



Department of Energy
 Carlsbad Field Office
 P. O. Box 3090
 Carlsbad, New Mexico 88221

FEB 03 2005



Mr. Steve Zappe
 Hazardous Waste Permits program
 Hazardous Waste Bureau
 New Mexico Environment Department
 2905 E. Rodeo Park Drive, Building 1
 Santa Fe, New Mexico 87505-6303



Subject: Submittal of the Panel 3 Certification of Construction

Dear Mr. Zappe:

The purpose of this letter is to submit the Panel 3 Hazardous Waste Disposal Unit (HWDU) Professional Engineer Certification of Construction pursuant to Module IV.E.2 of the Waste Isolation Pilot Plant Hazardous Waste Facility Permit (HWFP), Number: NM4890139088-TSDF. This section requires the submission of a letter signed by the Permittees and a New Mexico registered professional engineer stating that the facility has been constructed or modified in compliance with the HWFP. Dr. Stanley J. Patchet, a New Mexico registered engineer, New Mexico Certificate Number 14139, performed the certification.

We certify under penalty of law that this document and all enclosures were prepared under our direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on our inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of our knowledge and belief, true, accurate, and complete. We are aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

A Class 1 permit modification to update the repository figures will follow. If you have questions, please call Mr. Jody Plum at (505) 234-7462.

Sincerely,

Dr. Inés R. Triay, Acting Manager
 US DOE Carlsbad Field Office

R. D. Raaz, General Manager
 Washington TRU Solutions LLC

Enclosure

050209



Mr. Steve Zappe

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cc: w/enclosure

C. Walker, Trinity Engineering * ED

G. Basabilvazo, CBFO ED

E. Preciado, CBFO ED

cc w/o enclosure

J. Bearzi, NMED ED

J. Kieling, NMED ED



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January 19, 2005

Dr. S. D. Warren
General Manager
Washington TRU Solutions, LLC
P O Box 2078
Carlsbad, NM 88221

Subject: CERTIFICATION OF CONSTRUCTION - PANEL 3 HAZARDOUS WASTE DISPOSAL
UNIT

Dear Dr. Warren:

Waste Isolation Pilot Plant (WIPP)
EPA ID No 48901309088-TSDF
Hazardous Waste Facility Final Permit M4890139088-TSDF, issued October 27, 1999 and as
subsequently modified (hereafter, the Permit)

1. Introduction

This letter certifies that the Panel 3 Hazardous Waste Disposal Unit (HWDU) identified in the Permit is constructed and commissioned in a manner such that it can be operated in compliance with the conditions of the Permit.

I was on site during the planning, implementation, and completion of the work described and regularly visited the work in progress. I observed construction and commissioning activities while in progress and reviewed representative samples of related documentation.

1.1. Identification of Unit Being Certified

The unit certified as constructed in compliance with the Permit is the Panel 3 HWDU. This panel consists of 7 rooms connected by two entries running from East 300 to Room 7. See Attachment 1, Drawing 51-W-214-W3 and Attachment 2, Figure M2-1 revised.

1.2. Exclusions

1.2.1. Main Entries/Panel 9

In order to access Panel 3 it was necessary to excavate a portion of the access drifts, which will eventually form Panel 9. These entries were excavated and completed in a manner to allow the operation of Panel 3, as allowed by the Permit, Section IV.E.2. They are not certified as a HWDU at this time.

1.2.2. Sub-System Design

This certification does not certify the designs of the various sub-systems installed in Panel 3. It certifies that all sub-systems required in the Permit are installed and operate as required by the Permit.

1.2.3. General Systems

This certification does not certify any systems that are not physically part of Panel 3, for example waste handling equipment.

1.2.4. Condition of Other Areas

This certification applies to Panel 3 only and does not certify the condition or status of any other area, HWDU, or portion of a HWDU.

1.2.5. Operations During Waste Emplacement

This certification applies to the as-built condition of Panel 3 and does not certify operational activities of any kind.

2. General Description of Certification Process

The work associated with the construction and commissioning of the Panel 3 HWDU was performed using the appropriate WIPP procedures and processes. These ensure that work is performed in a safe and effective manner and at an appropriate quality level. Applicable documentation, for example work packages and test results, is maintained according to a WIPP Records Inventory and Disposition Schedule, is available for inspection, and is included as part of this certification by this reference.

