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RON CURRY
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CERTIFIED MAIL
RETURN RECEIPT REQUESTED

July 17, 2006

David Gregory
Federal Project Director
Los Alamos Site Office
Department of Energy
528 35th Street, MS A316
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David McInroy
Remediation Services Deputy Project Director
Los Alamos National Laboratory
P.O. Box 1663, MS M992
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**SUBJECT: NOTICE OF DISAPPROVAL
REMEDY COMPLETION REPORT FOR SOLID WASTE
MANAGEMENT UNIT 33-013, A FORMER STORAGE AREA AT
TECHNICAL AREA 33
LOS ALAMOS NATIONAL LABORATORY, EPA ID # NM0890010515
HWB-LANL-06-013**

Dear Messrs. Gregory and McInroy:

The New Mexico Environment Department (NMED) is in receipt of the Department of Energy and the Regents of the University of California's (collectively the "Permittees") *Remedy Completion Report for SWMU 33-013 at Technical Area 33 at Los Alamos National Laboratory* (Report), dated March 2006, and referenced by LA-UR-06-1218/ER2006-0046. NMED has reviewed this document and has determined that the Report is technically deficient. While NMED does not require submission of a new Report, the Permittees must respond to the comments below and provide the requested information, including replacement pages where specified, within 30 days of the receipt of this letter.

General Comment

It is unclear from looking at the sample depths shown in Figures 4.1-2, 4.1-3, and 4.1-4 of the Report whether they were collected below the excavation or below ground surface (bgs). Outside



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the perimeter of the asphalt pad NMED assumed that 0 – 0.5 ft. indicates a surface sample; however, two feet of soil were excavated prior to sampling within the asphalt pad, leading to the assumption that the same 0 – 0.5 ft. interval within the pad as shown in the Figures is actually 2 – 2.5 ft. bgs. The Permittees must clarify whether the depths of samples collected within the asphalt pad were below the base of the excavation or below ground surface.

Specific Comments

Comment 1 Section 4.1.2.5, page 12

The second paragraph on this page addresses the lateral and vertical extent of tritium found at SWMU 33-013. The Report states that “[c]oncentrations [of tritium] increased with depth at three locations within the footprint of the asphalt pad. The Phase I RFI data reported tritium at a concentration of 3342 pCi/g just beneath the asphalt (0 – 0.5 ft bgs), while tritium’s maximum detected concentration after the asphalt and soil removal was 855 pCi/g (2 – 3 ft bgs). Tritium concentrations will continue to decrease over time because of radioactive decay, i.e., the half-life for tritium is 12.6 years. Based on the Phase I and Phase II RFI and Accelerated Corrective Action (ACA) data, tritium concentrations decreased with depth within the asphalt pad footprint and the vertical extent is defined.”

Only two surface samples were analyzed for tritium during the 1993 Phase I investigation, and radionuclides were not included in the analysis during the 1996 Phase II investigation (LANL 2005, 88839). Additionally, the surface samples were removed during excavation. It is therefore appropriate to include the current ACA data in a discussion of nature and extent. The paragraph appears contradictory in that concentrations of tritium both increase with depth within the asphalt pad footprint (at three locations) and decrease with depth generally.

According to Figure 4.1-4 in the Report, three of six samples analyzed within the footprint of the asphalt pad increase in concentration with depth. Outside the footprint two of four samples increase with depth. The Permittees must provide an explanation for defining the vertical extent of tritium at SWMU 33-013 based on the data presented, state that vertical extent is not defined, or otherwise resolve the apparent contradiction.

The Report compares the concentrations of COPCs found at the 0 – 2.5 ft bgs depth interval to industrial Soil Screening Levels (SSLs) for inorganic and organic chemicals and to Screening Action Levels (SALs) for radionuclides, and compares the concentrations of COPCs from the 0 – 4.5 ft bgs depth interval with construction worker SSLs/SALs. The evaluation of risk-based SSLs/SALs for the construction worker scenario are typically based on a depth interval of 0 – 10 ft bgs. If vertical extent is not defined to at least 10 ft bgs, then evaluation of risk under the construction worker scenario may not be valid. Nevertheless, because the Report proposes completion under an industrial land use scenario, the screening assessment for risk to human health and ecological receptors is acceptable, provided the Permittees notify NMED if there is

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any change in land use. Unless vertical extent is defined, any construction activities must be limited to a depth of 4.5 ft bgs.

Comment 2 Section D-1.2, page D-3

In the second paragraph under “Exposure Assessment,” the Report states, “[In addition,] if construction activity were to occur and result in the uncovering of contaminated material, the clean fill would serve to decrease the concentrations of COPCs to which the construction worker could be exposed to.”

This is not an appropriate argument for addition of the clean fill. Dilution is not an acceptable alternative to minimizing the concentration of contaminants in soil or any other media. Permittees must provide an alternate approach that does not invoke dilution when assessing pathways for exposure and risk to a construction worker.

Comment 3 Section 3.1.1, page 6

The first sentence on this page states, “Remediation activities at SWMU 33-013 began on June 29, 2006...” The last sentence in paragraph four states, “The excavation activities continued until July 20, 2006...” NMED understands the Permittees to mean 2005 instead of 2006.

Comment 4 Section 4.1.2.1, page 10

The last sentence in the Section states, “Figure 4.1-2 presents the inorganic chemicals above background at SWMU 33-013.” NMED understands the Permittees should be referring to Figure 4.1-1.

Comment 5 Section 4.1.2.2, page 10

The last sentence in the Section states, “Figure 4.1-3 presents the detected organic chemicals at SWMU 33-013.” NMED understands the Permittees should be referring to Figure 4.1-2.

Comment 6 Section 4.1.2.3, page 10

The last sentence in the Section states, “Figure 4.1-4 presents the radionuclides detected at SWMU 33-013.” NMED understands the Permittees should be referring to Figure 4.1-3.

Comment 7 Figure 4.1-4, page 22

The boundary lines in the legend for this Figure do not match their appropriate definitions (e.g., the dotted line that should indicate “Fence” is assigned to “SWMU boundary,” while “Fence” remains undefined. The red line should indicate gas line, not water line.). The Permittees must

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revise the legend to match the legends in the other Figures of the Report and provide a replacement page for Figure 4.1-4.

Comment 8 Table 4.1-1, page 27

The SSL for nitrate under all land use scenarios is 1.0E+05 mg/kg (NMED 2005, 90802), not 1E-05 mg/kg as shown in the table. The Permittees must revise Table 4.1-1 accordingly and provide a replacement page for the Table.

Comment 9 Section D-1.3, page D-5

The Permittees have agreed to voluntarily provide total radionuclide risk levels in addition to total radionuclide dose. A value for total risk is stated on page D-5 based on comparison with EPA preliminary remediation goals (PRGs); however, the link to the webpage provided for comparison is either misspelled or out-of-date because the page cannot be found. The Permittees must provide a corrected link to the appropriate webpage for comparison to EPA PRGs, and provide an explanation for the derivation of risk based on the data.

If you have any questions regarding this letter please contact Mark Cummings of my staff at (505) 428-2543.

Sincerely,



James P. Bearzi
Chief
Hazardous Waste Bureau

JPB:mac

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file: Reading and LANL 2006