUNDWATER, CONSOLIDATED UNIT 16-021(C)-99
EPA ID# NM0890010515 HWB-LANL-06-016**

Dear Mr. Bearzi:

Los Alamos National Laboratory (LANL) and the Department of Energy (DOE) have received the New Mexico Environment Department's (NMED's) notice of approval with direction (the approval) dated November 29, 2006, on the *Investigation Report for Intermediate and Regional Groundwater, Consolidated Unit 16-021(c)-99* (henceforth the Investigation Report or IR) referenced as LA-UR-05-5510/ER2006-0288. LANL received the approval on December 4, 2006.

In the approval, NMED provided comments and direction to LANL and DOE and listed a series of required actions as part of comment number 9. The following required actions are listed verbatim below, followed by LANL's and DOE's responses to those required actions.

Required Action 9 (f) "The Permittees must supply all core and cuttings sample analytical data, not previously reported to NMED, that were collected during drilling of the intermediate and regional wells drilled at TA-16 within 45 days of receipt of this approval. For example, the completion report for well CdV-16-19i, dated May 7, 2004, indicates that these data will not be available until the Investigation Report for Canon de Valle is submitted. According to the Consent Order deliverable schedule, the Investigation Report for Canon de Valle is not due until December 31, 2010. The NMED requires these data to evaluate the need for any additional characterization activities prior to the evaluation of the CME."



LANL Response: LANL provided most core and cuttings data (not provided in the well completion reports) in the investigation report IR. Table 1 provides a crosswalk listing the location of these data in the IR. Table 2 includes X-ray diffraction (XRD) information for the three intermediate-depth boreholes, which is the only material not previously provided.

Required Action 9 (g) “Until otherwise directed, the Permittees must sample the intermediate and regional wells identified in this report in accordance with the approved interim facility wide ground water monitoring plan. If not already provided and where available, the Permittees also must supply video logs for each well proposed for monitoring in the Report.”

LANL Response: LANL will sample the intermediate and regional wells identified in this report in accordance with the approved interim facility wide ground water monitoring plan. A video log for each of the wells proposed for monitoring in the IR is provided as Attachment 3.

If you have any questions please contact John McCann (505-665-1091) or Lance Woodworth (505-665-5820).

Sincerely,



Andrew Phelps, Associate Director
Environmental Programs
Los Alamos National Laboratory

Sincerely,



David Gregory, Federal Project Director
Department of Energy
Los Alamos Site Office

AP/DG/DH/ew

- Attachments: (1) Table 1 Crosswalk Indicating Locations of Data from Core and Cuttings of CMS Wells
(2) Table 2 Quantitative X-Ray Diffraction Data from Intermediate-Depth Boreholes
(3) Borehole videos for TA-16 wells

Cy: (w/att.)

L. Woodworth, DOE LASO, MS A316 (no DVD)

F. Bosiljevac, DOE AL, MS A316 (no DVD)

L. King, EPA Region 6 (no DVD)

D. Hickmott, EP-CAP, MS M992 (no DVD)

J. McCann, EP-CAP, MS M992 (no DVD)

P. Reneau, EP-ERSS, MS M992 (no DVD)

EP-CAP File, MS M992 (one DVD)

RPF, MS M707 (two DVDs)

A. Dorries, EP-ERSS, MS M992 (no DVD)

G. Dover, EP-CAP, MS M992 (no DVD)

D. McInroy, EP-CAP, MS M992 (no DVD)

A. Phelps, ADEP, MS J591 (no DVD)

C. Mangeng, ADEP, MS J591 (no DVD)

D. Gregory, DOE-LASO, MS A316 (no DVD)

T. Skibitski, DOE-OB (no DVD)

IRM-RMMSO, MS A150 (no DVD)

Attachment 1 –

Table 1

Crosswalk Indicating Locations of Data from Core and Cuttings of CMS Wells

Well ID		Location in Investigation Report		Location in Investigation Report		Location in Investigation Report
CdV-R-15-3		N/A		On CD, Appendix G.3, Well Completion Report		On CD, Appendix G.3, Well Completion Report
CdV-R-37-2		N/A		On CD, Appendix G.3, Well Completion Report		On CD, Appendix G.3, Well Completion Report
CdV-16-1(i)		On CD in Appendix F.1		On CD in Appendix F.1		See Table 2—this letter
CdV-16-2(i)		N/A		On CD in Appendix F.1		See Table 2—this letter
CdV-16-2(i)r		N/A		N/A		N/A
CdV-16-3(i)		N/A		On CD in Appendix F.1		On CD in Appendix F.1

*NA = not applicable

Attachment 2 –

Table 2
Quantitative X-Ray Diffraction Data from Intermediate-Depth Boreholes

Sample	Clinoptilolite	Cristobalite	K-Feldspar	Glass	Kaolinite	Total
CDV-16-1i						
99.0-99.4	—	0.7	3.6	—	3.0	102.4
122.0-122.4	—	1.2	4.2	—	3.5	98.6
238-243	—	—	2.7	89.8	—	100.3
243-248	—	—	1.3	94.3	—	99.1
368-373	—	—	1.8	91.7	—	99.0
453-458	—	—	1.8	94.3	—	99.7
458-463	—	—	1.1	94.9	—	99.6
563-568	—	0.1	3.2	84.5	—	99.7
623-628	—	0.1	3.8	89.3	—	102.8
CDV-16-2i						
995-1000	—	8.3	15.7	18.4	—	100.4
1010-1015	—	8.4	12.8	21.8	—	98.4
1020-1025	—	8.2	13.7	21.1	—	99.1
1030-1035	—	5.4	17.2	16.8	—	99.5
1040-1045	—	6.5	15.7	17.7	—	100.2
1055-1060	—	8.2	17.1	12.6	—	97.0
CDV-16-3i						
985-990	—	7.1	13.3	16.6	0.1	97.0
1110-1115 SS	0.7	0.6	4.4	25.3	0.9	Ext
1340-1345 SS	0.9	0.3	7.2	18.6	1.1	Ext

All values in weight percent of the indicated mineral. Samples from the Cerro Toledo and Otowi Formations represent hand-picked pumices in most cases. Uppermost samples from CDV-16-1i are hand-picked clays from fractures.

Ext = External Standard Method (constrained to sum to 100%).

- = not present

Attachment 3
Borehole Videos for TA-16 Wells

***TO VIEW THE VIDEO
THAT ACCOMPANIES
THIS DOCUMENT,
PLEASE CALL THE
HAZARDOUS WASTE
BUREAU AT 505-476-6000
TO MAKE AN
APPOINTMENT***