



Generator

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

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MAY 14 1998

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

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



Dear Mr. Garcia:

SUBJECT: FY 1998 Second Quarterly Progress Report, Consent Agreement for Compliance Orders NMHWA 93-01, 93-02, 93-03, and 93-04

The purpose of this letter is to submit the FY 1998 second quarterly 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 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 February 1, 1998 through April 30, 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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Report

Benito Garcia

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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 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

Enclosure

cc w/enclosure:

John Tymkowych
Hazardous and Radioactive
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**TRANSURANIC WASTE INSPECTABLE STORAGE PROJECT
SECOND QUARTERLY PROGRESS REPORT
FEBRUARY 1, 1998 through APRIL 30, 1998**

The transuranic (TRU) Waste Inspectable Storage Project (TWISP) was initiated in February 1993 in response to the New Mexico Environment Department's (NMED's) Consent Agreement for Compliance Order's NMHWA 93-01, 93-02, 93-03, 93-04. 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 February 1, 1998 – April 30, 1998

1. Summary

- The Drum Venting System remains fully operational. The Detailed Operating Procedure for the Drum Venting System (DVS) is being 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. A total of 3,400 (55)-gallon drums have been successfully vented.
- The systems maintenance procedure for the DVS was updated and approved for FY98. Re-training to this procedure was completed. The DVS is operational, and maintenance of the system is ongoing per the applicable procedure.
- A total of 4,358 (55)-gallon drums have been retrieved and washed.
- 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.
- On March 9, 1998 the TWISP exercised Chapter 17 of the Safety Analysis Report (SAR), "Independent Safety Review". This review was performed to see how work has progressed since the last major review, approximately 11 months ago (TWISP Operational Readiness Review). As of April 9, 1998 TWISP is once again operational.

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 & 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.

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 windstorm) 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. 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.

3. Drum Vent System

The Drum Vent System (DVS) is complete. Because this DVS could not 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 will be installed for use during warm weather.

5. Update on Waste Verification Facilities (cont.)

- **Waste Characterization Glovebox, Phases I (sorting), II (coring), and III (head space analysis):** A glovebox for sorting, repackaging and visual examination is now on site and will soon be used in Phase I activities. Ancillary equipment design for the Phase II glovebox has been completed. Headspace analysis equipment is operational and being used 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.
- **Radioactive Materials Research, Operations and Demonstration Facility (RAMROD):** RAMROD personnel continue preparing for the Operational Readiness Review (ORR).
- **Real-time Radiography (RTR) for non-intrusive inspection of drum contents:** The Chemistry, Science and Technology Division has started up RTR for all TWISP drums retrieved from Pad 1. The mobile RTR system has been used successfully to inspect 1,100 drums currently stored in TA-54, Dome 229.
- **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. The system is presently being used at Idaho National Engineering and Environmental Laboratory (INEEL) for a comparison study.
- **Passive active Neutron Assay (PAN):** The PAN is fully operational for assaying Pu-239 and U-235. The system is currently being used at Technical Area 50 for WIPP drum characterization activities.

6. RCRA Permit Application Activities

NMED's final approval of RCRA permit modifications for TWISP and supporting operations remains on the critical path for the project. NMED legal staff is currently reviewing the TWISP permit modification. No date has been provided by NMED for completion of that review.

II. Activities scheduled for the period May 1, 1998, through July 31, 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 February 1, 1998 - April 30, 1998

No changes occurred.

IV. Problems encountered during the period February 1, 1998 - April 30, 1998

As discussed in the April monthly meeting between NMED (Mr. John Kieling), DOE-LAAO (Mr. Jody Plum) and LANL (Mr. Jack Ellvinger), TWISP operations has identified a potential safety concern related to certain requirements for inspecting, performing radiological surveys and overpacking drums to be retrieved from the waste stack on Pad 1. Soil used as a firebreak inside the waste container stack on Pad 1 is exerting pressure on the drums remaining in storage. As a result, these drums are leaning outward (forward) to such a degree that TWISP safety personnel want to minimize contact with containers on the top and front of the stack. Due to this concern, TWISP proposed (during the monthly meeting) to retrieve and overpack (if necessary) once drums are staged within the retrieval dome in a designated area where further visual inspection could occur. Additionally, TWISP proposed to retrieve drums from the stack and perform radiological surveys once the drum had been lowered to the ground. Although these proposed changes are not in accordance with the ARAP, TWISP believes that safety concerns associated with the leaning stack require that operations be adjusted in order to protect workers.

Other problems encountered during this quarter are described in detail in Section I, number 2.

V. Summary of monitoring during the period February 1, 1998 - April 30, 1998

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.