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PETER MAGGIORE
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TA-50

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

March 4, 2002

Dr. John C. Browne, Director
Los Alamos National Laboratory
P.O. Box 1663, MS A100
Los Alamos, NM 87545

Mr. David A. Gurule, Area Manager
Los Alamos Area Office
Department of Energy
528 35th Street, MS A316
Los Alamos, NM 87544

**RE: NOTICE OF DEFICIENCY
TECHNICAL ADEQUACY REVIEW
TA-50 RCRA PERMIT APPLICATION
DECEMBER 2000, REVISION 2.0
LOS ALAMOS NATIONAL LABORATORY
EPA ID NO. NM0890010515
HWB-LANL-99-048**

Dear Dr. Browne and Mr. Gurule:

The New Mexico Environment Department (NMED) has reviewed the Los Alamos National Laboratory and U.S. Department of Energy ("Permittees") response to a Request for Supplemental Information (RSI) issued by NMED on June 25, 2001, for the above-referenced Application. The Permittees' response is dated November, 2001.

Attachment A to this Notice of Deficiency (NOD) specifies information that was not adequately addressed in the RSI response. The requested information must be submitted to NMED within 30 days of receipt of this letter, and incorporated into the final revision of the TA-50 Application.

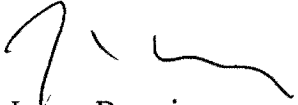


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Dr. Browne and Mr. Gurule
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If you have any questions or need additional information, please contact Steve Jetter of my staff at (505) 841-9488.

Sincerely



James Bearzi
Chief
Hazardous Waste Bureau

Attachment

cc: J. Kieling, NMED HWB
D. Cobrain, NMED HWB
C. Will, NMED HWB
S. Jetter, NMED HWB
A. Ortiz, NMED OGC
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G. Turner, DOE LAAO, MS A316

file: Reading and [REDACTED]

**ATTACHMENT A
NOTICE OF DEFICIENCY
TECHNICAL ADEQUACY REVIEW**

**TA-50 RCRA PERMIT APPLICATION
DECEMBER 2000, REVISION 2.0**

**LOS ALAMOS NATIONAL LABORATORY
EPA ID NO. NM0890010515**

March 4, 2002

Deficiencies in Permittees' November, 2001, Response to NMED's June 25, 2001, Request for Supplemental Information (RSI)

1. (NMED RSI Comment No. 1) Permittees response stating that the Application format was directed by NMED in correspondence to Permittees dated February 5, 1998, is inaccurate. The February 5, 1998, letter proposed a format for the permit, and does not address the Application format. NMED's concern with the current structure of the Application is the confusion created by having required information for individual units spread between three separate sections and the resulting increased difficulty in review by NMED and the public. NMED suggests that Section 2.0 be divided between Attachments A, Facility Description, and Attachment G, Container Management. Sections 2.1, 2.2, and 2.3 could be incorporated into Attachment A, and Sections 2.1.1 through 2.1.12 could be incorporated into Attachment G. All of Sections 2.1.1 through 2.1.12 deal with container management issues and should be included in the Attachment G, Container Management.

In addition, there are several inconsistencies in the description between the different sections. For example:

- 1) The description of the TA-50-69 Outdoor Container Storage Area (CSA) provided on page 2-4, Section 2.1, states, "transportainers and other weather protective structures ... **provide optional** weather protection..." Attachment A, page A-4, Section A.1.5, states, "Transportainers and other weather protective structures ... **will** be used to store waste." (Emphasis added.)
- 2) The surface drainage description for the TA-50-69 Outdoor CSA on page 2-4, Section 2.1, states "The pad slopes gently (approximately 1 to 5 percent) from east to west and up to 2.5 percent **toward the centerline.**" In Attachment G, page G-7, Section G.2.1.2, states, "Runon ... is prevented because both CSAs [TA-50-114 and TA-50-69 Outdoor] are **elevated by design**" and that "drainage swales ... divert storm water **away from the CSA.**" (Emphasis added.) Provide an engineered diagram of the TA-50-69 Outdoor CSA that shows the drainage and runon/runoff control features.
- 3) The description of Building 114 on page 2-3, Section 2.1 states, "The CSA is **divided into two separate lockers** by a metal wall, and has a grated floor above a recessed area...." The

description in Attachment A, page A-4, reads, "The locker contains an elevated grated floor above a **divided recessed area....**" (Emphasis added.)

