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TA 21

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

June 2, 2005

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

G. Pete Nanos, Director
Los Alamos National Laboratory
P.O. Box 1663, Mail Stop A100
Los Alamos, NM 87545

RE: NOTICE OF DISAPPROVAL (NOD) FOR THE VOLUNTARY CORRECTIVE MEASURE COMPLETION REPORT FOR SOLID WASTE MANAGEMENT UNIT 21-011(K) AT TECHNICAL AREA 21
LOS ALAMOS NATIONAL LABORATORY (LANL), EPA ID #NM0890010515
HWB-LANL-03-025

Messrs. Gregory and Nanos:

The New Mexico Environment Department (NMED) is in receipt of the United States Department of Energy and Regents of the University of California (the "Permittees") report entitled *Voluntary Corrective Measure Completion Report for Solid Waste Management Unit 21-011(k) at Technical Area 21*, dated October 2003 and referenced by LA-UR-03-7293 (ER2003-0633). NMED has reviewed this document and hereby issues this notice of disapproval. The Permittees must address all comments and submit revised text and/or replacement pages (where appropriate) within thirty (30) days of receipt of this letter. As part of the response letter that accompanies the revised text or replacement pages, the Permittees shall include a table that details where all revisions have been made to the Report and cross-references NMED's numbered comments. All submittals must be in the form of two paper copies and one electronic copy in accordance with section XI.A of the March 1, 2005 Consent Order (Order).

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General Comments:

1) Based on analytical results from previous RFI sampling completed in 1993, three radionuclides (tritium, uranium-234, and uranium-235) had values above background/fallout values. However, the 1996 IA confirmatory samples were only analyzed for isotopic plutonium, strontium-90, cesium-137, and americium-241. The Permittees must explain why they did not analyze for tritium, uranium-234, and uranium-235 in their 1996 IA confirmatory soil samples. (Must be included as a reponse)

2) The Permittees must provide a brief description of investigation, sampling or analytical methods and procedures in documents submitted to NMED that includes sufficient detail to evaluate the quality of the acquired data in accordance with Section IX.A, Standard Operating Procedures of the Order. (Must be included as a revision to the Report)

Specific Comments:

1) **Section 2.3 Preliminary Conceptual Model, page 7, paragraph 1:**

   NMED Comment: The reference to Langmuir (1997, 56037) is not included in Section 4.0, References. The Permittees must provide this reference as well as all other references missing from the TA-21 Reference Set. NMED cannot adequately evaluate the VCM without reviewing the references provided throughout the report. The Permittees must supply these references to the NMED for review. For your convenience, a list of these references is attached. (Must be included as a revision to the Report)

2) **Table 2.4-2, Summary of VCM Plan Specifications, Fieldwork, and Rationale for Deviations, page 25:**

   NMED Comment: NMED specified that 10 confirmation samples from two depth intervals (0-12 and 24-36 inches beneath an elevation equal to the bottom of the drainline) must be obtained from 5 locations along the outfall drainline. The Permittees collected 27 confirmation samples from 15 locations, which is well over the number specified by NMED. The Permittees provided a rationale for this deviation; however, the Permittees must explain why they did not collect samples from 2 depths at each drainline trench location, as required by NMED (for example, sample location 21-03-21396). (Must be included as a response)

3) **Section 2.4.3 Site Restoration Activities, page 26, paragraph 6:**

   Permittees' Statement: "In June 2003, the final walk-over gross gamma survey was performed to document the post-VCM count rates across the site (Figure 2.4-7). This survey indicated that all areas of elevated contaminant concentrations had been remediated, and that no additional "hot spots" had been exposed during restoration

activities. Nearly 15,000 gross gamma counts were recorded during this survey with an average of 23,285 cpm. This count rate roughly corresponds to a contaminant concentration of 40 pCi/g for cesium-137 based on known correlations between real-time gross gamma screening and fixed laboratory analysis reported in Appendix F of the SWMU 21-011(k) VCM Plan."

NMED Comment: Figure 2.4-7 shows areas of elevated contaminant concentrations near the southern end of the SWMU, approximately 120 feet north of DP Road. There is a significant improvement over the values seen in April 2003 (Figure 2.4-3) and December 2002 (Figure 2.4-2) gross gamma surveys; however, Figure 2.4-7 still exhibits concentrations in the 60001-80000 cpm range in discrete areas. The Permittees must revise this statement to clarify that there is still contamination present, but it is below the cleanup levels specified in the VCM Plan. (Must be included as a revision to the Report)

4) **Appendix D Analytical Suite and Results, Table D-2.0-1, Analytical Results for SWMU 21-011(k), page D-5:**

NMED Comment: The Permittees state that this table presents the analytical results from samples collected in 1993, 1996, 2001, and 2003; however, there is no way to distinguish one sample date from another. The Permittees must revise Table D-2.0-1 to reflect the dates on which samples were obtained. (Must be included as a revision to the Report)

Section 2.1, Site Description and Operational History (SWMU 21-011(k)), states, "effluent contained a variety of radionuclides and chemicals." The Permittees must explain why a full analytical suite was not performed on all samples, especially samples obtained in 1993, as these were used to characterize contaminants present at SWMU 21-011(k). (Must be included as a response)

Should you have any questions, please contact Kathryn Chamberlain at (505) 428-2546.

Sincerely,

James P. Bearzi
Chief
Hazardous Waste Bureau

JPB:kc

cc: D. Goering, NMED HWB
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file: Reading and LANL TA-21 '05 (SWMU 21-011(k))