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CERTIFIED MAIL - RETURN RECEIPT REQUESTED

March 28, 2008

David Gregory
Federal Project Director
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Department of Energy
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David McInroy
Remediation Services Deputy Project Director
Los Alamos National Laboratory
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**RE: APPROVAL WITH MODIFICATIONS PHASE II INVESTIGATION
REPORT, MATERIAL DISPOSAL AREA (MDA) T AT TECHNICAL
AREA (TA) 21, REVISION 1.0
EPA ID #NM0890010515
HWB-LANL-08-005**

Dear Messrs. Gregory and McInroy:

The New Mexico Environment Department (NMED) has received the United States Department of Energy (DOE) and the Los Alamos National Security LLC's (LANS) (collectively, the Permittees) *Phase II Investigation Report for Material Disposal Area (MDA) T at Technical Area (TA) 21, Revision 1.0* (Report), dated February 2008 and referenced by LA-UR-08-1215/EP2008-0102. NMED has reviewed the Report and hereby issues this Approval with the following modifications. Comment numbers correspond to the Notice of Disapproval (NOD) dated February 29, 2008.

NMED Comment #3

The Permittees failed to provide in the revised Report documentation (e.g., a Document Safety Analysis or an equivalent reference) to explain how and why the status of the work area at MDA-T changed from designation as a nuclear environmental site to a nuclear facility. NMED explicitly stated in the February 22, 2008 meeting with LANS contractor Kevin Reid and Bruce Wedgeworth of your staff that specific documentation



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must be submitted to explain the new designation and to justify the Permittees need to install substitute investigation boreholes 21-603058 and 21-603059. Since the Permittees did not adequately justify the need for the deviation, the Permittees must collect pore-gas samples from all five borehole locations (21-25262, 21-25263, 21-25264, 21-603058, and 21-603059) for the remainder of the quarterly sampling events. This must include the removal of the slough from boreholes 21-25262 and 21-25263, as originally required by NMED in the February 2007 *Phase II Investigation Work Plan for MDA-T* (referenced by LA-UR-07-0930/EP2007-0105), and the installation of permanent vapor monitoring wells equivalent to those installed in borings 21-25264, 21-603058, and 21-603059.

NMED acknowledges that the Permittees will have to submit a Safety Basis report for the required work. In order to provide for enough time for this process, NMED will allow the Permittees to deviate from the original monitoring requirements included in the October 2007 *Subsurface Vapor-Monitoring Plan for MDA-T at TA-21* (LA-UR-07-7037/EP2007-0658) which states "Samples will be collected on a quarterly basis for one year beginning on October 2007" (page 2). Instead of the schedule proposed in the October 2007 Work Plan, the Permittees must conduct quarterly sampling on the following time schedule:

Quarterly Event	Date
2	June 2008
3	September 2008
4	December 2008

This provides the Permittees ample time to fulfill Facility requirements prior to collection of the required samples at MDA-T. The final monitoring report is due within 45 days of completion of the final sampling event.

NMED Comment #5

NMED disagrees with the Permittees assertion that comparing data collected from borehole 21-25262 in 2006 to data collected from Ports #1 and #3 of borehole 21-603059 (replacement borehole for 21-25262) in 2007 is sufficient in determining trends related to changes in concentrations without information from Port #2. The differences in concentrations are too variable for trends to be determined based on such minimal information. For example, tritium was detected at Port #1 in January 2006 at a concentration of 6,680 $\mu\text{g}/\text{m}^3$, in April 2006 at 2,090 $\mu\text{g}/\text{m}^3$, and in October 2007 it was not detected. At Port #3 similar variances in the results occur; January 2006 tritium levels were detected at 9,670 $\mu\text{g}/\text{m}^3$, in April 2006 at 2,190 $\mu\text{g}/\text{m}^3$, and in October 2007 levels were detected at 379.253 $\mu\text{g}/\text{m}^3$ (see Table 6.5-2 in *Investigation Report for MDA-T Consolidated unit 21-016(a)-99* (LA-UR-06-6506/EP2006-0779) and Table 3.4-3 in the Report).

The Permittees did not generate boring logs for the two replacement boreholes (21-603058 and 21-603059) due to the assumption that locations 30 to 40 feet away from the original locations would not result in lithological differences that would affect sample

collection; however, there appears to be variation in the porosity of the tuff which significantly affected the Permittees' ability to collect pore-gas samples at comparable depths. The Permittees must collect samples from Port #2 in the original borehole (21-25262) for the final three quarters since collection of samples from Port #2 in borehole 21-603059 is not possible (see comment #3 above).

NMED Comment #8

The Permittees did not provide in the revised Report the required additional evidence for determining that the detected pore-gas concentrations are not a potential source for exposure via inhalation as required by NMED's *Notice of Disapproval for the Phase II IR for MDA-T at TA-21, November 2007* (February 29, 2008). Instead, the Permittees made a comparison to the situation at MDA-L. MDA-L is not comparable to MDA-T. MDA-L is undergoing closure that will likely include vapor extraction, source removal activities, and construction of a cover. The Permittees have not proposed any of these activities at MDA-T. The Permittees must provide a vapor intrusion assessment within 90 days of the final quarterly sampling event and must submit it to NMED as a separate document. This assessment will be used as part of the evaluation to determine whether a Corrective Measures Evaluation (CME) for MDA-T will be required.

Please contact Rebecca Kay at (505) 476-6040, should you have any questions.

Sincerely,



James P. Bearzi
Chief
Hazardous Waste Bureau

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