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Waste Isolation Pilot Plant (WIPP)

TRU Waste Shipment Dry Run Preoperational Checkout Plan

Prepared for the

U.S. Department of Energy

Under Contract Number

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NOTICE

TRU WASTE SHIPMENT DRY RUN

1.0 INTRODUCTION

The Waste Isolation Pilot Plant (WIPP) is a major system acquisition authorized as a research and development facility to demonstrate safe disposal of both remote-handled (RH) and contact-handled (CH) transuranic defense waste in bedded salt. In addition to these full-scale demonstrations, WIPP will provide facilities for experimentation with radioactive materials.

This plan documents the scope for the preoperational checkout of the shipment of transuranic defense waste from generator/storage (shipper) sites to the WIPP facility. As readiness is a phased effort, portions or all of this plan may be exercised at a given time. It has been prepared in compliance with the WIPP Waste Transportation Manual, WP 06-2.

Results from the preoperational checkout establish the basis for a preoperations checkout report to be used for WIPP and generator/storage site operational readiness review activities. A separate preoperational checkout and preoperational checkout report will be performed and prepared for each site upon completion of the demonstration.

2.0 OBJECTIVES

The objective of the preoperational checkout is to evaluate a "typical" WIPP shipment from each TRU waste generator/storage (shipper) site using established procedures. The preoperational checkout will provide a review of the completeness of site readiness review checklists, determine the adequacy of site readiness and allow a review process to track open items to closure. The checkout will validate generator site ability to load and ship a TRUPACT-II, exercise TRANSCOM tracking and communication procedures, State/Indian tribe responsibilities (when exercised) and receipt and emplacement procedures at the WIPP site.

The intent of the "Dry Run" is to include as many realistic aspects as possible into a trial run and incorporate needed changes into existing procedures prior to conducting actual transuranic waste shipments. The checkout may include site expertise in the areas of engineering, operations, document control, industrial safety, quality and health physics.

Products of the checkout may include:

- Finalized generator/storage site TRU waste shipment procedures, including WWIS data transmittal (Site responsibility).
- Finalized State/Indian tribe procedures regarding interaction with TRU waste shipments (State/Indian tribe responsibility).
- Finalized shipment monitoring and TRANSCOM tracking procedures (WIPP and ORNL responsibility).

- Finalized TRU waste receipt, unloading and emplacement procedures (WIPP responsibility).

- Operational Readiness Reviews for each generator/storage site confirming readiness to ship transuranic waste (generator/storage site responsibility).

- Driver training and route familiarization (WIPP responsibility).

3.0 SCOPE

A TRU waste shipment dry run preoperational checkout will be scheduled a minimum of twice for each generator/storage site in advance of actual shipments from that site. If requested, additional dry run preoperational checkouts will be scheduled to ensure readiness of all participants for actual shipments. Schedules will be coordinated by DOE, TW&I, Institutional and Transportation Operations representatives.

The normal conditions checkout will commence with the receipt of the empty TRUPACT-II containers at the generator/storage site and end with the receipt/unloading/drum emplacement at the WIPP site. The latter will be a WIPP Waste Handling Operations Manager's call. Underground emplacement of drums for every checkout is not mandatory.

4.0 RESPONSIBILITIES

The following list depicts organizational responsibilities as they relate to the preoperational check out:

- Preoperational checkouts will be scheduled in accordance with Paragraph 3.0 above.

- Generator/storage sites are responsible for establishing procedures for the receipt of empty TRUPACT-IIs, bar coding and labeling, TRUPACT-II loading, WWIS data transmittal, (drums loaded with sand will be used) shipping paper preparation, TRANSCOM bill of lading entries, shipment tracking and dispatching.

- States and Indian tribes will exercise their internal procedures, monitor shipments and participate in preoperational checkout "exercise scenarios" to the degree coordinated by WID Institutional personnel.

- Transportation Operations will implement existing procedures and coordinate the shipment of empty TRUPACT-IIs to the sites, the injection of "exercise scenarios," use of TRANSCOM by WIPP and prepare the afteraction report based upon input received from all participants.

- WID Waste Handling Operations personnel will implement existing procedures for the receipt, unloading, WWIS data interface, and underground emplacement of the preoperational checkout shipment.

5.0 SPECIAL DRIVER INSTRUCTIONS

To exercise the message capability of TRANSCOM, the drivers will notify the CMR/CCC operator of all stops made and when state borders are crossed. Entries of all stops and border crossings will be made in the operator log.

6.0 SCENARIOS

Preoperational checkout scenarios for en route "events" will be injected at the direction of WID Transportation Operations personnel. Scenarios to be utilized are shown at Annex "A". Locations of each event will be modified for each preoperational checkout to fit the participating generator/storage site.

