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RON CURRY
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**CERTIFIED MAIL
RETURN RECEIPT REQUESTED**

May 12, 2006

David Gregory
Federal Project Director
Los Alamos Site Office
Department of Energy
528 35th Street, Mail Stop A316
Los Alamos, NM 87544

David McInroy
Remediation Services Deputy Project Director
Los Alamos National Laboratory
P.O. Box 1663, Mail Stop M992
Los Alamos, NM 87545

**RE: NOTICE OF DISAPPROVAL
REMEDY COMPLETION REPORT FOR THE INVESTIGATION AND
REMEDICATION OF AREA OF CONCERN 03-001(i) AND SOLID WASTE
MANAGEMENT UNITS 03-029 AND 61-002,
LOS ALAMOS NATIONAL LABORATORY (LANL),
EPA ID #NM0890010515
HWB-LANL-06-004**

Dear Messrs. Gregory and McInroy:

The New Mexico Environment Department (NMED) has received and reviewed the United States Department of Energy and the Regents of the University of California's (collectively, the Permittees) *Remedy Completion Report for the Investigation and Remediation of Area of Concern 03-001 (i) and Solid Waste Management Units 03-029 and 61-002* (Report), dated December 2005 and referenced by LA-UR-05-8863/ER2005-0794. NMED has determined that the Report is technically deficient. While NMED does not require resubmission of the entire Report, Permittee must respond to the comments provided in this letter and provide the requested additional information within 60 days of the receipt of this letter.



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Comment 1 Section 2.0

Figures 4.1-1 through 4.1-5 present the site plan maps and summary data tables for the three sites. Tables 4.1-1 through Tables 4.1-5 also provide a summary of investigation data. The Permittees must revise the Background Section to include references to these Figures and Tables.

Comment 2

The Report indicates that contaminated soil and tuff were excavated at both AOC 03-001 (i) storage areas and SWMU 61-002, but there is insufficient information presented in the Report regarding the disposition of other investigation-derived waste (IDW). The Appendix F waste management strategy presented in Appendix F is inadequately referenced and discussed in the Report text. The Permittees must provide a discussion in the Report that explains how IDW was managed, stored, and disposed. This discussion should also address the disposition of soils removed during soil boring, potholing, and trenching.

Comment 3

The Report does not present any drawings illustrating the vertical and horizontal dimensions of the soil excavations conducted at AOC 03-001 (i) Storage Areas 1 and 2 and SWMU 61-002. The Permittees must provide a figure(s) depicting the excavated areas.

Comment 4 Section 3.1.1

The second paragraph indicates that headspace measurement of VOCs was conducted after the sample was placed in a closed container for 10 minutes. In Table 3.0-1, the section entitled "Headspace Vapor Screening" indicates the sample was allowed to equilibrate for 5 minutes prior to headspace measurement for VOCs. The Permittees must explain why there is a difference in equilibration time between the two discussions of the headspace screening methodology or correct the inaccurate statement.

Comment 5 Section 3.1

Section 3.1 indicates that Standard Operation Procedure SOP-01.08, Field Decontamination of Drilling and Sampling Equipment, was used during sampling. The descriptions of decontamination activities presented in Sections 3.11, 3.12, and 3.14, however, raise questions regarding the exact protocol used during each sampling event. The last paragraph of Section 3.1.1 states that a dry decontamination procedure was used to clean the core barrel, associated sampling equipment, and hollow-stem auger section, but no further discussion is provided. Section 3.1.2 indicates that the decontamination was conducted in accordance with Standard Operating Procedure SOP-1.08, but it is not clear whether a dry decontamination protocol was followed. Section 3.1.4 states that all sampling equipment was decontaminated after each use, but the procedure is not discussed or referenced. Also, Table 3.0-1 provides a description of a dry decontamination procedure, but it does not reference SOP-01.08; it discusses optional activities that allow for inconsistencies in the decontamination procedure. In accordance with Section IX.A of the Consent Order, the Permittees must provide a detailed description of the

exact protocol for the decontamination procedure used at AOC 03-001 (i) (both storage areas) and SWMU 61-002.