- 4) Page 2-4, Section 2.1.1, states that various sized steel or poly drums will be used. Attachment G, page G-1, Section G.1.1 mentions steel drums only.

Resolve these discrepancies in the revised Application.

2. (Comment No. 4) In addition to stating that no free liquid will be stored at the TA-50 CSAs, include in the revised Application procedures for determining the presence of free liquid, results or documentation to show that the wastes do not contain free liquids, and a reference to the section of the Waste Analysis Plan that addresses these procedures. [§270.15(b)(1)]

3. (Comment No. 7) There is a discrepancy in the capacity of Room 118 between the response text and figure provided in the response Appendix B. The response states that Room 118 has a capacity of 5500 gallons or 100 55-gallon drums. The figure indicates a capacity of 108 55-gallon drums or 5940 gallons. See also Comment 23 below regarding adequate aisle space.

4. (Comment No. 9) The NMED comment was directed toward the issue of fact, not legal authority. The effluent discharge is ongoing and it is inaccurate to describe it in the past tense. The statement on Application page 4-4, section 4.1.4, that "The area where treated effluent was discharged ..." (emphasis added), indicates that this effluent discharge point was either moved or is otherwise no longer used to discharge effluent from the Radioactive Liquid Waste Treatment Facility. As stated in Permittees' response, this is an active discharge. Therefore, revise the Application language to describe the effluent discharge in the present tense.

As requested in the RSI, include a summary table of outfall effluent contaminant levels and alluvial, intermediate, and regional groundwater sampling results. Only information on sediment and soil samples was submitted. No data was submitted for groundwater sampling results from the alluvial, intermediate, or regional wells installed to monitor this location. A complete summary table including sediment, soil and groundwater data for the Contaminants of Potential Concern (COPC's) must be submitted in the revised Application.

5. (Comment No. 10) Include the response language in the revised Application. Also, provide a legible map (Appendix E) and the title for the referenced 1996 RFI Report.

6. (Comment No. 11) Include the response language in the revised Application, either as text in the document or in the SWMU Report, and include the titles of the referenced reports and a COPC summary table as requested.

7. (Comment No. 12) Include information on air emission and deposition contaminant levels in the SWMU Reports to be submitted to fulfill the requirements of 20.4.1.900 NMAC (incorporating 40 C.F.R. § 270.14(d)).

8. (Comments Nos. 13 and 14) In discussions with the Permittees about their response to the RSI, NMED agreed that submittal of updated SWMU Reports, meeting the requirements of 20.4.1.900 NMAC (incorporating 40 C.F.R. § 270.14(d)), could fulfill the requirement to include SWMU information in the Application under 20.4.1.900 NMAC (incorporating 40 C.F.R. § 270.14(d)). NMED agreed to this after Permittees provided verbal assurance to NMED prior to submittal of the SWMU Reports that the Reports would indicate where there were significant detections of contaminants. NMED specifically cited MDA C as an example of a site with significant contamination that was not adequately described in the Application, because tritium was detected at MDA C at up to 23,000,000 pci/L. When the SWMU Report for MDA C was submitted, it only stated that tritium was detected "at a range of concentrations." Because Permittees did not provide an indication of the significance of the detections, as requested by NMED and as agreed to by the Permittees, NMED will require the submittal of a COPC summary table and other information originally requested in the RSI for sites with significant contamination.

Permittees' proposed language modification describing the presence of radionuclides within or directly below MDA C is misleading. Permittees have not determined that contamination exists only within the perimeter of MDA C. There has been insufficient investigation at depth along the perimeter to determine whether or not contamination has spread beyond the perimeter of MDA C. Revise the Application to state that neither the vertical or horizontal extent of contamination has been determined.

9. (Comment No. 15) Include the response language, including Appendix I, in the revised Application. Delete the sentence beginning "However, because the TA-50 SWMUs..."

10. (Comment No. 16) Permittees' response does not address the schedule for corrective action and determining risk from the operational releases, for example airborne releases from stack emissions and effluent discharge, discussed in Section 4.1.4 as requested in the RSI. Revise the Application as requested.