The shipment will be tracked using the DOE TRANSCOM satellite based tracking system. The WIPP CMR/CCC will monitor the "shipment's" progress and establish digital communications with the driver on a periodic basis following TRANSCOM Phase IV procedures.

Prior to the start of each preoperational checkout, a determination will be made as to whether one or two drivers will be required and the time periods to be utilized to implement scenarios. Shipments may be made by utilizing two drivers and driving straight thru, or with one driver and traveling during normal work hours. As a minimum, while en route on the return trip, via driver input into TRANSCOM, the CMR/CCC operator will be given simulated "shipment problems" that require a response. Messages will be preceded by, and end with, the word EXERCISE. These may include, but are not limited to mechanical problems, protestors, sabotage, vehicle accidents, severe weather conditions or deviation from the approved route.

The CMR/CCC operator is expected to follow the procedures established in the CCC Transportation Monitoring Responsibilities document and record actions taken as deemed appropriate. Prior to the start of each preoperational checkout a determination will be made as to whether or not external telephone notifications will be made. In either case, required external telephone notifications will be logged as having been simulated or actually accomplished.

On at least one occasion the WIPP CMR/CCC operator will ignore a message from the driver to verify that the TCC is monitoring the shipment, thus providing a full system test. Designation of this event will be at the discretion of WID Transportation Operations personnel. The exercise will terminate based upon the WID, Waste Handling Operations manager's decision regarding the extent of required participation by his personnel.

Data obtained regarding travel times to and from each site will be utilized to establish a baseline for future shipments.

7.0 ROUTES

Routes utilized for each preoperational checkout will be those contained in the DOE approved Dawn Trucking Company Management Plan which comply with DOT 49 CFR regarding the selection of "Preferred" routes. On occasion, the driver will be instructed to deviate from these routes to validate the alertness of the shipment monitoring agencies.

8.0 RECORDS

CCC/CMR log will be reviewed for verification of events and appropriate responses.

9.0 COMMUNICATIONS

All telephone communications with the WIPP site regarding conduct of the dry run, by other than vehicle drivers, will be made to the Central Coordination Center/Central Monitoring Room at 505-887-8457 or 505-887-8125. Dawn trucking Company drivers will utilize 505-885-6883 and are authorized to make collect calls if necessary.

10.0 ACCEPTANCE CRITERIA

Acceptability of the preoperational checkout will be determined by the evaluator of that element for each checkout. This may require input from the responsible site representative.

As stated in paragraph 2 above, the purpose of the preoperational checkout is to ensure that all components of the shipment cycle are prepared for actual shipments by demonstrating readiness with simulated shipments. Since there are ten generator/storage sites and one carrier and receiving site, the extent to which each element (shipper, carrier, State, Indian tribe, ORNL TCC, WIPP CCC, and WIPP Waste Handling Operations) will be exercised may vary in later operations; e.g., once WID Waste Handling Operations personnel have verified their receipt, unloading and emplacement procedures from previous site preoperational checkouts there is no requirement to exercise this aspect for subsequent shipments as new generator sites begin their preoperational checkout.

A final report will be issued which documents the checkout results.

11.0 REFERENCES

- WP 06-2 - WIPP Waste Transportation Manual
- WP 06-3A - CMR Operator Guidelines and TRANSCOM Tracking System Operation
- ORNL TRANSCOM Operating Procedures (Phase IV)
- Applicable generator/storage site waste handling and shipment procedures

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SCENARIO LIST

1. Route

The route to be followed will be: identified and provided to the driver prior to each preoperational checkout. While en route the driver will be provided separate instructions to deviate from the route to verify State, CMR/CCC, and TCC monitoring capabilities.

2. Emergencies

Emergencies input via TRANSCOM for CMR/CCC operator response will be input by the driver or evaluator. As drivers may, or may not be, driving straight through, scenarios listed below may have locations modified to allow for normal work day receipt by TRANSCOM monitoring locations.

3. Driver Induced General Scenarios

- Situation 1 - at shipping/generator site - Inbound

Location: TBD

Description: Evaluator Induced - National weather channel indicated severe storm approaching shipper's area. KAVOURAS forecast indicates seven inches of snow anticipated in next 24 hours with temperatures below zero degrees and 15 mph winds.

Ant Resp: Operator contacts shipping site traffic manager and Transportation Operations personnel to make a coordinated decision of appropriate course of action. Carrier should be notified of delay if not done so by driver.

Ant Response was satisfactory - Y/N

_____ _____
Evaluator Date/Time

- Situation 2 - Inbound

Location: Last detected at City, State

Description: Evaluator Induced - No communication capability with driver through TRANSCOM.

Ant Resp: Operator attempts to call driver via mobile phone. Instructs driver to call in every two hours or when crossing a state border. Operator provides TCC with location provided by driver for manual input to TRANSCOM.

