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RON CURRY
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**CERTIFIED MAIL
RETURN RECEIPT REQUESTED**

August 17, 2006

David Gregory
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Los Alamos Site Office
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David McInroy
Remediation Services Deputy Project Director
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**RE: NOTICE OF DISAPPROVAL FOR THE INVESTIGATION/REMEDIATION
WORK PLAN FOR MATERIAL DISPOSAL AREA B, SOLID WASTE
MANAGEMENT UNIT 21-015, AT TECHNICAL AREA 21,
LOS ALAMOS NATIONAL LABORATORY (LANL),
EPA ID #NM0890010515
HWB-LANL-06-007**

Messrs. Gregory and McInroy:

The New Mexico Environment Department (NMED) is in receipt of the Department of Energy and the Los Alamos National Security, LLC (collectively, the "Permittees") *Investigation/Remediation Work Plan for Material Disposal Area B, Solid Waste Management Unit 21-015, at Technical Area 21* (Plan), dated March 2006 and referenced by LA-UR-06-1933/ER2006-0191. NMED has reviewed this document and hereby issues this Notice of Disapproval (NOD).

General Comments:

1. The Plan does not address all issues outlined in the NMED letter *Additional Requirements for the Investigation Work Plan for Unit 21-015, Material Disposal Area B, at Technical Area 21*, dated February 20, 2006. The Permittees were asked to provide this information because this



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Plan outlines a presumptive remedy and may replace a corrective measures evaluation (CME). To ensure that NMED received all of the information needed to evaluate the Permittees' presumptive remedy without requiring evaluation of other remedial alternatives, NMED requested the information. The Permittees must revise the Plan to include the following information.

- a) Costs associated with the proposed activities,
- b) Discussion of the long-term effectiveness of the proposed activities, and
- c) Discussion of possible contingencies if cleanup levels are not achieved.

2. Due to the close proximity of MDA B to local businesses and the possibility that land close to MDA B could be used for residences, the Permittees must remove contaminated media (*e.g.* soil, tuff), both vertically and laterally within the excavation trenches, until residential SSLs/SALs are achieved. While, cleanup must be confirmed by laboratory analysis, it may be guided by field screening.

Specific Comments:

1. Section 4.2 Regulatory Basis for Technical Approach, page 10, paragraph 1:

Permittees' Statement: "A request to obtain an AOC designation for this work will be submitted to NMED for approval. The request will specify the boundaries of the proposed AOC, the rationale for how the boundaries were established, and an explanation of how the boundaries will be delineated. The request will also describe the activities to be conducted within the AOC."

NMED Comment: The Permittees must submit the Area of Contamination (AOC) designation request to NMED no less than thirty (30) days prior to the site investigation sampling notification. Notification of site investigation/sampling activities must be submitted fifteen (15) days prior to the commencement of any field activity pursuant to Section V.E.2 of the March 1, 2005, Consent Order (Order).

2. Section 4.2 Regulatory Basis for Technical Approach, pages 10-11:

Permittees' Statement: "The removal of contaminant source material will involve the excavation of buried historical waste and surrounding soil and tuff until contaminant levels are below industrial soil screening levels (SSLs) as specified in Section VIII.B.1 of the Consent Order."

NMED Comment: See General Comment # 2.

3. Section 4.3.2 Environmental Protection Monitoring, page 11:

Permittees' Statement: "Details of radiation monitoring equipment and procedures will be included in a radiation program to be developed specifically for MDA B activities."

NMED Comment: To facilitate a complete evaluation of this remedy and to address public concerns, NMED requests that the descriptions of "radiation monitoring equipment and procedures" be included with this Plan.

4. Section 4.4 Excavation of Disposal Trench Contents, page 13, paragraph 2:

Permittees' Statement: "If further excavation does not reveal material with contaminant concentrations below SSLs or SALs within a reasonable depth, the decision to cease deeper excavation may be made on the basis of safety and the practical limitations of slope lay-back requirements. As a contingency, if the proposed cleanup levels are not reached in specific locations, the coordinates of those locations will be recorded using a global positioning satellite (GPS) system or other survey methods. The coordinates will allow the locations to be identified for further characterization of nature and extent of contamination."

NMED Comment: According to Section VIII.E of the Order, the Permittees may vary from a cleanup goal if achievement of the cleanup goal is impracticable. However, the Permittees must submit a demonstration of impracticability to NMED, complete a site-specific risk assessment, and identify alternate cleanup goals subject to NMED's approval. Therefore, the Permittees must remove contaminated media (*e.g.*, soil, tuff), both vertically and laterally within the excavation trenches, until residential SSLs/SALs are achieved unless achievement of the cleanup goal is deemed impracticable by NMED.

