

12/22/1995

TA-54

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Department of Energy
Albuquerque Operations Office
Los Alamos Area Office
Los Alamos, New Mexico 87544

Benito Garcia, Bureau Chief
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Bureau
New Mexico Environment Department
2044 Galisteo St., Building A
P. O. Box 26110
Santa Fe, New Mexico 87505

Dear Mr. Garcia:

Subject: Proposed Hazardous Waste Facility Permit Revisions for the Transuranic Waste
Inspectable Storage Project (TWISP)

The purpose of this letter is to transmit suggested language to revise the permit for mixed waste container storage areas at the Los Alamos National Laboratory (LANL) TWISP at Technical Area (TA) 54, Area G. The suggested language will modify the Resource Conservation and Recovery Act (RCRA) Hazardous Waste Facility Permit issued to the Department of Energy (DOE) and the University of California (UC) for LANL by the New Mexico Environmental Improvement Division (now the New Mexico Environment Department [NMED]) on November 8, 1989. LANL's Hazardous Waste Facility Permit and United States Environmental Protection Agency identification numbers are NM0890010515-1 and NM0890010515, respectively.

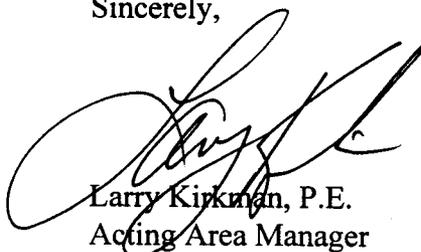
The suggested permit language was prepared in accordance with the New Mexico Administrative Code, Title 20, Chapter 4, Part 1 (20 NMAC 4.1), as revised November 1, 1995, Subpart IX, at the request of NMED. If approved for inclusion in the hazardous waste facility permit, the revisions will formalize the conditions for storage of mixed waste at seven TWISP container storage areas. This storage will be used to implement the requirements of the December 10, 1993 Consent Agreement between NMED, DOE and UC. The Consent Agreement resolved the New Mexico Hazardous Waste Act Compliance Order 93-03 regarding a remedial action plan for placing mixed waste currently placed at LANL TA-54, Area G, Storage Pads 1, 2, and 4 into storage complying with the Act. The suggested permit revision language, if approved, will supplement the Conditional Approval of RCRA Hazardous Waste Permit Modifications Notice from NMED of May 11, 1994, regarding TWISP.



The permit revisions are specifically suggested for the TA-54, Area G, TA-54-226 Retrieval Dome, the TA-54-229, -230, -231, and -232 Storage Domes and Storage Pads 2 and 4. Detailed information regarding these container storage areas was initially provided to your office as the RCRA Part B Permit Application, September 1993, Rev. 0.0. As requested in a meeting with the Permitting Section of the Hazardous and Radioactive Materials Bureau on October 27, 1995, a permit revision summary including descriptions of the affected permit sections and project changes since 1993 is also enclosed.

Thank you in advance for your consideration of the suggested revisions. If you have any further questions, please contact Jody Plum, Office of Environment and Projects, at (505) 665-5042.

Sincerely,



Larry Kirkman, P.E.
Acting Area Manager

LAAMEP:2JP-025

Enclosures

cc w/enclosures:

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SUMMARY OF SUGGESTED HAZARDOUS WASTE FACILITY PERMIT AMENDMENTS FOR THE TRANSURANIC WASTE INSPECTABLE STORAGE PROJECT

The purpose of this attachment is to summarize requested permit revisions to the Los Alamos National Laboratory (LANL) Resource Conservation and Recovery Act (RCRA) Hazardous Waste Facility Permit issued to the Department of Energy (DOE) and the University of California (UC) for LANL by the New Mexico Environmental Improvement Division (now the New Mexico Environment Department [NMED]) on November 8, 1989. The permit revisions involve changes to the permit text associated with seven new mixed waste container storage areas located in Technical Area (TA) 54, Area G. The container storage areas will be used to implement a retrieval operation for the wastes currently stored in Storage Pads 1, 2, and 4 at TA-54. The retrieval project is the Transuranic Waste Inspectable Storage Project (TWISP) required by the December 10, 1993, Consent Agreement between NMED, DOE, and UC.

The TWISP permit modifications were conditionally approved by NMED on May 11, 1994. The requested permit revisions propose new permit language necessary to incorporate the container storage for the project. This storage includes four new storage domes, TA-54-229, -230, -231, and -232 at Area G, and three existing storage pads, TA-54-226, -Storage Pad 2, and -Storage Pad 4 that will be retrofitted as domes as part of the project. Descriptions of these container storage areas have been previously submitted to NMED in LANL's "RCRA Part B Permit Application, Storage Pads 1, 2, and 4; Storage Domes A-D, Technical Area 54, Area G, Chemical Plating Waste Treatment Skid; Treated Liquid Storage Tanks, Technical Area 63, Hazardous Waste Treatment Facility" of September, 1993.