Ant Response was satisfactory - Y/N

_____ _____
Evaluator Date/Time

- Situation 3 - Inbound

Location: Weigh station near intersection of _____ and _____, City, State.

Description: Driver Induced - Tractor placed out of service due to insufficient brake pads on front wheels and excessive play on right front axle. Vehicle not repairable locally and must be replaced. Gross vehicle weight at weight station was 79,748 pounds.

Ant Resp: Operator should notify carrier of replacement requirement as well as the receiver (Transportation Operations) and shipper. Weight was specified as it will require a special tractor not to exceed the 80,000 lb. limit. Operator should be aware of weight limitations.

Ant Response was satisfactory - Y/N

_____ _____
Evaluator Date/Time

- Situation 4 - Inbound

Location: Intersection of _____ and _____, City, State.

Description: Driver Induced - Broken radiator hose. Driver can arrange repair. Estimated two hour delay.

Ant Resp: Operator notify carrier and receiver.

Ant Response was satisfactory - Y/N

_____ _____
Evaluator Date/Time

- Situation 5 - Inbound

Location: Rest area three miles south of City, State, on I-___, mile marker 123.

Description: Driver Induced - Protestors harassing shipment. Path blocked by protestor vehicles. Carrier tractor damaged by thrown objects. Demonstrators becoming more and more violent.

Ant Resp: Operator notifies WIPP Project Office, Transportation Operations, shipper, local law enforcement agency and carrier. Tractor replacement may be required. Stay in contact with driver.

Ant Response was satisfactory - Y/N

_____ _____
Evaluator Date/Time

- Situation 6 - Inbound

Location: I-__, __City__, __State__.

Description: Evaluator Induced - Information provided by State Highway Patrol: On the down hill slope of pass, tractor brakes failed, driver attempted to keep control but overturned. All three TRUPACT-IIs have broken loose and are scattered within 100 yards of the trailer. Drivers have been seriously injured. Not known if there was any spread of contamination. No further information available at this time.

Ant Resp: Operator follows notification plan, Appendix A to CCC Transportation Monitoring Responsibilities document.

Ant Response was satisfactory - Y/N

_____ _____
Evaluator Date/Time

- Situation 7 - Inbound

Location: Intersection of I-__, __City__, __State__.

Description: Evaluator Induced - Two vehicle accident. Carrier and auto which entered interstate from on ramp, cutting off carrier. Auto totalled. Tractor driver injured seriously. TRUPACT-II undamaged. Tractor inoperable (right front fender and frame crushed) Damage - car $12,000 - tractor $7,000. Local authorities on scene - ambulance has departed.

Ant Resp: Notify WIPP Project Office, Transportation Operations, carrier and shipping site traffic manager. Carrier will have to arrange for replacement tractor and driver replacement.

Ant Response was satisfactory - Y/N

_____ _____
Evaluator Date/Time

- Situation 8 - Inbound

Location: Intersection of _____ and _____, __City__, __State__.

Description: Driver Induced - 100 mile check - broken U-bolt on third rear most container, right rear corner.

Ant Resp: CMR/CCC operator notifies Transportation Operations which arranges for installation of a replacement by a qualified individual. Appropriate WPO staff would be notified of the event.

Ant Response was satisfactory - Y/N

_____ _____
Evaluator Date/Time

- Situation 9 - Inbound

Location: Evaluator Induced - To be determined by Transportation Operations personnel based upon input from WID Institutional personnel. At some point while a dry run shipment is traversing a state, the state police/highway patrol will be notified that TRANSCOM contact with the shipment has been lost and their assistance is requested in locating the vehicle. The state will use its resources to locate the vehicle and pull it over. Once located, the driver will contact the CCC/CMR and notify the operator of his location. The state police/highway patrol representative will also notify his headquarters that the vehicle has been located, and they, in turn, will notify the CCC/CMR operator. This will exercise both lines of communication. This may be implemented in each state the vehicle passes through.

Ant Response was satisfactory - Y/N

_____ _____
Evaluator Date/Time

4. Route Deviations

- Driver Induced - On the inbound portion of the shipment, __City__, __State__, the driver will turn _____ on _____ to __City__, __State__, turning _____ on _____ and _____ on _____. This constitutes a deviation and should be detected by State, CMR/CCC and TCC operators. Driver should be queried about the deviation.

Ant Response was satisfactory - Y/N

_____ _____
Evaluator Date/Time

- Driver Induced - On the inbound portion of the shipment, south of __City__, __State__, the driver will proceed south on _____ to __City__, __State__, then proceed on _____ to _____, turning _____ on _____ to __City__, __State__, then _____ on _____ to __City__, __State__. This constitutes a deviation and should be detected by State, CMR/CCC and TCC operators. Driver should be queried about the deviation.

Ant Response was satisfactory - Y/N

_____ _____
Evaluator Date/Time

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