2.1. Identification of Applicable Items

The Permit was reviewed and those items likely to be involved in the certification process were identified. These are specifically noted in Section 3 below. The review and assessment of each item was performed with a knowledgeable individual cognizant of the item, its configuration, and required performance.

2.2. Physical Plant

2.2.1. Construction

The Panel 3 HWDU was planned and constructed using appropriate WIPP policies and procedures. Work packages contained appropriate hold and Quality Assurance (QA) checkpoints. Excavation was performed using non-explosive continuous mining techniques. Work sequences and techniques were those commonly applied in the mining industry and previously used at the WIPP.

2.2.2. Commissioning and Testing

Sub-systems within the Panel 3 HWDU were commissioned and tested using the appropriate WIPP policies and procedures and the tests were witnessed. The systems were examined for correct completion and integrated operation.

2.2.3. As-Built Documentation

Physical facilities in the Panel 3 HWDU are documented using the appropriate WIPP policies and procedures.

2.2.4. Inspections

The "Underground Openings Inspection Checklist," Attachment 1 of procedure WP 04-AU1007, is revised to reflect the construction of Panel 3. The revised form will be implemented as a Permit requirement on the date of NMED approval of the Panel 3 HWDU. No other inspections or record sheets require modification.

2.2.5. Training

The Training Program is process-orientated and does not contain any panel-specific contents. It does not require modification.

3. System Inspection and Certification

3.1. Physical Plant

3.1.1. Position and Dimensions

3.1.1.1. Compliance with Drawing 51-W-214-W and Figure M2-1

Previous experience in Panels 1 and 2 indicated that it is desirable to take room roof to floor closure into account at construction time, since this would minimize, and possibly eliminate, remedial floor work in the active waste disposal panel. Using available geomechanical data, the anticipated amount of closure for each room was estimated and added to the minimum operational height to determine the actual excavated height.

Attachment 1, Drawing 51-W-214-W3, is an as-built revision of Drawing 51-W-214-W2 that shows the plan position and elevation of panel excavations and revised notes applicable to Panel 3. Drawing 51-W-214-W remains valid as the design base for future panels. Attachment 2, Figure M2-1 revised shows Panel 3 as an existing excavation. Figure M2-1 revised is effective on the date of NMED approval of the Panel 3 HWDU. These drawings confirm that Panel 3 is constructed in the correct position and to the correct dimensions.

3.1.1.2. Geology

The geology of Panel 3 is consistent with that described in the Permit. Units of the Salado Formation exposed during mining of Panel 3 are continuous from adjacent areas and display similar thicknesses, compositions, structures and features, with typical minor local variation. WTS Geotechnical Engineering staff mapped the geology of Panel 3, evaluated cores from holes drilled above and below the repository horizon, and confirmed that the geology of Panel 3 is consistent within the limits of local variability noted to date. Since Panel 3 is at a slightly higher horizon than Panels 1 and 2, the stratigraphy immediately above and below panel excavations is slightly different than for the previous panels.

3.1.2. Ventilation

3.1.2.1. Bulkheads, Regulators, and Crossovers

All necessary ventilation control structures are in place and operable. The Mine Ventilation Plan is revised to reflect the addition of Panel 3.

3.1.2.2. Attachment Q

Attachment Q, WIPP Mine Ventilation Rate Monitoring Plan, was reviewed and assessed in terms of the construction and operation of Panel 3. Attachment Q can be applied to the operation of Panel 3 as a HWDU without modification and is adequate to ensure that flow rates are maintained in compliance with Permit requirements.

3.1.2.3. Test and Balance

A partial test and balance of ventilation flows was performed. The underground ventilation system was operating in Alternate Mode (i.e. one 700 fan running) and was configured to create waste disposal flow rates through Room 2 of Panel 2 and Room 7 of Panel 3. Flow rates were measured using approved procedures and instruments calibrated to standards traceable to the National Institute of Standards and Technology (NIST). Under conservative conditions and configuration, the minimum required flow rate was simultaneously achieved in each room.

3.1.3. Traffic Separation

Traffic separation between the waste disposal circuit and the construction circuit is maintained by ventilation bulkheads and airlocks. The main entries south of South 3080 have been mined so Panel 4 mining activities can be performed without entering the waste disposal circuit.