11. (Comment No. 17) Address run-off from the site as a whole, not just from the CSA units. Revise the Application to include a discussion of potential run-off of surface contamination from TA-50 as a whole, including from sources such as airborne emissions and MDA C.

12. (Comment No. 18) NMED disagrees with Permittees' position that "LANL meets the definition of an existing facility contained in 20.4.1.500 NMAC §260.10 and, therefore, the requirement cited (§264.18) is not applicable to TA-50." Under 20.4.1.500 NMAC (incorporating 40 C.F.R. § 264.10), "existing facility" means "a facility which was in operation or for which construction commenced on or before November 19, 1980" and "facility" means "all contiguous land . . . used for treating, storing, or disposing of hazardous waste." Therefore, new units not on land contiguous to existing hazardous waste management units are not exempt from the requirements of 20.4.1.500 NMAC (incorporating 40 C.F.R. § 264.18(a)). NMED does

agree that those units at TA-50 to be permitted under the Application are exempt from seismic standards, because they are on land contiguous with treatment or storage units, provided Permittees submit documentation that hazardous waste management units at TA-50 were in operation on or before November 19, 1980.

13. (Comment No. 20) Permittees' response references Appendix J, "Copy of the 'U.S. Department of Energy Report 2000 LANL Radionuclide Air Emissions' LA-13839-MS." NMED believes Permittees intended Appendix I, "Information on Groundwater and Drinking Water Monitoring Programs," and NMED's response is to Appendix I. Permittees' response is not adequate. Appendix I describes the following: Mortandad Canyon Groundwater Discharge Plan alluvial monitoring at four unspecified locations for nitrate, fluoride, and TDS; Mortandad Canyon Annual Surveillance alluvial and regional aquifer monitoring at unspecified locations for generally identified analytes not including organics; Canada del Buey Discharge Permit alluvial monitoring at one unspecified location for nitrate, chloride, and TDS, reported to the NMED Groundwater Quality Bureau; Annual Surveillance alluvial, intermediate, and regional monitoring at unspecified locations for generally identified analytes, not including organics; SDWA [?] monitoring; drinking water monitoring; and Hydrogeologic Work Plan characterization. This does not describe a groundwater monitoring program adequate to detect releases from TA-50. NMED will require adequate groundwater monitoring as a Permit condition.

14. (Comment No. 24) Include the last sentence of the third bullet of the response in the revised Application, with the revision that the methods of disposition of the waste will be provided as an amendment to the Closure Plan at the time of closure and not as information provided in a closure report as stated in the response.

Application Sections F.1.11.3 and F.1.11.5, referenced in the response, deal with decontamination of sampling equipment, not the procedures for the decontamination of equipment and structures used during waste handling operations.

Revise Section F.1.11.7 to include the analytical methods and procedures for radionuclide sampling.

Revise the Closure Plan to provide more detail of the following:

- a) Procedures for cleaning equipment;
- b) Procedures for collecting samples and test methods for surface swipe samples. Sections F1.1, F.1.10.4, and F.1.13 of the Application reference collection of surface samples and analytical evidence. However, Section F.1.11 addresses only the procedures for collecting soil and wash water samples. In order to satisfy the requirements of 20.4.1.500 NMAC (incorporating 40 C.F.R. § 264.112(b)(4)), Permittees must include procedures on when, where, how many, and how surface swipe samples will be collected, the procedures for collecting these samples, and test methods.

15. (Comment No. 45) The Application, page F-8, line 2, states that “soil samples will be collected from areas showing evidence of contamination...” Evidence of contamination is not always obvious and therefore cannot be relied upon exclusively for determining sampling locations. The reference in the comment to failed containment systems is in reference to failed storage structures such as deteriorated surfaces or cracks in the floors or walls. Revise the Application to include language stating that samples will be collected from “areas showing evidence of contamination, areas of potential contamination such as sumps, drainages, etc., and areas of deteriorated or failed surfaces.”

The Application, page F-7, Section F.1.10, states that wall and floor surfaces will be inspected to identify defects that could result in failure to contain wash water and that if defects are found they will be repaired or sealed. Revise the Application to discuss how these failed surfaces will be monitored or sampled to ensure that no contamination had migrated through these failed surfaces prior to them being sealed.

