

Los Alamos National Laboratory/University of California
Environmental Stewardship (ENV)
Environmental Remediation & Surveillance Program (ERS), MS M992
Los Alamos, New Mexico 87545
(505) 667-0469/FAX (505) 665-4747

TAAI



National Nuclear Security Administration
Los Alamos Site Office, MS A316
Environmental Restoration Program
Los Alamos, New Mexico 87544
(505) 667-7203/FAX (505) 665-4504

Date: June 22, 2005
Refer to: ER2005-0407

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



SUBJECT: RESPONSE TO THE NOTICE OF "APPROVAL WITH MODIFICATIONS INVESTIGATION WORK PLAN FOR MATERIAL DISPOSAL AREA T SOLID WASTE MANAGEMENT UNIT 21-016(a)-99"

Dear Mr. Bearzi:

Enclosed please find two copies of the Los Alamos National Laboratory's and the Department of Energy's response to the New Mexico Environment Department's notice of "Approval with Modifications Investigation Work Plan for Material Disposal Area T Solid Waste Management Unit 21-016(a)-99." This notice of approval was received by the Environmental Stewardship–Environmental Remediation and Surveillance (ENV-ERS) Program on May 23, 2005. The responses to the Approval with Modifications incorporate the outcome of a conference call conducted with John Young on June 7, 2005.

Also, please note that your May 19, 2005 Approval with Modifications letter requires the report be submitted by May 24, 2006. The Investigation Report due date should be September 22, 2006, based on the day for day slip from the previous due date of September 30, 2005.

If you have any questions, please contact Mark Thacker at (505) 665-5342 or Woody Woodworth at (505) 665-5820.

Sincerely,

David McInroy, Deputy Program Director
Environmental Remediation & Surveillance
Los Alamos National Laboratory

Sincerely,

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



Mr. James Bearzi
ER2005-0407

2

June 22, 2005

MT/jk

Enclosures: 1) Response to the notice of "Approval with Modifications Investigation Work Plan for Material Disposal Area T Solid Waste Management Unit 21-016(a)-99"
2) Certification by ENV-ERS Program Technical Representatives

Cy:(w enclosure)

E. Rainey, ENV-ECR, MS M992
M. Thacker, ENV-ECT, MS M992
D. Gregory, DOE LASO, MS A316
L. King, EPA Region 6
ENV-ECR File, MS M992
RPF, MS M707
S-7, MS F674
CT# 05-033

Cy:(w/o enclosure)

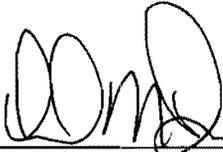
A. Dorries, ENV-ECR, MS M992
D. McInroy, ENV-ERS, MS M992
B. Criswell, ENV-ERS, MS M992
J. Kieling, NMED-HWB
J. Young, NMED-HWB
M. Leavitt, NMED-SWQB
B. Rich, ADO, MS A104
L. Woodworth, DOE LASO, MS A316
D. Pepe, NMED-OB
M. Leavit, NMSO-SWQB

CERTIFICATION

**CERTIFICATION BY THE ENVIRONMENTAL STEWARDSHIP- ENVIRONMENTAL
REMEDiation & SURVEILLANCE PROGRAM TECHNICAL REPRESENTATIVES**

Document Title: RESPONSE TO THE NOTICE OF "APPROVAL WITH
MODIFICATIONS INVESTIGATION WORK PLAN FOR
MATERIAL DISPOSAL AREA T SOLID WASTE MANAGEMENT
UNIT 21-016(a)-99"

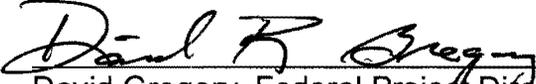
I certify under penalty of law that these documents and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage 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.

