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CERTIFIED MAIL - RETURN RECEIPT REQUESTED

February 14, 2008

David Gregory
Federal Project Director
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David McInroy
Remediation Services Deputy Project Director
Los Alamos National Lab
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**RE: APPROVAL WITH MODIFICATIONS
INVESTIGATION WORK PLAN FOR SITES AT TECHNICAL AREA 49
OUTSIDE THE NUCLEAR ENVIRONMENTAL SITE BOUNDARY
LOS ALAMOS NATIONAL LABORATORY (LANL)
EPA ID #NM0890010515
HWB-07-032**

Dear Messrs. Gregory and McInroy:

The New Mexico Environment Department (NMED) is in receipt of the United States Department of Energy and the Los Alamos National Security, LLC's (the "Permittees") document entitled *Investigation Work Plan for Sites at Technical Area 49 Outside the Nuclear Environmental Site Boundary, Revision 1* (Plan) dated January 2008 and referenced by LA-UR-08-0449/EP 2008-0028. NMED has reviewed the Plan and hereby issues this Notice of Approval with the following modifications. Comment numbers correspond to the original Notice of Disapproval (NOD) dated December 20, 2007 (except the "additional comments").

Specific Comments:

- 6. **NMED Comment:** The Permittees state that "[s]amples will be collected from shallow boreholes or test pits near the four open trenches located west of SWMU 49-004. The boreholes or test pits will reach bedrock. If nonnative material is encountered during



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drilling or excavation, the soil will be field screened for radionuclides, TAL metals, and organic chemicals.” The description of investigation activities at the four open trenches is overly vague. The Permittees must excavate test pits to determine the vertical and lateral extent of each trench. The Permittees must collect samples from the contents of the trenches (if encountered) and at two intervals (*e.g.*, 0’-0.5’ and 1.0’-2.0’) from the soil directly underlying the trench contents. The Permittees must field screen the samples for radionuclides, TAL metals, and organic chemicals. If field screening indicates that radionuclide and TAL metal concentrations are above background, the samples must be sent for off-site laboratory analysis for the same analytical suite proposed for Area 6 (SWMU 49-004).

Additionally, Section 4.4.2 states that Figure 4.4-2 illustrates the proposed locations of the boreholes or test pits at the open trenches west of SWMU 49-004. The reference to Figure 4.4-2 is incorrect. The correct reference is Figure 2.4-1.

- 7. NMED Comment:** The Permittees state in their NOD response that “[i]f VOCs are detected in vapor-phase samples at concentrations greater than 10% of screening levels based on equilibrium partitioning with groundwater cleanup levels (maximum contaminant levels (MCLs)), or if tritium is detected in vapor-phase samples at concentrations greater than the groundwater MCL, each borehole will be completed as a vapor-monitoring well.” In accordance with Section IV.C.4.c.v of the March 1, 2005 Order of Consent (Order), the Permittees shall not install vapor-monitoring wells prior to submitting a vapor-monitoring and sampling plan to NMED for review and approval. Based on the proposed vapor-monitoring well locations and the data provided in the vapor-monitoring plan, NMED will determine the most appropriate location(s) for the vapor-monitoring well(s).

Additional Comments:

1. Section 4.4.4, Drilling Plan, page 27, paragraph 1:

Permittees’ Statement: “Advancement of boreholes at AOC 49-002, SWMU 49-004 and SWMU 49-005(a), AOC 49-005(b), and SWMU 49-006 will be achieved by the air-rotary drilling method or hollow-stem auger (HSA). Air-rotary is the preferred drilling method when access for a future monitoring system needs to be maintained. Drill bit control is necessary to avoid highly contaminated zones or exposure to potential hazards is possible.”

NMED Comment: As stated by the Permittees in Section 4.4.6 of the *Investigation Work Plan for Sites at Technical Area 49 Inside the Nuclear Environmental Site Boundary, Revision 1*, “[a]dvancement of boreholes...will be achieved by auger to refusal then by the air-rotary method.” Therefore, the Permittees must use hollow stem auger drilling methods to the maximum depth achievable by the method.

2. Section 5.2.4, Borehole Abandonment, pages 31-32:

NMED Comment: All boreholes must remain open until NMED has reviewed the Investigation Report and determined whether long-term monitoring is required. The Permittees must take appropriate measures to ensure that the borings are secure and that no materials can enter the borings pending NMED's determination of their potential use as vapor monitoring wells.

Should you have any questions regarding this letter, please contact Kathryn Roberts at 476-6041.

Sincerely,



James P. Bearzi
Chief
Hazardous Waste Bureau

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file: Reading and LANL '07, TA-49 (SWMUs: 49-006, 49-004, 49-005(a), AOCs: 49-005(b), 49-008(a), 49-008(b), and 49-002)