



**Department of Energy**

Albuquerque Operations Office  
Los Alamos Area Office  
Los Alamos, New Mexico 87544

FEB 13 1998

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Benito Garcia, Bureau Chief  
Hazardous and Radioactive Materials Bureau  
New Mexico Environment Department  
2044 Galisteo St., Bldg. A  
P. O. Box 26110  
Santa Fe, NM 87505

Dear Mr. Garcia:

Subject: FY 1998 First Quarterly Progress Report, Consent Agreement for Compliance Orders NMHWA 93-01, 93-02, 93-03, 93-04

Enclosed for your review is the FY 1998 first quarterly progress report for the Transuranic Waste Inspectable Storage Project (TWISP) at Los Alamos National Laboratory (LANL). The report is required by Section IX.C of the referenced December 10, 1993 Consent Agreement. It is being submitted by the Department of Energy (DOE) and the University of California (UC).

The enclosed report addresses the activities related to the TWISP during the reporting period of November 1, 1997 through January 31, 1998. The following elements, as required by the referenced Consent Agreement, are addressed in the enclosed report:

- I. A brief description of activities completed during the reporting period to implement the requirements of the Consent Agreement.
- II. A brief description of activities scheduled for the following reporting period.
- III. A description of any change in key project personnel which occurred during the reporting period.
- IV. A description of problems encountered during the reporting period and mechanisms used or proposed for resolving the problems.
- V. Tables and figures summarizing all data, sampling and test results for the period.



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Supporting documents will be retained at the Los Alamos Area Office, and will be made available to your staff upon request. As you can see, there has been significant progress. We will continue to keep you apprised of the progress as per our agreement. If you should have any questions, please feel free to contact Jody Plum of my staff at (505) 665-5042.

Sincerely,

  
Joseph C. Vozella  
Assistant Area Manager  
Office of Environment

LAAME:6JP-046

Enclosure

cc w/enclosure:  
John Tymkowych  
Hazardous and Radioactive  
Materials Bureau  
New Mexico Environment Department  
2044 Galisteo Street  
P. O. Box 26110  
Santa Fe, NM 87505

**TRANSURANIC WASTE INSPECTABLE STORAGE PROJECT  
QUARTERLY PROGRESS REPORT  
NOVEMBER 1, 1997 - JANUARY, 1998**

The Transuranic (TRU) Waste Inspectable Storage Project (TWISP) was initiated in February 1993 in response to the New Mexico Environment Department's (NMED) Consent Agreement for Compliance Order NMHWA 93-03. The TWISP involves the recovery of approximately 16,865 TRU and TRU-mixed waste containers currently under earthen cover on Pads 1, 2, and 4 at Technical Area (TA)-54 Area G, and placement of that waste into inspectable storage. All waste will be moved into inspectable storage by September 30, 2003. Waste recovery and storage operations will emphasize protection of worker safety, public health, and the environment.

**I. Activities accomplished during the period November 1, 1997 – January 31, 1998**

**1. Summary**

- The Drum Venting System (DVS) remains fully operational. The Detailed Operating Procedure for the DVS was updated, and validated. Training for the operation of the DVS continues in order to optimize safety. All DVS operators have been trained. All training requirements were met. 3,000 fifty-five-gallon drums were successfully vented.
- The systems maintenance procedure for the DVS was updated for FY98 and approved. Re-training to this procedure was completed. The DVS is operational, thus, maintenance of the system is ongoing per the applicable procedure.
- 3,200 fifty-five-gallon drums have been retrieved and washed.
- Three bulging 55-gallon drums were remotely vented at TWISP using the Laboratory's Hazardous Materials (HAZMAT) Team.
- Storage domes 231 and 232 were completed and are being used to store retrieved drums and Fiberglass Reinforced Polyester and Plywood (FRP) boxes.
- Soil removal from Pad 4 has been completed, and waste material covered.
- Real-time Radiography (RTR) of TWISP drums has started.