Name:  Date: 6/22/05
David McInroy, Deputy Program Director
Environmental Remediation & Surveillance Program
Los Alamos National Laboratory

or

Ken Hargis, Division Leader
Environmental Stewardship Division
Los Alamos National Laboratory

Date: _____

 Date: 6/22/05
David Gregory, Federal Project Director
Environmental Restoration Program
Department of Energy/Los Alamos Site Office

or

John Ordaz,
Assistant Area Manager of Environmental Projects
Department of Energy/Los Alamos Site Office

Date: _____

**Response to
Approval with Modifications,
Investigation Work Plan for Material Disposal Area T,
Solid Waste Management Unit 21-016(a)-99,
Los Alamos National Laboratory,
EPA ID #NM0890010515 HWB-LANL-04-003.
Dated May 19, 2005**

INTRODUCTION

This submittal is the response by Los Alamos National Laboratory (LANL) to the "Approval with Modifications, Investigation Work Plan Material Disposal Area T, Solid Waste Management Unit 21-016(a)-99," issued by the New Mexico Environment Department (NMED) Hazardous Waste Bureau on May 19, 2005, and received by LANL on May 23, 2005. The investigation work plan (the work plan) for Material Disposal Area (MDA) T (LA-UR-04-0559; ER ID 85641) was submitted by LANL to NMED in February 2004. A notice of disapproval for the work plan was issued by NMED on September 28, 2004. LANL issued a response to the notice of disapproval on October 29, 2004. The responses to the approval with modifications incorporate the outcome of a conference call conducted June 7, 2005, between NMED, the Department of Energy (DOE), and LANL.

To facilitate review of LANL's responses, NMED's comments are included verbatim in italics. LANL's responses follow each NMED comment.

The approval with modifications document states, "The Report, summarizing the results of work plan implementation, must be submitted on or before May 24, 2006." The original notice date in Section XII of the March 1, 2005, Compliance Order on Consent (the Consent Order) for approval of the MDA T work plan is May 31, 2004. DOE received the approval with modifications DOE on May 23, 2005, or 357 days later than the original notice date. In accordance with Section III.M.2 of the Consent Order, the MDA T investigation report will be submitted to NMED on September 22, 2006, 357 days after the original due date of September 30, 2005.

NMED Comment

General Comment:

1. *Inside the cover page of the Work Plan is a disclaimer stating that the Permittees are not responsible for the "accuracy, completeness, or usefulness of any information" contained in the Work Plan. In fact, the Permittees are responsible and accountable for the accuracy, completeness and usefulness of the information cited in the Work Plan and any other document submitted to NMED in accordance with the Permittees Resource Conservation and Recovery Act operating permit and the March 1, 2005 Compliance Order on Consent (Order) (section XI.B.1) referencing 200.4.1.900 NMAC incorporating 40 C.F.R. 270.11(d)(1). If the Permittees can't attest to the accuracy of the information provided in the documents submitted, NMED can't approve any work plan, investigation report or other document where inaccurate, unreliable or useless data and information are cited. If future document submittals from the Permittees contain this message, NMED will reject the document. The Permittees must resubmit the cover page without the disclaimer within 10 days of receipt of this letter.*

LANL Response

1. The response to this general comment and a revised cover page were submitted to NMED on June 2, 2005.

Toledo Interval and fracture zones and/or regular intervals of 30, 60, 100, 150, 200, 250, 300 feet below ground surface and at total depth of the deeper boreholes.

LANL Response

5. For the three 385-ft-deep boreholes proposed around the MDA T absorption beds and shafts, LANL will collect pore-gas samples to delineate a vertical profile rather than collect two samples from discrete intervals (i.e., one from the depth matching the depth of the nearest targeted disposal unit and one from total depth). LANL will target pore-gas sample collection at higher permeability intervals such as surge beds, the "old alluvium," the Cerro Toledo interval, and fracture zones. The pore-gas samples from the three 385-ft boreholes will be collected early in the field campaign, before the drilling of the 280-ft boreholes. The results of the pore-gas samples from the 385-ft boreholes will be reviewed to determine whether pore-gas sampling of the 280-ft boreholes is necessary.

