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CERTIFIED MAIL
RETURN RECEIPT REQUESTED

June 1, 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
INVESTIGATION WORK PLAN FOR MATERIAL DISPOSAL AREA A AT
TECHNICAL AREA 21, SOLID WASTE MANAGEMENT UNIT 21-014
LOS ALAMOS NATIONAL LABORATORY (LANL)
EPA ID #NM0890010515
HWB-LANL-05-002

Dear 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 *Investigation Work Plan for Material Disposal Area A, at Technical Area 21, Solid Waste Management Unit 21-014* [Work Plan] dated January 2005 and referenced by LA-UR-05-0094 (ER2004-0561). NMED has reviewed this document and hereby issues this notice of disapproval. The Permittees must address these comments and submit a revised Work Plan within 30 days of receipt of this letter. As part of the response letter that accompanies the revised Work Plan, the Permittees shall include a table that details where all revisions have been made to the Work Plan 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 Consent Order.



10839

General Comments:

1. The administrative authority (AA) is used to refer to NMED, EPA, and the Laboratory throughout the MDA Work Plan. In the future, the Permittees must use the appropriate designations.
2. Neither the Historical Investigation Report (HIR) nor the work plan indicates the depth from the top of the ground surface to the top of the Central or the Eastern Pits. The HIR (Table 2.2-1) indicates that in 1946 crushed fill was used to backfill the trenches at the Eastern Pits and in 1978 a soil cover of crushed fill was placed over the Central Pit. There is no documentation regarding the depth or volume of fill that was placed over the pits. The Permittees must provide additional information pertaining to how much fill was placed at MDA A.

Specific Comments:

1. Section 4.2 MDA A Investigation Activities, Soil and Sediment, page 20-21, paragraph 5:

Permittees' Statement: "Eight fill/soil samples will be collected from the MDA A cover. Samples will be collected from two depth intervals at each sampling location (0-0.5 ft and 1.5-2.0 ft)."

NMED Comment: The Permittees are proposing to sample cover/fill material. Fill material cannot be used to represent releases from this site. NMED requires sampling of native soil or other media that existed during the operation of MDA A. Because the depth to the native soil is unknown the Permittees must sample in intervals until native soil is reached and can be sampled.

2. Section 4.4 Number, Depth and Location of Boreholes, page 22-23:

NMED Comment: NMED agrees with the depth of the proposed boreholes. The Permittees may need to advance proposed boreholes to the Cerro Toledo based on the results of the MDA T boreholes. Several wells have a proposed depth, this depth may change because all boreholes will be advanced at least 20 ft below the base of the nearest disposal unit and a vertical depth of 25 ft below the last field-screening detection.

3. Section 4.8 Perched Water Sampling, page 24:

Permittees' Statement: "A monitoring well design will be submitted to the AA in accordance with Section 5.6 of this work plan"

NMED Comment: This statement needs further clarification because Section 5.6 of this work plan does not seem relevant to groundwater. The Permittees must submit a groundwater work

plan, including well design if perched groundwater is encountered, according to Section IV.C.2.c.vii of the Consent Order.

4. Section 4.6 Surface and Near-Surface Sampling, page 24:

NMED Comment: The Permittees plan to characterize cap material placed in 1987. Again, there is no documentation on how thick the cap material is. In 1985 cap material was also placed at MDA A and this material should be characterized as well. The Permittees must explain why they are planning on sampling fill material.

5. Section 4.7 Subsurface Vapor Monitoring, page 24:

NMED Comment: The Permittees must collect vapor monitoring samples according to section IX.B.2.g of the Consent Order.

6. Section 4.9 Field Screening, page 25:

NMED Comment: The Permittees propose to continuously screen for radiological contamination and, therefore, must provide additional information regarding the methods and procedures that will be utilized for the proposed field screening activities. This information must include which instrumentation will be utilized, how measurements will be determined in the field, a list of radionuclides that will be screened and QA/QC protocols.

7. Section 4.11.1 Tuff, Soil and Sediment Samples, page 25-26:

NMED Comment: The Permittees must complete full analytical suites for each sample. This suite must include VOCs, SVOCs, explosive compounds, PCBs, dioxins, furans, nitrates, perchlorate, TAL metals, cyanide, and radionuclides. Because the disposal history is similar to MDA B where "several cartons of waste caused minor explosions and, on one occasion, a cloud of pink gas arose from the debris in the dump," the Permittees must include analysis of explosive compounds. The analysis may be limited to the boreholes surrounding the central and eastern disposal pits and must include the samples collected from the hillside. Also, because the operational history of the site includes "unidentified chemicals," the Permittees must also analyze for dioxins/furans and PCBs. The Permittees propose analyzing for dioxins/furans only if these constituents are detected during the MDA T investigation. According to the MDA T Investigation Work Plan, MDA A and the General Tanks are unrelated to MDA T. The Permittees must provide further justification for not including these constituents in their analysis.