**2. TWISP Facility Construction**

The dry pipe fire suppression system was completed. Testing and fine-tuning of the system continue. The dry pipe fire suppression system installed in Domes 226, 229, 230 and 33 continues to experience significant problems. Due to the flexibility of the structures themselves, the piping system has experienced movement at the joints which is allowing the nitrogen gas to escape, and as designed, when the gas escapes the system charges with water. This movement has also resulted in pipes resting at a negative slope which causes pipes to become frozen, requiring shut down of the system while repairs are made and the system is drained, re-pressure tested and refilled with nitrogen. Depending on the outcome of these corrective measures, an estimate will be produced and a Baseline Change Proposal (BCP) submitted to cover the increase cost.

## **Corrective Actions:**

Alliance Fire Protection Company (installation contractor) has corrected the slope in the piping so positive sloping can be maintained for adequate drainage. The pipes will be spot checked (after a wind storm) to verify proper sloping. Flexible joints had previously been proposed by the engineer of record and rejected by the Facilities Fire Protection group (FSS-21) due to lack of approval by Underwriters Laboratory (UL). A white paper with various options was written and presented to DOE-LAAO.

### **3. Drum Vent System**

The Drum Vent System (DVS) is complete. Because this DVS was not able to be used at Rocky Flats as originally planned, LANL incorporated the DVS into TWISP operations. The DVS is fully operational.

### **4. Equipment Purchasing**

No major procurements.

### **5. Update on Waste Verification Facilities**

Development of new waste characterization processes to supplement existing process knowledge is ongoing. A brief description of planned facilities and equipment is provided below:

- **Drum Prep Facility:** Upgrades to the Drum Prep Facility (DPF) have been completed. The dry pipe fire suppression system has been completed. Testing and validation is ongoing. The DPF is fully operational and being used for drum washing, painting, and venting. A cooling system is being looked at for warm weather months of operations.
- **Waste Characterization Glovebox, Phases I (sorting), II (coring), and III (head space analysis):** A glovebox is now on site for use in Phase I activities. Ancillary equipment design for the Phase II glovebox has been completed and is scheduled for operation in March of 1998. Headspace analysis is operational in the Waste Characterization, Reduction and Repackaging Facility (WCRRF).
- **Waste Characterization, Reduction and Repackaging Facility (WCRRF) upgrades for verification of hazardous constituents:** The Safety Analysis Report has been approved, and is in the process of being implemented. An Operational Readiness Review (ORR) is required for operations to begin.
- **Real-time Radiography (RTR) for non-intrusive inspection of drum contents:** The mobile RTR system has been used successfully to inspect 630 drums currently stored in TA-54, Dome 48. The Chemistry, Science and Technology Division has started up RTR for all TWISP drums retrieved from Pad 1.
- **Segmented Tomographic Gamma Scanner (S/TGS) to quantify isotopic content of drums:** The Laboratory now has an operational mobile S/TGS that has been used at a

variety of Laboratory sites. The S/TGS was augmented with additional software to give it tomographic gamma scanning capabilities.

- **Passive active Neutron Assay (PAN):** The PAN is fully operational for assaying Pu-239 and U-235.

## **6. RCRA Permit Application Activities**

NMED final approval of RCRA permit modifications for TWISP and supporting operations remains on the critical path for the project. The TWISP permit modification is currently being reviewed by NMED legal staff. No date has been provided by NMED for completion of that review. Additional waste characterization capacity has also been requested in the TA-50 Radioactive Materials Research, Operations, and Demonstration Facility RCRA permit modification request submitted to NMED in December, 1996.

## **II. Activities scheduled for the period February 1, 1998, through April 30, 1998**

- 1 Amended Remedial Action Plan (ARAP) revisions in process
- 2 Complete retrieval of waste from Pad I.
- 3 Drum venting operations will continue.
- 4 The enhanced environmental surveillance of the TRU Pad area will continue.
- 5 Work will continue at the waste verification facilities.
- 6 Reliability of fire suppression system will continue to be evaluated.
- 7 Pad 4 retrieval will begin.
- 8 Drum washing activities will continue.
- 9 RTR will continue.

## **III. Changes in key personnel during the period November 1, 1997 - January 31, 1998**

No changes occurred.

## **IV. Problems encountered during the period November 1, 1997 – January 31 1998**

Section II outlines the problems encountered during this quarter.

## **V. Summary of monitoring during the period Nvember 1, 1997 – January 31, 1997**

Continuous air monitoring is on going in dome 226 (retrieval dome), domes 229, 230, 231, and 232 (storage domes) and, dome 33 (drum prep facility). No elevated readings have been detected.