

TADO

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ENVIRONMENT DEPARTMENT

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**CERTIFIED MAIL - RETURN RECEIPT REQUESTED**

August 19, 2009

David Gregory  
Federal Project Director  
Los Alamos Site Office  
Department of Energy  
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David McInroy  
Remediation Services Deputy Project Director  
Los Alamos National Laboratory  
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**RE: NOTICE OF DISAPPROVAL  
NORTH CANYONS INVESTIGATION REPORT  
LOS ALAMOS NATIONAL LABORATORY  
EPA ID #NM0890010515  
HWB-LANL-09-029**

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) *North Canyons Investigation Report* (NCIR), dated and received June 30, 2009 and referenced by LA-UR-09-1670 and EP2009-0166. NMED has completed review of the NCIR and hereby issues this Notice of Disapproval (NOD).

1. Screening levels used in the NCIR for the residential receptor were primarily based on the 2006 NMED soil screening levels (SSLs). While differences in screening levels between the 2006 SSLs and the 2009 SSLs exist, the overall conclusions of the risk assessment using the 2009 data would be the same as those applying the 2006 data. Similarly, for comparison of surface water concentrations, tap water screening levels from the Environmental Protection Agency (EPA) Regional Screening Level (RSL) tables were applied. If a datum was not available, a maximum contaminant level (MCL) was applied. While there would be no change in conclusions within the risk assessment when using New Mexico-specific tap water screening levels, the Permittees must apply New Mexico-specific screening levels over RSLs (where available) in future reports. A specific response to this comment is not required.



2. Typically, a comparison of soil/sediment concentrations to soil-to-groundwater screening levels is conducted to assess whether there is potential for contaminants to migrate to groundwater. Neither a qualitative nor quantitative analysis of this pathway was provided in the NCIR. While groundwater was not identified as a complete exposure pathway for the recreational receptor, the potential for groundwater contamination via migration from soil/sediment must be addressed by the Permittees because no further evaluation of the individual Solid Waste Management Units (SWMUs) and/or Areas of Concern (AOCs) that are potential sources for contamination in the upper portions of the canyons is planned.
3. The primary current and future receptors for the human health risk assessment were identified as recreational. The residential risk scenario was considered for background purposes only. As noted in Section 1.4 of the report, portions of the North Canyons downstream from SWMUs and AOCs are used by the Pueblo de San Ildefonso for various cultural activities, including hunting. Several of the constituents of concern (COCs) carried forward in the risk assessment have a tendency to bioaccumulate. As such, risks to the residents of the Pueblo de San Ildefonso via ingestion of potentially contaminated game must be evaluated (specifically a subsistence hunting scenario) as hunting is a current and reasonably foreseeable future land use in the North Canyons. Revise the NCIR accordingly.
4. For the screening evaluations, lead was retained as a noncarcinogen and a hazard quotient was calculated and summed with other noncarcinogens. The result is an overestimation of noncarcinogenic risk. Lead screening levels are based on blood lead levels, unlike most noncarcinogens which have screening levels based on more traditional toxicological data (e.g., no observed adverse effect levels). Lead must therefore be evaluated independently. Because exclusion of lead from the hazard indices will not result in changes to the overall conclusions of the risk screening, a revision to the NCIR is not required. Future evaluations must assess lead independently from noncarcinogens.
5. A thorough review of available ecological toxicity has not been conducted, resulting in the omission of several constituents of ecological concern (COECs) from being qualitatively evaluated in the ecological assessments (see Table 8.1-31) presented in NCIR. Only data that are currently provided in the ECORISK database were applied. As noted in comments provided by NMED for previous canyon and aggregate area investigations, exclusion of data from the ECORISK database is not sufficient justification for exclusion of the evaluation of a COEC. While Section 8.1.8 of the report indicates there are uncertainties associated with the exclusion of certain chemicals due to lack of toxicity reference data in the ECORISK database, there is no discussion in the NCIR concerning how the overall conclusion may be influenced. The Permittees must provide a more detailed discussion of how exclusion of the COECs listed in Table 8.1-31 potentially impacts the risk evaluations.

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6. There is a paragraph duplication at the top of page 54 of the NCIR; it begins with, "The EPA software..." which is repeated again several lines later in the same paragraph. Delete the unnecessary text.

The Permittees must address all comments and submit a revised NCIR by September 15, 2009. As part of the response letter that accompanies the revised NCIR, the Permittees shall include a table that details where all revisions have been made and that cross-references NMED's numbered comments. All submittals (including maps) must be in the form of two paper copies and one electronic copy in accordance with Section XI.A of the Order. The Permittees must submit a redline-strikeout version that includes all changes and edits to the Report (electronic copy) with the response to this NOD.

Please contact Daniel Comeau at (505) 476-6043, should you have any questions.

Sincerely,



James P. Bearzi  
Chief  
Hazardous Waste Bureau

cc: J. Bearzi, NMED HWB  
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File: LANL North Canyons IR 2009