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JON GOLDSTEIN
Deputy Secretary

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

February 9, 2009

David Gregory
Federal Project Director
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Department of Energy
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David McInroy
Remediation Services Deputy Project Director
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Los Alamos, NM 87545

**RE: APPROVAL WITH MODIFICATIONS FOR PHASE II INVESTIGATION
REPORT FOR THE TA-16-340 COMPLEX [CONSOLIDATED UNITS 13-
003(a)-99 AND 16-003(n)-99 AND SOLID WASTE MANAGEMENT UNITS
16-003(o), 16-026(j2), AND 16-029(f)], REVISION 1
LOS ALAMOS NATIONAL LABORATORY
EPA ID #NM0890010515
HWB-LANL-08-032**

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 L.L.C.'s (LANS) (collectively, the Permittees) *Phase II Investigation Report for the TA-16-340 Complex [Consolidated Units 13-003(a)-99 and 16-003(n)-99 and Solid Waste Management Units 16-003(o), 16-026(j2) and 16-029(f)], Revision 1*, dated January 2009 and referenced by LA-UR-09-0309/EP2009-0016. NMED has reviewed the document and hereby approves this report with following modifications.

30263



Modifications (Comment numbers refer to Notice of Deficiency (NOD) comments):

1. **General Comment No. 1:** This comment requested an explanation of why soil around the 7500 foot contour line that exhibited elevated levels of benzo(a)pyrene and arsenic was not included in the removal action. The Permittees justified leaving this soil in place due to the following rationale:

- The steepness of the terrain would make industrial use highly unlikely, and
- Risk levels could be obtained without including this soil in the removal action.

The rationale of the steepness of the terrain is reasonable and it is agreed that development of the site that would include areas on the steeper slopes is not probable. However, the condition that risk levels could be met was not demonstrated in the risk assessment. As noted in the NOD response, the Permittees indicate that the industrial risk level of $1E-05$ was slightly exceeded [risk for solid waste management unit (SWMU) 16-003(o) was $3E-05$]. Because the Permittees are using terrain as one of the lines of evidence to support acceptable industrial risk, land use control is warranted limiting access to the steeper terrain that was excluded from remediation.

2. **General Comment No. 4:** In response to this comment, the Permittees revised the risk assessment to include an evaluation of the construction worker scenario. It is noted that the resulting risk assessment shows an elevated hazard index for all of the sites. The primary drivers are aluminum (at all sites) and manganese [at all except SWMUs 16-026(j2) and 16-029(f)]. The revised report indicates that "EPCs [exposure point concentrations] for these inorganic COPCs [constituents of potential concern] are within the range of background concentrations or less than twice the maximum tuff background concentrations. In addition, for the construction worker scenario, the manganese SSL [soil screening level] is within the range of background concentrations. The HIs [hazard indices] without these inorganic COPCs are less than the NMED target HI of 1.0 (NMED 2006, 092513) for the construction worker scenario" (page 1-32). The inhalation pathway is the most significant pathway for exposure to these metals and in particular, manganese. In reviewing the data for aluminum and manganese, it does not appear that the site concentrations fall within the background range of concentrations for soil or tuff. In addition, it appears unlikely that a site attribution analysis (i.e., comparing the populations using a test such as the Wilcoxon Rank Sum test) would conclude that the data sets are statistically similar. The Permittees must use engineering controls in the event that the site is developed to mitigate excess inhalation exposure to a construction worker.

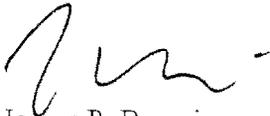
3. **General Comment No. 5:** The Permittees must continue to monitor surface water (i.e., at locations 16-02654 and 16-06121) and groundwater (i.e., at locations 16-25278, 16-25279, and 16-25280) at TA-16-340 Complex. The Permittees must follow the schedule outlined in the approved annual Interim Facility-Wide Groundwater Monitoring Plan. Field water quality parameters must be measured and the samples analyzed for inorganic chemicals, organic chemicals, and radionuclides. The results of the monitoring must be reported in the Periodic Monitoring Reports for Water Canyon/Cañon de Valle Watershed. The Permittees must maintain and conduct annual inspections of erosion control best management practices installed in the drainages and slopes of Fishladder Canyon (described in Section 4.7 of the revised report). The inspections must be conducted every year at the end of the monsoon season and a summary report must be submitted by December 31 each year.

Additional Comments:

Typographical errors were noted in Table 5.2-1 of the revised report. The screening levels reported for benzene and chlorophenol[2-] are incorrect. For the construction worker, the screening levels should be 174 mg/kg for benzene and 586 mg/kg for chlorophenol[2-]. Both of these chemicals were not identified as COPCs, hence no revisions to the risk assessment are required.

Please contact Neelam Dhawan at (505) 476-6042, should you have any questions.

Sincerely,



James P. Bearzi
Chief

Hazardous Waste Bureau

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File: LANL 2009, TA 16, TA-16-340 Complex