Comment 6 Section 4.1.2

The second paragraph of Section 4.1.2 states, "Post-excavation samples were not analyzed for inorganic chemicals since the results obtained from pre-excavation samples indicated that the inorganic chemicals were not COPCs [chemicals of potential concern] (see section 4.1.2.1 below)." In reviewing the referenced Section 4.1.2.1, barium was noted to exceed background concentrations and a decrease in concentration with depth was not noted. Lead concentrations were noted to decrease with depth. While NMED acknowledges that the concentrations of lead and barium are within the residential soil screening levels, the Permittees must demonstrate that the cumulative risk does not exceed the HI of 1 and 10^{-5} for carcinogens while incorporating these inorganic metals in risk calculations

Comment 7 Section 4.1.3

Section 4.1.3, AOC 03-001 (i), Storage Area #2: The post-excavation sampling detected concentrations of inorganics above established background concentrations in the tuff for barium and nickel. Only four feet of surface soil was removed at Storage Area #2, which was reportedly to the grade of the road that will be constructed through the area. The Permittees must explain how the depth of soil removal was determined, particularly when confirmation sampling indicated the continued presence of inorganic COPCs at Storage Area #2.

Comment 8

An evaluation of the potential for contaminants to migrate to groundwater was not provided with this report. In reviewing the exposure point concentrations for AOC 03-001(i) Storage Areas 1 and for SWMU 61-002, it was noted that several constituents had concentrations greater than the soil screening level (SSL) based on a dilution attenuation factor (DAF) of 20. For example, 2-methylnaphthalene, naphthalene, and 1,3,5-trimethylbenzene exceeded the DAF 20 SSL at Storage Area 1. At SWMU 61-002, 2-methylnaphthalene, naphthalene, toluene, 1,3,5-trimethylbenzene, and 1,2,4-trimethylbenzene exceeded the DAF 20 SSLs. The Permittees must evaluate the potential for migration of site contaminants to groundwater and include a comparison to the DAF 20 SSLs as appropriate.

Comment 9

Inorganic COPCs were excluded from the risk analysis if they were only detected in a few samples and at concentrations slightly greater than background. The rationale provided was that these constituents were not reflective of site contamination. While this assumption is most likely valid and the inclusion of these metals would most likely not impact the overall conclusion of the risk assessment, a site attribution analysis comparing the background data set to the site data set (e.g., Wilcoxon Rank Sum Test) should have been conducted to verify this assumption. The Permittees must provide a site attribution analysis to justify exclusion of COPCs in the risk assessment.

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Comment 10

A depth of 20 feet below ground surface was applied as the exposure interval for the construction scenario. This depth was assumed because the depths of construction excavations required for construction of the perimeter road was not known. However, it seems unlikely that this is an overestimate of the excavation depths required for road building. There is also concern that use of a larger soil interval results in a lower exposure point concentration, and thus a less conservative assessment of risk to the construction worker (It is noted in Section D-1.3.2 of the Report that this interval represents a conservative approach). The Permittees must discuss the trend of contaminant concentrations with depth and discuss why the 20-foot exposure interval is considered conservative.

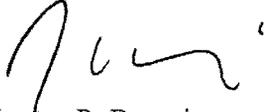
Comment 11

A hazard quotient (HQ) was calculated for lead and this HQ was incorporated into the hazard index (HI). This is not methodology correct. Lead is evaluated by relating soil lead intake to blood level concentrations. As such, lead should be evaluated individually and a HQ should not be calculated for this constituent. The Permittees must revise the risk table to remove the calculation of a HQ for lead and revise all subsequent HIs.

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Please contact Swarna Latha Vonteddu at (505) 428-2551 should you have any questions.

Sincerely,



James P. Bearzi
Chief
Hazardous Waste Bureau

JPB: sv

cc: D. Goering, NMED HWB
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J. Ordaz, DOE LASO, MS A316
K. Hargis, LANL RRES/DO, MS M591
N. Quintana, LANL E/ER, MS M992
file: Reading and LANL TA-00 2005 (Investigation Work Plan for
Guaje/Barranca/Rendija Canyons Aggregate area)

File: Reading File & LANL 2006 File