8. Section 5.0 Investigation Methods, page 27:

NMED Comment: The Permittees must provide a brief description of each cited SOP in accordance with Section IX.A, *Standard Operating Procedures* in the Consent Order. The description must include sufficient details of all investigation, sampling and analytical methods in order for NMED to evaluate their use.

9. Section 5.6 Collection of Pore-Gas Samples for Tritium Analyses, page 31:

Permittees' Statement: "Pore-gas samples for tritium analyses will be collected in conjunction with samples for VOC analyses from two depths in all proposed boreholes."

NMED Comment: In deeper boreholes the Permittees may need to collect more than two samples in order to satisfy the requirements of two samples for every 100 ft.

10. Table 4.13-1, Consent Order Specifications and LANL Proposed Alternatives (Based on September 1, 2004, Draft Compliance Order on Consent), pages 77-86:

Item: Drilling Explorations

NMED Comment: As an alternative to the proposed angled borehole and the adjacent vertical borehole, the Permittees shall drill three shallower angled boreholes adjacent to the General's Tanks to intersect the tuff directly beneath and between the General's Tanks. The boreholes shall be advanced to 25 feet below the deepest detected contamination, in accordance with Section IX.B.2.b.i of the Consent Order.

Item: Soil and Rock Sampling #6

NMED Comment: Section 2.4.1, MDA A Source of Contamination, states that, "because a complete waste inventory for MDA A does not exist, additional chemicals for potential concern (COPCs) may be identified." Based on this statement, NMED requires that the Permittees select their most contaminated sample based on field screening results and complete a full analytical suite on the selected sample. See Comment # 7 also.

Item: Groundwater monitoring

NMED Comment: NMED agrees that the groundwater samples obtained from Los Alamos Canyon monitoring wells can be collected under the approved Interim Facility-Wide Groundwater Monitoring Plan due to NMED June 9, 2005. The groundwater data specified above and in Section IV.C.2.c.ix of the Consent Order, should also be documented in the MDA A Investigation Report due to NMED on August 31, 2006.

11. Table 5.0-1 Summary of Applicable SOPs and QPs, pages 87-92:

The summaries do not provide an adequate description of methods and procedures used as part of this investigation. The Table only provides a general description of the type of information found in each SOP. Section IX.A of the Consent Order requires the Permittees provide descriptions of all investigation, sampling and analytical methods and procedures with sufficient detail for NMED to evaluate the quality of the acquired data. The Permittees must resubmit the required information following the descriptions/table submitted as part of the response to the Approval with Modifications for the investigation Work Plan for the DP Site Aggregate Area.

12. Appendix B Management Plan for Investigation Derived Waste, pages B-1 to B-4:

NMED Comment: If the Permittees are contemplating using an area of contamination (AOC) then NMED requires the Permittees to submit a request to NMED for approval of an AOC designation and use. The approval of this work plan is not an approval for the AOC designation. Delineation of an AOC must be reviewed and approved by NMED prior to implementation of this work plan. EPA defines AOCs as certain discrete areas of generally dispersed contamination that can be equated to Resource Conservation and Recovery Act (RCRA) units or landfills. AOCs may be either used to consolidate waste or treat waste in-situ within the AOC without triggering RCRA requirements. Neither of these actions is proposed at MDA A. NMED has therefore determined the Permittees are not applying the AOC concept properly to this site.

The Permittees must provide a detailed description of the methods and procedures used to characterize the waste streams. As stated in section IX.A of the Consent Order, the Permittees cannot substitute a reference to their SOPs and website for a description of procedures.

Whether the waste is RCRA hazardous or low-level only, the Permittees may not return environmental media to the point of origin because, by doing so, the Permittees may change the hydraulic characteristics of the unit(s) and may provide a conduit for contaminant migration. All boreholes must be properly plugged and abandoned following Section X.D of the Consent Order. If the Permittees are requesting a "no longer contained-in" determination for contaminated media, each sample collected must be analyzed for Appendix VIII constituents (40 CFR Part 261) and the results must be submitted to NMED before a "contained-in" determination can be made. Furthermore, if the Permittees plan to use existing data to characterize IDW, then associated QA data must be provided in conjunction with existing data.

13. HIR Section 2.2.1 The General's Tanks, page 2-3:

NMED Comment: The Permittees must provide more clarification as to how the General's Tanks received rainwater in 1985. Also, the Permittees must provide documents referenced in regards to the General Tanks receiving rainwater, specifically: DOE, 1987 (08664) and Balo and Warren, 1982 (07205).

Messrs. Gregory and Nano
MDA A Investigation Work Plan NOD
June 1, 2005
Page 6

Should you have any questions regarding this letter, please contact Laurie Trevizo at (505) 428-2539.

Sincerely,



James P. Bearzi
Chief
Hazardous Waste Bureau

JPB: lt

cc: L. Trevizo, NMED HWB
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file: Reading and LANL TA-21