Los Alamos
NATIONAL LABORATORY
EST.1943
Environmental Programs
P.O. Box 1663, MS M991
Los Alamos, New Mexico 87545
(505) 606-2337/FAX (505) 665-1812

National Nuclear Security Administration
Los Alamos Site Office, MS A316
Environmental Restoration Program
Los Alamos, New Mexico 87544
(505) 667-4255/FAX (505) 606-2132

Date: JUL 16 2010
Refer To: EP2010-0341

James Bearzi, Bureau Chief
Hazardous Waste Bureau
New Mexico Environment Department
2905 Rodeo Park Drive East, Building 1
Santa Fe, NM 87505-6303

Subject: Revised Request for Extension to Submit the Material Disposal Area T Remedy Completion Report

Dear Mr. Bearzi:

This letter, submitted in response to the New Mexico Environment Department's (NMED's) letter regarding the completion report, dated May 5, 2010, requests an extension from the December 19, 2010, date for the Material Disposal Area (MDA) T remedy completion report to a proposed date of February 11, 2015. This letter provides additional detail to justify the basis for the time extension.

The "Technical Area 21 Groundwater and Vadose-Zone Monitoring Well Network Evaluation and Recommendations" (hereafter, the Network Evaluation) was submitted to NMED on July 1, 2010, and contains recommendations for two additional wells related to MDA T. The schedule for installing these wells was a critical factor in the development of the schedule included in this revised extension request. Defining the necessary work to build the technical underpinnings of the corrective measures evaluation (CME) has enabled the Los Alamos National Laboratory (the Laboratory) to refine its proposed attached schedule, which is responsive to NMED's concern for the Laboratory's technical basis for the extension request.

TA-21 Network Evaluation—Identification of MDA T Monitoring Needs

In the TA-21 Network Evaluation, the Laboratory recommended new regional wells, coupled with investigations of the vadose-zone moisture content beneath the disposal shaft field. It is recommended that two regional wells be installed to provide proximal monitoring of the regional aquifer downgradient of MDA T. Moisture monitoring beneath the disposal shaft field will indicate whether contaminants in the shafts and beneath the adsorption beds could be mobilized and transported by unsaturated water flow. Additionally, a vapor-monitoring well west of building 21-257 was proposed. This well will follow removal of the waste lines. Groundwater and vapor samples will be collected, and baseline moisture vadose-zone profiles will be established while the CME is being developed.

Additional Data Needed to Support the CME

The objective of the CME process is a technically defensible preferred remedy. The Laboratory's review of existing data has identified potential data needs that would refine the site's transport models. Examples of potential data that may be collected include soil characteristics and thickness (to constrain erosion model), moisture and contaminant distributions near shafts (to constrain source release model and groundwater transport model), and additional geologic and geophysical characteristics, including the extent of the near-surface paleochannel. Any data-collection activities will be used to better distinguish the benefits and impacts of all potential remedies at MDA T, which contains a significant inventory of radionuclides.

In accordance with NMED's May 5, 2010, letter, the Laboratory's proposed schedule anticipates the submittal of the corrective measures implementation plan 1 yr after the CME is submitted. This schedule is based on the standard public comment period and NMED's response time frame as per the Compliance Order on Consent.

Based on the conclusions and recommendations of the Network Evaluation and additional data needs to support the CME, a conceptual planning schedule leading to the remedy completion report is provided with this letter, with the following key intermediate milestones:

- Corrective measures evaluation report — December 11, 2012
- Corrective measures implementation plan — December 15, 2013
- Remedy completion report — February 11, 2015

Again, we are requesting the extension for the remedy completion date and welcome the opportunity to discuss this schedule and its inherent assumptions and implications with you at your convenience. If you have any questions regarding this request, please contact Kate Lynnes at (505) 665-3019 (klynnes@lanl.gov), Paul Huber at (505) 412-7673 (phuber@lanl.gov), or Ed Worth at (505) 665-0398 (EWorth@doeal.gov).

Sincerely,

Michael J. Graham, Associate Director
Environmental Programs
Los Alamos National Laboratory