The requested permit revisions have been limited to those sections of the permit that are directly affected by the addition of the new container storage areas or where significant operational changes have occurred in LANL procedure since the original permit was issued. Some of the revisions have been previously submitted as relevant for other permit modification requests (e.g., the proposed Hazardous Waste Facility Permit Modification for TA-50 and TA-54 West, December 22, 1995). It is anticipated that other more generic changes to the permit will be made during future scheduled permit modifications or the permit renewal process for 1999.

The summary below contains two parts. The first part provides a brief description of the proposed revisions to the hazardous waste facility permit. A complete listing of the specific changes to each permit section are included in the Proposed Hazardous Waste Facility Permit Modification as the enclosed Table, "Proposed Hazardous Waste Facility Modified Permit Summary for Container Storage Areas at Technical Area 54, Area G, TA-54-226, -229, -230, -231, -232, Pad 2, and Pad 4." The second part of the summary contains information on project design considerations that have been developed since the September, 1993, RCRA Part B Application.

A. Proposed Revisions to the Hazardous Waste Facility Permit

The revisions occur in one permit module, the existing facility figure section, and in seven permit attachments. The permit module affected is Module III, "Storage in Containers." The seven permit attachments include Permit Attachment A "Waste Analysis Plan," Permit

Attachment B "Inspection Plan," Permit Attachment C "Personnel Training," Permit Attachment D "Contingency Plan," Permit Attachment E "Closure Plan," Permit Attachment F "Container Management," and Permit Attachment G "Authorized Wastes." Revisions to these sections were based upon the newest electronic version of the permit currently being reviewed by the Hazardous and Radioactive Materials Bureau (HRMB), NMED. Changes to the existing permit language have been highlighted in the "redline/strikeout" format. Descriptions of the proposed revisions to each section follow.

Permit Module III "Storage Containers" has been revised to include the additional permitted container storage areas requested, update regulatory citations, and include the relevant waste quantities. A new subsection has been added to Section III.A. "Designated Storage Units," to include the new container storage areas at TA-54, Area G. Mixed waste references and regulatory citations for the New Mexico Administrative Code, Title 20, Chapter 4, Part 1 (20 NMAC 4.1), as revised November 1, 1995, have been added to the remaining sections of the permit module where appropriate. A new item describing the storage capacity of the locations has been added to Section III.C.3 "Quantity."

A new facility map has been included to show the container storage area locations at TA-54, Area G. The map is added to the existing figure drawings at the end of the permit module sections of the current permit.

Permit Attachment A "Waste Analysis Plan" has been revised with the addition of a new section describing waste characterization of transuranic (TRU) mixed waste. The TRU mixed waste analysis plan is the same as that submitted to NMED, March 31, 1995; and it was also included with the "Proposed Hazardous Waste Facility Permit Modification, Technical Area 50, Building 1, Rooms 35, 36, and 38/38A Container Storage Areas, Building 69, Indoor and Outdoor Container Storage Areas, Technical Area 54 West, Building 38, High Bay, Low Bay, Loading Dock, and Outdoor Container Storage Areas" submitted December 22, 1995. The attachment has also been reformatted as Attachments A.1 and A.2 pursuant to guidance from HRMB on October 27, 1995.

Various sections of Permit Attachment B "Inspection Plan" have been modified to include new information regarding communication and alarm equipment for the proposed storage areas and updated regulatory citations. A new version of the "Hazardous and Mixed Waste Facility Inspection Form" and instructions currently used at LANL have been added at the end of the attachment.

Permit Attachment C "Training Plan" has been completely replaced due to extensive revisions to the facility training procedures since the original permit was issued. Permit Attachment D "Contingency Plan" has also been replaced with the exception of language regarding implementation guidelines and emergency process shutdown of facility incinerators. These replacements have been submitted previously in the RCRA Part B Permit Application Request of September, 1993; the TA-16, Container Storage Areas and Open Burn Units, RCRA Part B Permit Application of June 30, 1995; and the proposed Hazardous Waste Facility Permit Modification for TA-50 and TA-54 West, of December 22, 1995. Tables D-6 and emergency equipment tables from the existing permit have also been retained. A new closure plan for the proposed container storage areas has been added to Permit Attachment E "Closure Plan."

Permit Attachment F "Container Management" has been revised to include descriptions of the proposed container storage areas and new language has been added to reflect changes in LANL waste container transport and management practices. Extensive language changes are proposed for Section F.1 "Container Packaging, Sampling, and Labeling" to update LANL procedures for waste characterization and transport documentation. Section F.2.1 "Specific Storage Areas" has been modified to include a new subsection for the proposed container storage area with waste storage descriptions consistent with existing permit language. Section F.2.2 "General Container Management Practices" has been modified to specify waste repackaging areas discussed in the existing permit and to add an aisle spacing cross reference.

Tables have been added to Permit Attachment G "Authorized Wastes" to incorporate the EPA Hazardous Waste numbers, estimated annual quantities, and process codes associated with the wastes to be stored at these container storage areas. The format used follows that of the original permit.