3.2. Monitoring

3.2.1. VOC Monitoring

3.2.1.1. Equipment

Station VOC B was installed as described and required in the Permit. This third station is functionally identical to the two units currently monitoring Panel 2 and operating in East 300 and South 2520. The station is clean and certified by a qualified vendor. The station was installed using procedure WP12-VC1683, "VOC Sampler Handling and Use."

3.2.1.2. Test Results

All gauges and pumps are certified against NIST traceable instruments. A canister was installed using procedure WP12-VC1620, "VOC Sample Canister Handling and Sampling." The system was operated sufficiently to show electrical power to the pump and to verify flow controller operation.

3.2.2. Radiation Monitoring

3.2.2.1. Equipment

Continuous Air Monitor (CAM) skids 534-S-116 and 534-S-106 were installed as described and required in the Permit. These skids are functionally identical to units currently monitoring Panel 2 and operating in South 2180.

3.2.2.2. Test Results

The CAMs were tested using appropriate WIPP procedures. The system was operated sufficiently to show electrical power to the CAMs and a correct automatic shift to filtration by both CAMs. The test also included an element to ensure that the operation of Panel 3 CAMs does not impact the continued correct operation of the CAMs in Panel 2 and vice versa.

3.2.3. Geotechnical Monitoring

3.2.3.1. Equipment

Geotechnical monitoring instrumentation is installed in Panel 3 at locations prescribed by the Permit. Instruments and inspection boreholes were installed using materials and techniques as described and required in the Permit. Room convergence stations and extensometers measure rock mass deformation while inspection boreholes allow a qualitative assessment of separation and lateral movement. The installations are sufficient to detect any trends toward rock mass instability and failure.

3.2.3.2. Test Results

The system was operated to demonstrate remote polling of room extensometers and the checking and visual display of the polled data. All computer software used is controlled and revised according to the appropriate WIPP procedures. Manual room convergence instruments use WIPP procedures that are independent of instrument location and that do not require modification. Since this monitoring is required for worker safety the system is in use and will be implemented as a Permit requirement on the date of NMED approval of the Panel 3 HWDU.

3.3. Hazard Prevention and Emergency Response

3.3.1. Preparedness and Prevention (Attachment E)

The evacuation alarm and communication system in Panel 3, consisting of mine pager phones and strobe lights, meet the requirements of 30 CFR 57 as required by Attachment E. Attachment E does not contain any panel-specific contents and does not require modification. Since these systems are required for worker safety the systems are in use and will be implemented as a Permit requirement on the date of NMED approval of the Panel 3 HWDU.

3.3.2. Contingency Plan (Attachment F)

The Contingency Plan (Attachment F) does not contain any panel-specific contents and does not require modification.

3.3.3. Emergency Response and Evacuation Plan

The Underground Escape and Evacuation Plan, effective January 5, 2005 and the Underground Escape Map, effective December 29, 2004, required by the Mine Safety and Health Administration (MSHA) and 30 CFR 57, reflect the current, final configuration of Panel 3. They are posted and are included in appropriate underground documents and training courses. All other emergency response services and facilities are unaffected by the completion of Panel 3.

3.4. Other

3.4.1. Ground Control

Construction ground control consisted of scaling, rockbolting, and local removal as appropriate. Because of the horizon change and difference in stratigraphy, roof conditions are somewhat different than those in panels 1 and 2. All ground control activities are done in conformance with Notes 4, 5, and 9 on Drawing 51-W-214-W. Panel 3 is included in the existing ground control assessment process; appropriate ground control measures are available and are being implemented as necessary.

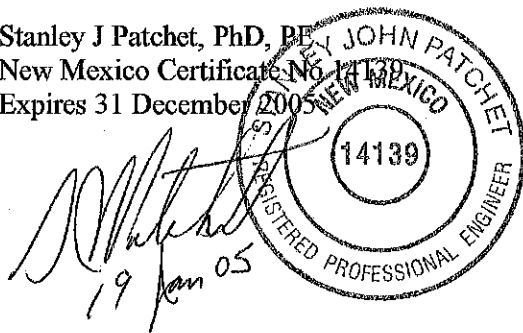
3.4.2. Quality Assurance Program Description

The "Quality Assurance Program Description," WP13-1, adopts the graded approach and was used, as appropriate, for all Panel 3 activities. It does not contain any panel-specific contents and does not require modification.

