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CERTIFIED MAIL - RETURN RECEIPT REQUESTED

June 4, 2010

George J. Rael
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Department of Energy
3747 West Jemez Road, MS A316
Los Alamos, NM 87544

Michael J. Graham
Associate Director Environmental Programs
Los Alamos National Security, L.L.C.
P.O. Box 1663, MS M991
Los Alamos, NM 87545

RE: NOTICE OF APPROVAL
INVESTIGATION REPORT FOR UPPER MORTANDAD CANYON AGGREGATE AREA, REVISION 1
LOS ALAMOS NATIONAL LABORATORY
EPA ID #NM0890010515
HWB-LANL-09-053

Dear Messrs. Rael and Graham:

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) *Investigation Report for Upper Mortandad Canyon Aggregate Area, Revision 1* (Report), dated April 2010 and referenced by LA-UR-10-2046/EP2010-0149. NMED has reviewed the Report and the Notice of Deficiency (NOD) response accompanying the Report and hereby issues this Notice of Approval for both with the following comments. Comment numbers correspond to January 12, 2010 NOD comment numbers.

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General Comment # 5: Table 1.6-1 was revised, but some discrepancies still need resolution:

a) Screening levels for carbazole were provided for the industrial scenario (15,000 milligrams per kilogram, mg/kg) and the residential scenario (1,500 mg/kg). The levels were cited as being from the December 2007 Region 6 Human Health Medium-Specific Screening Levels (MSSLs). However, in reviewing the December 2, 2007 tables, the industrial and residential soil levels listed are 2,900 mg/kg and 2,400 mg/kg, respectively, as adjusted to reflect a target cancer level of 1×10^{-05}. It is noted that use of either of these values would not impact the conclusion of the risk assessments where carbazole was identified as a constituent of potential concern (COPC), specifically site 48-007(a)-00 and Tables J-4.2-15 and J-4.2-19. However, for future assessments, the screening data used for carbazole should be verified.

b) The construction worker screening level for 1,1,2-trichloroethane is listed in Table 1.6-1 as 64,300 mg/kg. Table A-1 of the December 2009 NMED SSLs lists this value as 12,400 mg/kg. As 1,1,2-trichloroethane was not included as a COPC in any of the sites where risk assessments were conducted, there is no impact on conclusions. For future evaluations of the construction worker scenario, the screening data for 1,1,2-trichloroethane should be verified.

General Comment # 6: The response to this comment was not adequate. A great amount of time and effort was expended to establish how essential nutrients should be addressed in the site attribution analysis and risk assessments. In addition, the process outlined in the NOD was developed in cooperation with the NMED and the Permittees and deemed acceptable to both the parties. If levels of essential nutrients are detected in site media above background levels following the agreed-upon process, then a comparison of the detected concentrations to recommended daily allowances and/or upper intake limits must be conducted to justify elimination of the nutrient from further consideration. The requirement to compare the site concentrations to recommended daily allowances and/or upper intake limits does not represent a data-intensive nor time-intensive requirement and as such is not unreasonable. In future reports, the Permittees must use the appropriate agreed upon approach when addressing essential nutrients.

Specific Comment #7: The Permittees revised Sections 8.1.1, 8.2.1, 8.2.2, and 9.2 to indicate that investigation of Solid Waste Management Unit (SWMU) 03-034(a) is not complete. It is noted that in the revised Report, SWMU 03-034(a) is proposed for delayed investigation. The Permittees acknowledged that the nature and extent of contamination is not fully defined at SWMU 03-034(a), but failed to revise the relevant text in Section I-2.11.5 and Table 9.1-1 to reflect this. Sections I-2.11.5.1, I-2.11.5.2, I-2.11.5.3, I-2.11.5.4 and Table 9.1-1 indicate that the lateral and vertical extent of all inorganic, organic, and radionuclide COPCs are defined at SWMU 03-034(a). Additionally, Table 9.0-1 was renamed Table 9.1.1 on page 581, but the table captions on the following three pages (i.e., pages 582 to 584) were not revised accordingly. No revision to the Report is required.

Specific Comment #24: The Permittees deem SWMU 50-006(c) appropriate for corrective action complete without controls because the Permittees have concluded that it does not pose an unacceptable risk under a residential scenario. Under a residential scenario, the total excess cancer risk was calculated at 2×10^{-5} risk and the elevated risk was attributed to the presence of polycyclic aromatic hydrocarbons from asphalt roads and parking lots. For a residential scenario, total dose was calculated at 28 mrem/yr which is equivalent to a risk of 5×10^{-5}, based on a comparison with the U.S. Environmental Protection Agency's (EPA's) Preliminary Remediation Goals (PRGs) for radionuclides. Under a construction worker scenario, the dose was calculated at 18 mrem/yr which is equivalent to a risk of 3×10^{-5} based on the EPA's PRGs for radionuclides. Based on the result of the risk evaluations, SWMU 50-006(c) is not appropriate for a corrective action complete without control status. NMED will only consider a corrective action complete with controls determination for SWMU 50-006(c) until total risk is below NMED's target risk level of 1×10^{-5}.

Specific Comment #26: The Permittees acknowledged that site characterization is not complete and additional investigation is required at SWMU 50-011(a). The Permittees proposed to delay the investigation until future decontamination and decommissioning of the Technical Area 50 facility is complete. Table 9.1-1 was not revised to indicate this, the table indicates that extent is defined for SWMU 50-011(a) and there is no potential risk. No revision to the Report is required.

Specific Comment # 29: As required by the NOD comment, the Permittees corrected the reference of Table 4.5-1 to Table 1.4-2, in Section B-3.1. It is noted that Sections B-3.0 and B-3.2 also incorrectly refer to Table 1.4-2 as Table 4.5-1, a table that contains results of field screening. No revision to the Report is required.

No revision to the Report is required. However, the Permittees must submit a Phase II investigation work plan to NMED no later than December 6, 2010. The Phase II work plan must address all non-deferred sites in the Report which require additional investigation in order to complete nature and extent evaluations that are sufficient to complete human health and ecological risk evaluations.

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

Sincerely,

James P. Bearzi
Chief
Hazardous Waste Bureau

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