Sincerely,

George J. Rael, Manager
Environmental Projects Office
Los Alamos Site Office

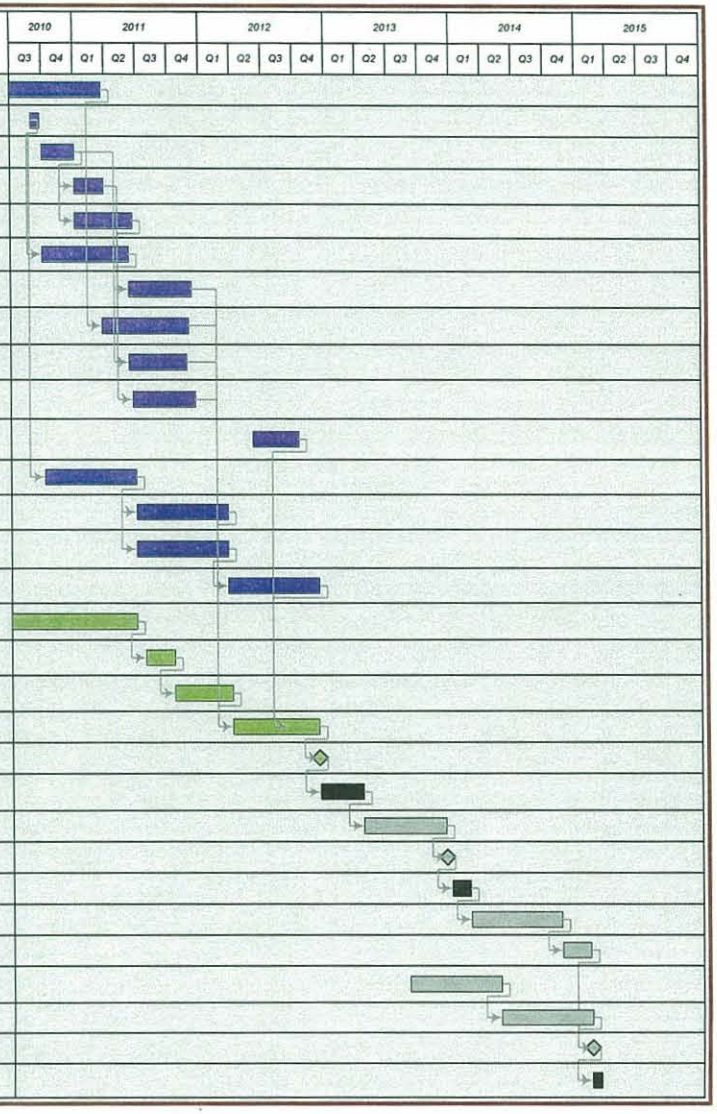
MG/GR//PH/BW:sm

Attachment: MDA T Conceptual Schedule Supporting Remedy Completion

Cy: (w/att.)
Laurie King, EPA Region 6, Dallas, TX
Tom Skibitski, NMED-OB, Santa Fe, NM
Steve Yanicak, NMED-DOE-OB, MS M894
Ed Worth, DOE-LASO, MS A316
Annette Russell, DOE-LASO (date-stamped letter emailed)
Tori George, EP-REG, MS M991
Kate Lynnes, EP-REG, MS M991
Bruce Wedgeworth, EP-TA-21, MS C349
Paul Huber, EP-TA-21, MS C349
Kay Birdsell, EES-16, MS M992
Michael J. Graham, ADEP, MS M991
Kristine Smeltz, EP-BPS, MS M992
RPF, MS M707
IRM-RMMSO, MS A150 (date-stamped letter emailed)

MDA T Conceptual Schedule Supporting Remedy Completion

ID	Task Name	Start	Finish	Duration
1	DOE Safety Basis Process	7/1/2010	3/23/2011	38w
2	Monitor Well & Vadose Zone IWP	8/30/2010	9/24/2010	4w
3	CME Data Needs IWP	10/1/2010	1/3/2011	13.4w
4	Erosion properties sampling for CME	1/4/2011	3/28/2011	12w
5	Paleochannel Sampling for CME	1/4/2011	6/20/2011	24w
6	Moisture monitoring installation	10/1/2010	6/9/2011	36w
7	Collect moisture data	6/10/2011	12/8/2011	26w
8	Characterize Absorption Beds for CME	3/24/2011	11/30/2011	36w
9	Close-in Characterization around Shaft Field for CME	6/10/2011	11/24/2011	24w
10	Treatability Evaluations to support Alternatives decisions	6/21/2011	12/19/2011	26w
11	Install vapor monitoring well (follows waste line removal)	6/4/2012	10/15/2012	19.2w
12	MDA T Regional Aquifer Monitor Well MW-14 per network assessment	10/7/2010	6/29/2011	38w
13	MW-14 Quarterly Groundwater Monitoring	6/30/2011	3/21/2012	38w
14	TA 21 Regional Aquifer Monitor Well MW-10 per network assessment	6/30/2011	3/21/2012	38w
15	MW-10 Quarterly Groundwater Monitoring	3/22/2012	12/12/2012	38w
16	Complete a baseline alternative analysis	7/1/2010	6/29/2011	52w
17	Technologies/Alternatives Development	7/26/2011	10/17/2011	12w
18	Potential alternative Remedy Analyses (3 Alts)	10/18/2011	4/2/2012	24w
19	CME Report	4/3/2012	12/10/2012	36w
20	CME Report to NMED	12/11/2012	12/11/2012	0w
21	NMED CME Approval, Statement of Basis & Selection of Final Remedy	12/13/2012	4/17/2013	18w
22	Prepare Designs/CMI Plan	4/18/2013	12/13/2013	34.4w
23	CMI Plan to NMED (CME plus 12 mo.)	12/16/2013	12/16/2013	0w
24	NMED Approve CMI Plan	12/30/2013	2/21/2014	8w
25	Implement Corrective Measure	2/24/2014	11/14/2014	38w
26	Compile CMI Completion Report	11/17/2014	2/6/2015	12w
27	TW-3 Replacement Well to help assess 21-011(k) impacts on groundwater	8/28/2013	5/20/2014	38w
28	TW-3 4 Quarter Monitoring	5/21/2014	2/10/2015	38w
29	Remedy Completion Report to NMED	2/11/2015	2/11/2015	0w
30	NMED Approve Remedy Completion Report	2/10/2015	3/9/2015	4w



NOTES:
Blue: Characterization to support Remedy Decision
Green: CME Activities
Gray: Post CME Activities