16. (Comment No. 41) Instead of deleting the section on post-closure care, replace the language in this section with language stating that “All hazardous waste and waste residues will be removed or decontaminated at closure in compliance with 20.4.1.500 NMAC (incorporating 40 C.F.R. 264.178). Therefore these units will not be subject to the post closure care requirements.”

17. (Comment No. 43) In the revised Application replace “if appropriate” in the response with “if above standards.”

18. (Comment No. 44) Use of the word “and” between “hazardous and radioactive” means that both must be present in order for the wash water to be managed properly. This is not the case; both hazardous and radioactive contaminated wash water must be managed properly. Permittees' proposed language precludes hazardous waste that is not mixed waste. Revise the Application as requested in the RSI, unless the Permittees object to a statement that they will appropriately manage radioactive waste.

19. (Comment No. 47) Basing decontamination verification on sampling of the wash water only is inadequate. The use of the wash water solution may be appropriate for loose contamination, but will not remove fixed contamination. In addition, use of wash water to determine decontamination can result in significant dilution of constituents and does not allow for the identification of contaminant hot spots. Therefore, NMED requires that swipe samples be collected at closure of container storage areas. Swipe samples shall be collected from all areas showing signs of contamination, in areas of likely contamination such as sumps and basins, with a minimum of four samples per room or on a grid of one sample per every 100 square feet. In addition, decontamination verification for radionuclides should also be performed using swipe-sampling analysis pursuant to Nuclear Regulatory Commission Regulatory Guide 1.86. Revise the Application accordingly.

20. (Comment No. 48) NMED will require the requested closure criteria as a Permit condition. The use of technical or administrative controls implies that hazardous waste or hazardous waste residues are left in place at the unit, and that closure therefore does not meet the requirement to remove or decontaminate hazardous waste and hazardous waste residues under 20.4.1.500 NMAC (incorporating 40 C.F.R. § 264.178). There is flexibility available in the means of achieving closure standards, but Permittees must meet those standards in order to demonstrate removal or decontamination under 20.4.1.500 NMAC (incorporating 40 C.F.R. § 264.178).

21. (Comment No. 50) Although waste is to be stored in self contained structures at the TA-50-69 Outdoor CSA, the storage pad does not have any cover that protects it from the weather. The likelihood of waste escaping to the surrounding environment is therefore greater at this CSA than at those units contained within a building. Therefore, NMED requires that soil sampling be performed at the Outdoor CSA during closure and that sampling locations take into consideration accumulation areas, such as the downgradient end of the storage pad, drainages, and low points, in addition to the use of records and visual inspection. Revise the Application to include this requirement.

22. (Comment No. 52) The description of the loading/unloading operations addressed in Section G.1.2.2 is inadequate. 20.4.1.900 NMAC (incorporating 40 C.F.R. § 270.14(b)(8)) requires a description of procedures, structures, and equipment used to prevent hazards during unloading operations. Revise the Application to describe all loading/unloading areas, including their location in relation to the CSAs, a description of how these areas are designed to prevent hazards, and procedures and equipment used to prevent hazards during loading/unloading operations. In addition, figure A-9, page A-19, does not show the loading/unloading area for Building 37. Revise Figure A-9 to show the loading/unloading area.

New Comments:

23. Page 2-5, Section 2.1.4, Aisle Space and Section G.3, Storage Configuration: Provide the specific aisle width to be maintained at the CSA's. If the width varies between each CSA, provide the aisle widths in the appropriate sections in the Application, Attachment G. Typically an aisle space of three feet is used. If a narrower width is used, provide justification that the width will not interfere with inspections or the unobstructed movement of personnel, fire, and spill equipment during an emergency.

24. Page 2-6, Section 2.1.8, Management of Containers: Include in the revised Application a copy of the written facility-specific procedures for container management referenced in this Section.

25. Pages A-2 and A-3, Section A.1, Facility Description: Submit a list of all hazardous waste management units at TA-50, that were at any time permitted or interim status units, and that are not included as units to be permitted in the Application. Include a description of the

Attachment A
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closure status of each such unit. According to Permittees' List of Permitted and Interim Status Units at LANL, dated January 10, 2002, and submitted to NMED on January 16, 2002, TA-50-37 Room 112 does not currently exist, while the Application, page A-3, states that Room 112 is an existing interim status or permitted unit. Clarify the status of Room 112.