B. Project Changes Since September, 1993

The following discussions are provided as suggested by HRMB on October 27, 1995. The original information regarding TWISP was provided in the RCRA Part B Permit Application of September, 1993. Additional information was provided in response to the Notice of Deficiency issued by NMED on December 20, 1993. Portions of the information submitted at those times has been superseded by changes in project procedures, changes in LANL policy, or design changes. These changes are discussed below and their effect on the previously submitted information or the proposed permit revision language is noted.

1. Fire Control Equipment Upgrades. A dry-pipe sprinkler system will be added to TA-54-226 and TA-54-229 to enhance fire suppression activities for potentially combustible wastes. Segregation procedures will be developed to ensure that these type wastes will not be stored in the other domes. The fire hydrant water delivery capabilities at TWISP have also been upgraded. These upgrades are reflected in language contained in Permit Attachment D, Appendix D-1, page 45, "Fire Control Equipment."
2. Structure Identification Numbers. The September, 1993, Part B Application referenced the storage domes as Storage Domes A-D, and Storage Pads 1, 2, and 4. These units have since been issued permanent structure numbers and are referenced as such throughout the permit revisions.
3. TA-54-230 Improvements. This dome received design upgrades to enable the storage of drums and fiberglass reinforced crates that potentially contain liquids due to waste degradation or exposure. These included an improved concrete foundation, a high density polyethylene liner system and an auxiliary containment structure. A description of the upgrades, a new construction detail drawing, and a listing of other affected facility drawings were sent to the HRMB on July 6, 1995. Revision language to describe that TA-54-230 will be used for such storage has been added to Permit Module III, Section III.A.3.a; Permit Attachment E.10, page 1; and Permit Attachment F, Section F.2.1.6, page 4.
4. Movement of Retrieval Dome TA-54-226. The description of the retrieval dome operation activities contained in the September, 1993, TWISP RCRA Part B Permit Application states that after all wastes have been retrieved from Storage Pad 1 and placed into inspectable arrays in the storage domes, the retrieval dome will be relocated to Storage Pads 2 and 4 in turn for further

retrieval operations. If the drum retrieval and monitoring operations at Storage Pad 1 demonstrate that the weather protection and secondary release containment provided by the retrieval dome are not necessary, LANL proposes that the retrieval dome remain in its initial position. Subsequent retrieval operations at Storage Pads 2 and 4 would involve the removal of the earthen cover at the retrieval working face of the pad, field monitoring for radioactive constituents and visual inspection of the waste containers, retrieval of containers, and transport of the containers to the retrieval dome on Storage Pad 1. Subsequent drum venting and waste characterization activities would then be performed in the retrieval dome. At completion of the retrieval operations, the dome would be used for container storage on Storage Pad 1.

The primary containment on the Storage Pads is the earthen cover. Soil sampling on the surface of the earthen cover to this date has not indicated radionuclide releases directly attributable to the waste stored on the pads. By restricting the removal of the earthen cover to only that area on the working face where retrieval operations are occurring at the pad, the potential for releases and/or accidents is minimized. Retrieval operation and container integrity conditions will be monitored by continuous air monitors (CAM) at the working face, thereby helping to pinpoint any source of contamination and limit the potential extent of any remedial action. Containment structures or equipment will be available at the working face for use if needed.

In April, 1992, 16 drums from Storage Pad 2 were retrieved for examination to assist in certification activities. During the operations, CAMs did not detect anomalous radionuclide levels. Although one drum was damaged, 31 soil samples collected from the area confirmed that no release of radionuclides or hazardous constituents had occurred. Based on this example and if future review of the operations conducted for the initial retrieval of the waste containers in Storage Pad 1 warrants, LANL concludes that the movement of the retrieval dome may not be necessary. This option should be made available due to the reduced potential for worker accidents because of less construction and demolition, the reduction in associated costs, and the increased potential for a speedier retrieval of the waste containers.

As currently drafted, the hazardous waste facility permit does not include sections that would address this type of option. To include this option would require a change to the information in the retrieval project operations portions of the TWISP RCRA Part B Permit Application, September, 1993 (Section 4, "Waste Management Practices," Parts 4.1.1.2.).

5. Soil and Tuff Removal From Earthen Covers. Section 4.1.1.2.1, "Soil and Tuff Removal", of the TWISP RCRA Part B Permit Application of September, 1993 states that tuff will be removed from the Storage Pads with a vacuum truck or manually. As working space in the retrieval dome is limited, operations may require the use of other equipment such as small forklifts or small scale earth moving equipment. This change does not affect the hazardous waste facility permit language as currently drafted.

6. Security. An additional security barrier has been added to TA-54 since Section 5.1.1, "TA-54, Area G, Security" of the TWISP RCRA Part B Permit Application was submitted in September, 1993. A new security gate is in place at the west end of Mesita del Buey Road, adjacent to the TA-54 West Facilities. The gate is locked during non-operational hours. Emergency and security personnel can access TA-54 through the gate during such times using security badge readers. This addition does not affect the hazardous waste facility permit language as currently drafted.