NMED Comment

6. *Section 4.7 of the MDA T Work Plan also refers to groundwater samples being collected if perched water is encountered. If perched water is encountered in any of the boreholes, a groundwater monitoring well construction plan must be submitted to NMED for approval within 15 days of borehole and sampling completion. Groundwater monitoring wells must be installed in accordance with Sections IV.C.3.c vi; IV.C.3.c.viii and X of the Order.*

LANL Response

5. No response necessary.

NMED Comment

Work Plan Appendix B:

7. **NMED Comment:** *The Permittees shall provide the NMED approved document citing the fill "background" values listed in some of the Tables (e.g., Tables B-23 and B-25).*

LANL Response

7. The referenced information is in the 1998 report entitled "Inorganic and Radionuclide Background Data for Soils, Sediments, and Bandelier Tuff at Los Alamos National Laboratory" (LANL 1998, 59730). Section 3 of this report states, "at sites where potentially contaminated surface material represents imported fill or a combination of soil and fill, soil is considered to be the most appropriate background comparison material." LANL has provided this report to NMED and resubmittal is not necessary.

NMED Comment

8. **Response Table 1, Summary of Borehole Sample Target and Figure 12 Revised Borehole Locations:**
9. **NMED Comment:** *Boreholes 1-5 shall be moved as close as possible to the absorption beds.*

NMED Comment

As a reminder, the Permittees must collect vapor samples in SUMMA canisters for laboratory analysis of VOCs using EPA Method TO-15 or equivalent method and also determine percent moisture. Sample selection must be based on the vapor field screening results, or other evidence of potential contamination (e.g., presence of surge beds). NMED understands that the Permittees will voluntarily submit vapor samples for tritium analysis in accordance with the DOE letter from Everett Beckner to NMED Secretary Ron Curry, dated August 26, 2004.

NMED requires that for volatile organic compound (VOC) field screening, the Permittees must isolate the base of the boreholes at each sampling interval during drilling and purge the subsurface air in sufficient quantities to ensure that formation air is sampled. The Permittees must use a photoionization detector (PID) equipped with an 11.7 eV lamp for VOC screening and also measure percent carbon dioxide and oxygen. NMED understands that the Permittees will collect vapor samples from each interval using silica gel cartridges in series for analysis of tritium using EPA Method 114 (NESHAP Part 61, Appendix B) or equivalent method.

Finally, if an air rotary drilling method is needed to advance the proposed Cerro Toledo borings to total depth once auger drilling is no longer practicable, the Permittees must use appropriate methods to ensure that quality subsurface air samples are obtained from each borehole (e.g., lengthy purging and stabilization of parameters). The Permittees must ensure the boreholes are left open for use during future monitoring and that contaminant migration down the borehole does not occur in while vapor monitoring wells are being contemplated. In accordance with Section IV.C.3.c.v of the Order, the Permittees must submit a long-term subsurface vapor monitoring and sampling work plan to NMED for approval after the investigation results have been reported to NMED.

LANL Response

LANL will characterize volatile organic compounds (VOCs) and tritium in pore gas by collecting samples from the 385-ft boreholes and, if necessary, the 280-ft boreholes (see response to NMED Comment 5). Because of this sampling, LANL will not perform the VOC screening procedure described in the comment (i.e., isolate the base of the boreholes at each sampling interval during drilling, purge the subsurface air in sufficient quantities to ensure that formation air is sampled, and use a photoionization detector (PID) for field screening of the samples). LANL will perform head-space screening of subsurface core samples using a PID. LANL will also use a packer to isolate the total depth sample interval of each borehole, purge the subsurface air in sufficient quantities to ensure that formation air is sampled, and use a PID to ensure the borehole has been advanced to nondetect for VOCs using a PID.