4. Certification

I certify under penalty of law that this certification was prepared under my supervision for Washington TRU Solutions, LLC. Based on my personal observations and my inquiries of persons directly responsible, the information in this certification is, to the best of my knowledge and belief, true, accurate, and complete.

Stanley J Patchet, PhD, PE
New Mexico Certificate No. 14139
Expires 31 December 2005



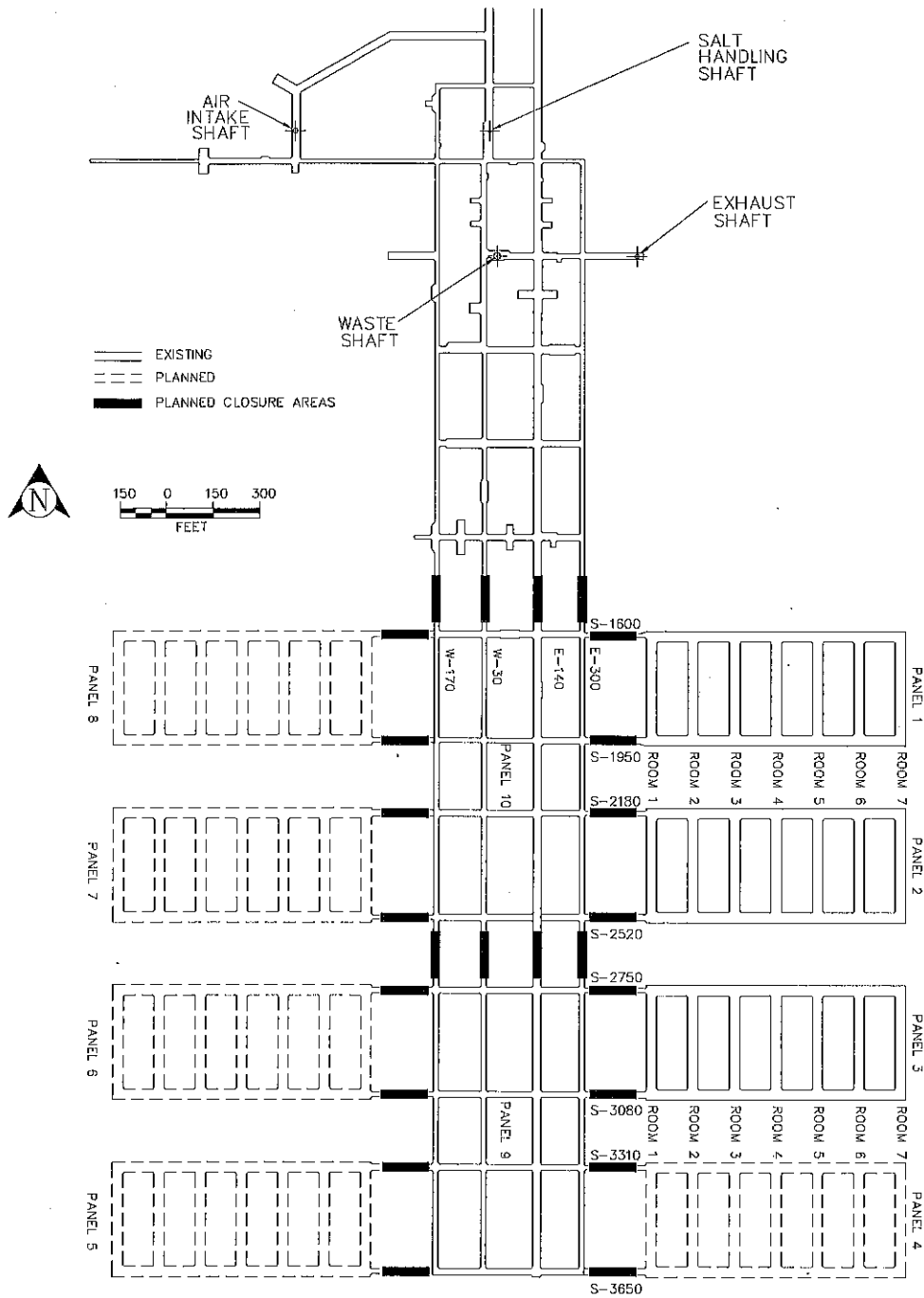


Figure M2-1
 Repository Horizon

Effective upon NMED
 Approval of Panel 3 HWDU

PERMIT ATTACHMENT M2
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