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*LA-UR:* 17-25145  
*Locates Action No.:* NA

Ms. Michelle Hunter, Chief  
Ground Water Quality Bureau  
New Mexico Environment Department  
Harold Runnels Building, Room N2261  
1190 St. Francis Drive  
P.O. Box 26110  
Santa Fe, NM 87502

**Subject: Filing of 100% Design Plans and Specifications, Radioactive Liquid Waste Treatment Facility Upgrade—Transuranic Liquid Waste Project, DP-1132**

Dear Ms. Hunter:

In accordance with Section 20.6.2.1202 of the New Mexico Administrative Code, *Filing of Plans and Specifications—Sewerage Systems*, the U.S. Department of Energy and Los Alamos National Security, LLC (DOE/LANS) are submitting the 100% design plans and specifications (Enclosure 1—CD) for the Radioactive Liquid Waste Treatment Facility Upgrade—Transuranic Liquid Waste (RLWTF-TLW) Project at Technical Area (TA)-50. In December 2015 DOE/LANS provided the New Mexico Environment Department (NMED) with the 60% design plans and specifications for the RLWTF-TLW Project (ENV-DO-15-0359). The NMED responded to DOE/LANS request for comments on the 60% design in January 2016. In January 2017 DOE/LANS submitted the 90% design for the RLWTF-TLW Project (EPC-DO-17-007). The enclosed 100% design plans and specifications are ready for construction. The start of construction is tentatively planned for spring 2018.



The RLWTF-TLW Project scope is to replace the existing transuranic liquid waste (TLW) treatment capability at Los Alamos National Laboratory. This project is a “like-for-like” replacement of the capability currently provided in RLWTF – Room 60, with the following exceptions:

- Equipment will be modernized per technological advances;
- Additional systems and equipment will be employed as needed to meet current orders, regulations, requirements, influent characteristics, etc.; and
- Facility and equipment sizing will be based on current projections of future capacity as opposed to the capacity available in the existing RLWTF.

The TLW process is comprised of the following three primary systems:

- Transuranic (TRU) Waste Influent Storage System;
- TRU Waste Treatment System; and
- TRU Secondary Waste treatment and Packaging System.

The TRU Waste Influent Storage System receives approximately 29,000 liters per year of TRU acid and caustic waste in approximately 400 liter batches of either acid or caustic liquid waste. It then transfers the waste to the TRU Waste Treatment System for treatment to remove radionuclides.

The TLW Waste Treatment System receives TRU waste from the TRU Waste Influent Storage System and provides primary treatment for removal of radioactive components. Treated water (product water) from TLW Waste Treatment System is transferred to the headworks of the Low-Level Waste Treatment System (LLW). The TRU Waste Treatment System also transfers the resulting secondary waste to the TRU Secondary Waste Treatment and Packaging System for secondary treatment and packaging for disposal.

The TRU Secondary Waste Treatment and Packaging System collects, dewateres, and packages solids received from the tanks and equipment skids associated with the TRU Waste Treatment System. The RLWTF-TLW Project will be located at TA-50. The facility will consist of a single building.


Please contact Karen E. Armijo by telephone at (505) 665-7314 or by email at [Karen.Armijo@nnsa.doe.gov](mailto:Karen.Armijo@nnsa.doe.gov), or Robert S. Beers by telephone at (505) 667-7969 or by email at [bbeers@lanl.gov](mailto:bbeers@lanl.gov) if you have questions regarding these plans and specifications.

Sincerely,



Anthony R. Grieggs  
Group Leader

Sincerely,



Karen E. Armijo  
Permitting and Compliance Program Manager

ARG/KEA/MTS/RSB:am

Enclosure:

- (1) Compact Disc (CD) containing the 100% Design Plans and Specifications, Radioactive Liquid Waste Treatment Facility Upgrade--Transuranic Liquid Waste Project

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# **ENCLOSURE 1**

Compact Disc (CD) containing the 100% Design  
Plans and Specifications, Radioactive Liquid Waste  
Treatment Facility Upgrade–Transuranic Liquid  
Waste Project

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