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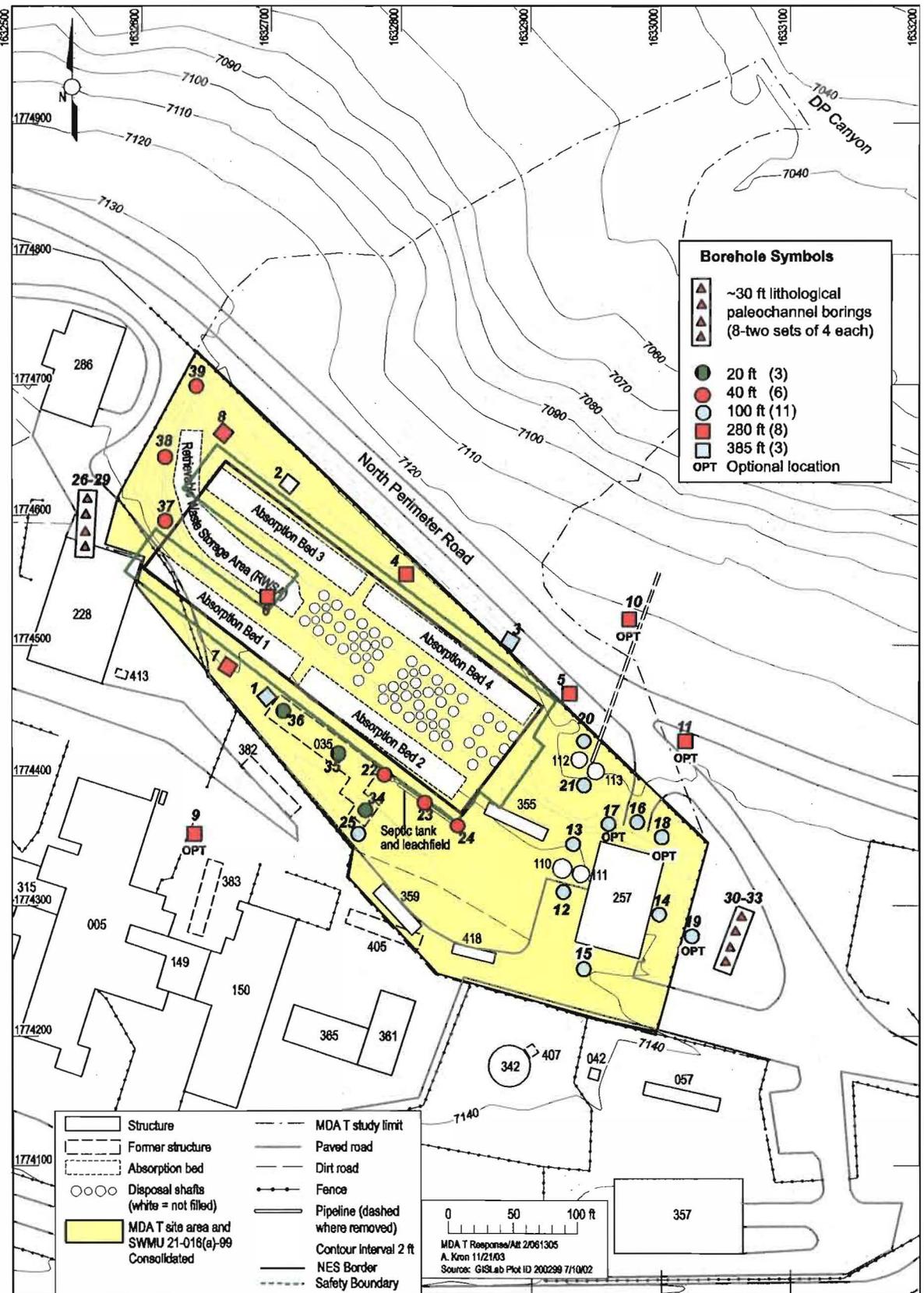
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Attachment 2
Planned Borehole Locations at MDA T



Planned borehole locations at MDA T