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Date: JAN 18 2017
Symbol: EPC-DO-17-007
LA-UR: 17-20013
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

Dear Ms. Hunter:

Subject: Filing of 90% Design Plans and Specifications, Radioactive Liquid Waste Treatment Facility Upgrade—Transuranic Liquid Waste Project, DP-1132

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 90% 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. The NMED responded to DOE/LANS request for comments on the 60% design on January 29, 2016. A copy of NMED’s response letter is provided as Enclosure 2.



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:

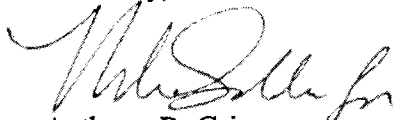
- Transuranic (TRU) Waste Influent Storage System;
- TRU Waste Treatment System; and
- TRU Secondary Waste treatment and Packaging System.

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, dewater, 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, or Robert S. Beers by telephone at (505) 667-7969 or by email at bbeers@lanl.gov if you have questions regarding these plans and specifications.

Sincerely,



Anthony R. Grieggs
Group Leader
Environmental Compliance Programs
Los Alamos National Security, LLC

Sincerely,



Karen E. Armijo
Permitting and Compliance Program Manager
National Nuclear Security Administration
Los Alamos Field Office
U.S. Department of Energy

ARG:KEA:MTS:RSB/

Enclosure:

- (1) Compact Disc (CD) containing the 90% Design Plans and Specifications, Radioactive Liquid Waste Treatment Facility Upgrade–Transuranic Liquid Waste Project
- (2) NMED letter providing comments on the 60% design plans and specifications for the TLW Upgrade Project, January 29, 2016

Cy: Shelly Lemon, NMED/SWQB, Santa Fe, NM, (E-File)
John E. Kieling, NMED/HWB, Santa Fe, NM, (E-File)
Stephen M. Yanicak, NMED/DOE/OB, (E-File)
Jody M. Pugh, NA-LA, (E-File)
Karen E. Armijo, NA-LA, (E-File)
Eric L. Trujillo, LASO-OTHER, (E-File)
Craig S. Leasure, PADOPS, (E-File)
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Cindy L. Costa, PM1, (E-File)
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Randal S. Johnson, DESHF-TA55, (E-File)
Stephen G. Cossey, DESHF-TA55, (E-File)
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John C. Del Signore, TA-55-RLW, (E-File)
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ENCLOSURE 1

**Compact Disc (CD) containing the 90% Design Plans
and Specifications, Radioactive Liquid Waste
Treatment Facility Upgrade–Transuranic
Liquid Waste Project**

ENV-DO-17-007

LA-UR-17-20013

Date: JAN 18 2017

ENCLOSURE 2

**NMED letter providing comments on the 60%
design plans and specifications for the TLW
Upgrade Project, January 29, 2016**

ENV-DO-17-007

LA-UR-17-20013

Date: JAN 18 2017



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Governor

JOHN A. SANCHEZ
Lieutenant Governor

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RYAN FLYNN
Cabinet Secretary

BUTCH TONGATE
Deputy Secretary

January 29, 2016

RECEIVED

FEB 05 2016

Alison M. Dorries, Division Leader
Environmental Protection Division
Los Alamos National Laboratory
P.O. Box 1663 MS K490
Los Alamos, New Mexico 87545-0001

RE: Comments on 60% Design Plans and Specifications Radioactive Liquid Waste Treatment Facility - Upgrade Project Transuranic Liquid Waste Project, DP-1132

Dear Ms. Dorries:

The New Mexico Environment Department, Ground Water Quality Bureau (GWQB) has received from the Department of Energy and Los Alamos National Security LLC (DOE/LANS) design documents for the Radioactive Liquid Waste Treatment Facility Upgrade Project (RLWTF UP) including:

- 60% design plans and specifications for the RLWTF UP at Technical Area (TA)-50, including supplemental information to discharge permit application DP-1132.

The DOE/LANS has requested comments from GWQB on the referenced plans and specifications. GWQB has reviewed the 60% plans and specifications for compliance with basic elements necessary for protection of groundwater quality. GWQB makes no comment regarding the design adequacy, compliance with applicable State, Federal, and local statute, code and requirements.

The review confirms that the design, construction specifications, proposed systems and calculations are generally appropriate, and include adequate safeguards to protect groundwater quality including secondary containment for in-service drums of ferric chloride, and structural integrity of sanitary sewer lines and their connections to manholes. While not a concern for ground water, the GWQB notes that the water quality acute criterion for chlorine in surface water is 19 ug/L, which needs to be taken into account if chlorinated water from disinfecting water

Alison M. Dorries, DP-1132, Comments on 60% Design Plans and Specifications Radioactive Liquid Waste Treatment Facility
January 29, 2016
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supply pipe is discharged to a surface water. Also, in Section 22 0816, 3.4 D, the word "chloride" should be "chlorine".

As a sealed engineering document, GWQB relies on the design engineer for the efficacy of the design to meet permit requirements. GWQB similarly relies on DOE/LANS to provide adequate construction oversight to ensure conformance with the design specifications. Construction of the facility prior to issuance of the final approved Discharge Permit will proceed at DOE/LANS own risk, should DOE/LANS decide to proceed with construction before GWQB issues the final permit.

The GWQB appreciates the opportunity to provide these comments on the proposed RLWTF Upgrade Project. Please contact me or Steven Huddleson at (505) 827-2936 if you have any questions.

Sincerely,



Michelle Hunter, Chief
Ground Water Quality Bureau

cc: Gene E. Turner, Los Alamos National Laboratory, P.O. Box 1663 MS K490
Los Alamos, New Mexico 87545-0001
John Kieling, Hazardous Waste Bureau (electronic copy)
Jim Chiasson, Construction Programs Bureau (electronic copy)
Steven Huddleson, Ground Water Quality Bureau (electronic copy)
Gerard Knutson, Ground Water Quality Bureau (electronic copy)
Bruce Yurdin, Surface Water Quality Bureau (electronic copy)
Jennifer Hower, Office of General Counsel (electronic copy)