5. Section 4.4 Excavation of Disposal Trench Contents, pages 12-14:

NMED Comment: NMED recommends that if worker safety can be ensured, the trenches remain open until analytical results confirm there is no remaining contamination in soils or tuff at concentrations above residential SSLs or SALs at the base of the excavation. This may help the Permittees avoid additional work and cost. NMED also reminds the Permittees that if contamination is present above residential SSLs/SALs, removal of contaminated tuff must continue until the cleanup levels are achieved unless reaching the cleanup levels is demonstrated to be impracticable as defined in Section VIII.E of the Order.

6. Section 4.10 Characterization Sampling of Excavation Bottoms, pages 15-16:

Permittees' Statement: "Samples will be collected from the bottom and each side wall of the excavation(s) at regular intervals, with a spacing between sample locations of no more than 50 ft. Each selected location will be sampled at a minimum of two depths when practicable, corresponding to approximately 0-0.5 ft and 1.5-2.0 ft below the floor or side slope of the

excavation, or at depths biased toward significant features such as fractures or weathered or clay-enriched zones.”

NMED Comment: The Permittees must explain the characterization sampling in greater detail. For example, will the maximum 50 ft interval apply laterally parallel and perpendicular to the long axis of the trench? The Permittees must also discuss how the sampling frequency and locations will be determined in the sidewalls of the excavation. The Permittees must also collect samples from areas of staining, elevated moisture zones, contaminated zones identified by field-screening, locations based on waste types removed, and areas with detected residual contamination.

7. Section 4.13 TA-21 Industrial Waste Line, page 16:

Permittees' Statement: “Samples will be collected from two depths beneath the line at each location selected, either at potholes or, if trenching is used, at locations biased to visible signs of pipe leakage, breaks, or joints. Samples will be collected at locations no more than 150 ft apart.”

NMED Comment: The Permittees must reduce the sampling interval beneath the industrial waste line to collection of one sample for every 50 linear feet or less. The Permittees must provide a map showing the revised proposed number of samples and their locations and also provide a summary of the proposed sampling, similar to Tables 4.10-1 and 4.14-1 for samples collected beneath the industrial waste line. The Permittees must revise the Work Plan accordingly.

8. Section 4.14 Borehole Sampling Activities, page 17, paragraph 1:

Permittees' Statement: “The locations of the boreholes will be determined by the nature and volumes of waste removed from the various sections of MDA B, and will be biased to areas where liquid wastes were disposed of, either in containers or directly into the unlined waste trenches. The boreholes will be located in areas selected to enhance the definition of the lateral and vertical extent of potential contamination.”

NMED Comment: Locations and numbers of boreholes and samples will be dependent on the confirmatory sampling results and observations made during fieldwork (e.g., staining and fractures). NMED cannot agree to a predetermined number of boreholes at this time. The Permittees must provide a section that details the decision-making process for determining borehole locations and number of samples required in the revised Plan. This section should include how the number of boreholes and their locations will be determined, how sampling intervals for both soil/tuff and pore-gas will be chosen, and contingencies if the objectives of the investigation are not achieved. References to predetermined numbers of boreholes and samples must be removed.

Following completion of excavation activities, the Permittees must submit a proposal to determine the extent of contaminant releases present in media that was not removed during the

remedial excavation. The Permittees must submit this proposal within 90 days after the conclusion of removal activities. The proposal shall include the analytical results from confirmatory sampling, a summary of excavation activities and how they pertain to choosing borehole locations, proposed number of boreholes and their locations, the proposed analytical suite for investigation samples (if different from the analytical suite in the approved Work Plan), sampling intervals (soil/tuff and pore-gas), and a map showing the proposed locations. The proposal must be approved by NMED prior to its execution. NMED requests that the Permittees keep NMED informed as to when sampling activities within the excavation are complete.

The Permittees must submit quarterly status reports once field activities are initiated that summarize the activities conducted during the reporting period. The first status report is due 90 days after the start of field activities. The status reports shall include, but are not limited to, field observations, confirmatory sampling results, descriptions of types of waste encountered, areas of concentrated waste (e.g., liquids, sludges, containers), elevated moisture areas, and the spatial distribution of wastes. The Permittees must revise the Plan accordingly.

9. Section 5.1 Excavation Methods, page 19, bullet 6:

Permittees' Statement: "Excavation will continue until field screening (using laboratory methods) indicates that all undisturbed geologic material has levels below the appropriate SSLs for TAL metals, SVOCs, and VOCs, as determined by NMED (NMED 2005, 90802 or current version) or EPA (EPA 2005, 91002 or current version), and levels below the appropriate SALs for radionuclides (LANL 2005, 88493 or current version). In all cases, excavation will extend to a depth of 12 ft or at least 1 ft into undisturbed tuff, whichever is greater."

NMED Comment: Section 4.2 states, "The removal of contaminant source material will involve the excavation of buried historical waste and surrounding soil and tuff until contaminant levels are below industrial soil screening levels (SSLs)..." The Permittees can only estimate the total depth of the excavation at this time. The stopping point criterion will be based on whether the contaminant levels in native materials are below residential SSLs/SALs based on analytical results. Also, see general comment # 2 and specific comments #4 and #5. The Permittees must revise the Plan accordingly.

10. Section 5.2 Initial Screening Methods, page 20, paragraph 2:

Permittees' Statement: "Representative samples of excavated overburden and lay-back material (i.e., material that does not come from the waste trenches but has been excavated only to facilitate the safe removal of the waste trench contents) will be collected to make an initial determination about whether the material must be handled as waste. Existing sample data from previous investigations, where available, may be used to supplement initial screening of the overburden and lay-back material. A plan for representative sampling and analysis of this material will be developed."

NMED Comment: Based on previous surface sampling from 1998 and 2001, the surface soils (0-0.5') at MDA B contain radionuclides (particularly Plutonium-239) at levels above background. The Permittees should consider segregating approximately the top 6 inches of overburden (fill material) and dispose of this soil and any other overburden determined to contain radionuclides at levels that exceed cleanup criteria at an approved offsite low level radioactive waste (LLRW) facility. The Permittees should include a description of these activities in the Waste Characterization Plan.

11. Section 7.0 Schedule, page 25:

Permittees' Statement: "Fieldwork is expected to start in October 2006 and will take approximately 36 months to complete, with a scheduled finish date of October 31, 2009." "The investigation report will be submitted to NMED in December 2010."

NMED Comment: NMED will solicit public comment on the draft Plan. The revised Plan submitted in response to this NOD must therefore include a timeline for the proposal required in specific comment # 8. The Permittees must revise the Work Plan accordingly.

12. Figure 1.1-1 MDA B Site Plan, page 31:

NMED Comment: Figure B-26 in Appendix B of this Plan shows chemical pits on the western end of MDA B. The Permittees must revise Figure 1.1-1 to include the chemical pits.

13. Appendix C Management Plan for Investigation Derived Waste, page C-2, paragraph 3:

Permittees' Statement: "The Laboratory expects these wastes to be designated as LLW, RCRA hazardous, MLLW, and industrial, and they will be transported to, and disposed of at, TA-50."

NMED Comment: NMED reminds the Permittees that RCRA hazardous, MLLW, and possibly industrial waste cannot be disposed of at the Radioactive Liquid Waste Treatment Facility (RLWTF) at TA-50 as this facility is not permitted to treat hazardous and mixed waste. The Permittees must designate in Appendix C, which facility will accept each type of waste. Additionally, the Permittees must define 'industrial waste'.

14. Appendix C Management Plan for Investigation Derived Waste, Table C-1, Summary of Estimated IDW Generation and Management, page C-3:

NMED Comment: The Permittees must revise the "Expected Disposition" column of Table C-1 to state that RCRA hazardous waste, LLW, and MLLW will be disposed of at a Permitted Subtitle C facility rather than a "LANL-approved TSDF".

The Permittees must address all comments and submit a revised Plan within sixty (60) days of receipt of this letter. As part of the response letter that accompanies the revised Plan, the Permittees shall include a table that details where all revisions have been made to the Plan and

Messrs. Gregory and McInroy

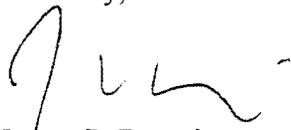
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that cross-references NMED's numbered comments. All submittals (including maps) must be in the form of two paper copies and one electronic copy in accordance with Section XI.A of the Order. In addition, NMED requests that a redline-strikeout version (electronic and hard copy) of the Plan be submitted with the response to this NOD.

Please contact Kathryn Chamberlain of my staff at (505) 428-2546 should you have any questions.

Sincerely,



James P. Bearzi

Chief

Hazardous Waste Bureau

JPB:kc

cc: K. Chamberlain, NMED HWB
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file: Reading and LANL TA-21 '06 (SWMU 21-015)

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