



NEW MEXICO
ENVIRONMENT DEPARTMENT
Hazardous Waste Bureau
 2905 Rodeo Park Drive East, Building 1
 Santa Fe, New Mexico 87505-6303
 Phone (505) 476-6000 Fax (505) 476-6030

ENTERED



www.env.nm.gov

INSPECTION TYPE: Routine Complaint Follow-Up Compliance Assistance Pre-Arranged

DATE: 02/26/2019 **TIME:** 0900

FACILITY NAME DOE Waste Isolation Pilot Plant **EPA ID #** NM4890139088

BUSINESS OWNER & ADDRESS U.S. Department of Energy, 34 Louis Whitlock Drive, Carlsbad, NM 88220

MAILING ADDRESS 34 P.O. Box 3090, Carlsbad, NM 88221-3090

PROPERTY OWNER & ADDRESS U.S. Department of Energy, P.O. Box 3090, Carlsbad, NM 88221-3090

NOTIFIED AS: N/A

CURRENT STATUS:

- | | |
|---|---|
| <input type="checkbox"/> CESQG (<100 kg/mo.) | <input type="checkbox"/> CESQG (<100 kg/mo.) |
| <input type="checkbox"/> SQG (100-1000 kg/mo.) | <input type="checkbox"/> SQG (100-1000 kg/mo.) |
| <input checked="" type="checkbox"/> LQG (>1000 kg/mo.) | <input checked="" type="checkbox"/> LQG (>1000 kg/mo.) |
| <input type="checkbox"/> Transporter | <input type="checkbox"/> Transporter |
| <input type="checkbox"/> Transfer Facility | <input type="checkbox"/> Transfer Facility |
| <input checked="" type="checkbox"/> TSD Facility - Unit Type(s): Storage/Disposal | <input checked="" type="checkbox"/> TSD Facility - Unit Type(s): Storage/Disposal |
| <input type="checkbox"/> Used Oil: | <input type="checkbox"/> Used Oil: |

ENTRY CONFERENCE:

- Present credentials to facility representative
- Cite authority to enter site, conduct inspection, obtain samples, take photos (NMSA § 74-4-4.3)
- State reasons(s) for and nature of inspection
- State objectives and procedures for inspection



RESPONSIBLE OFFICIAL(s):

Name	Title
Anthony Stone	RCRA program mgr
Michael R. Brown	Director Office of Environmental Protection

INSPECTION PARTICIPANTS:

Name	Title	Email	Phone Number
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Jeff Rumpson	Env. Comp Insp.		

190214



DATE OF LAST INSPECTION: 05/01/2018

CHECKLISTS COMPLETED: VSQG SQG <90 Day Used Oil Other: WIPP-specific Checklist

History, Size and Nature of Business:

The Waste Isolation Pilot Plant (WIPP) is a U.S. Department of Energy (DOE) facility for the acceptance and disposal of Transuranic (TRU) mixed waste from various DOE laboratories around the United States. Much of the TRU mixed waste was originally generated from the continuing research, production, and maintenance of the U.S. nuclear weapons arsenal, as well as more benign research of radioactive materials. The facility is located approximately 26 miles east of the city of Carlsbad, New Mexico. The facility has a 16 square mile exclusion zone incorporating about 35 acres of fenced property. See the facility maps provided in the inspection folder for a layout of the facility's surface and underground structures. There are currently approximately 750 employees. WIPP began accepting waste in 1999, and has maintained operational status since January 2017.

Process Description

The WIPP facility accepts shipments of Transuranic (TRU) mixed waste at the Waste Handling Building (WHB), examines shipment paperwork, waste profiles, and the general condition of the shipping containers, scans the exterior of the waste packaging for evidence of radionuclide contamination, and brings them into the permitted area of the WHB for short-term storage and preparation for emplacement. TRU waste may also be stored temporarily in the permitted Parking Area Unit. The TRU waste containers arrive in 55-gallon drums or other standard waste containers that are nested within larger shipping containers for safe transport. The TRU waste containers are removed from the outer packaging in the WHB, scanned again for exterior radionuclide contamination, may be transferred to facility overpack or 'cask' containers, and loaded onto equipment for transport to the underground repository. The underground repository contains Hazardous Waste Disposal Units (HWDUs), consisting of 10 "Panels", each containing 7 disposal rooms.

These activities may generate site-derived TRU waste such as used Personal Protective Equipment, absorbents, or other materials which may have been contaminated by the TRU mixed waste shipment. These wastes are accumulated and stored in a designated area of WHB, normally for later emplacement in the underground. Derived Low-Level Mixed Waste (LLMW) may be sent off-site for disposal.

There are two types of TRU mixed waste normally accepted at WIPP, Contact Handled (CH) waste and Remote Handled (RH) waste. The equipment and procedures used for emplacement are somewhat different for these two categories, and are described in detail in the facility's RCRA permit. For RH wastes, the waste is placed in a cask that is fitted into a borehole drilled into the rock at a disposal room, and sealed with a shielded plug. CH waste containers are stacked 3-high on the floor of the disposal rooms and backfilled with Magnesium Oxide absorbent.

WIPP also generates sufficient quantities of non-mixed hazardous wastes and used oil from maintenance of facility structures and equipment, and from recovery operations, to qualify as a Large Quantity Generator of hazardous wastes.

These wastes are accumulated in one of two Satellite Accumulation Areas (one each surface and underground) or one of two Central Accumulation Areas (one each surface and underground), for off-site disposal.

Waste Streams

Waste stream	Waste code	Process, location, container size	Transporter & EPA id # and TSDf w/ EPA id	Monthly generation
Waste Aerosol cans	D001, D005, D035; managed as Universal waste under 20.4.1.1001D NMAC	Spent and partially spent aerosol cans. Accumulated in a 30-gallon drum at the surface or underground SAAs. Transferred to surface CAA for off-site disposal	Advanced Chemical Transport (CAR000070540) and Veolia ES Technical Solutions (NJD080631369/COD980591184)	See upcoming BR
Gas/diesel mixture	D001, D018	Drained from out of service vehicles/bad fuel. Stored in 55-gallon drums at the surface CAA.	Advanced Chemical Transport (CAR000070540) and Veolia ES Technical Solutions (NJD080631369/COD980591184)	See upcoming BR
Waste diesel	D001	Drained from out of service vehicles/bad fuel. Stored in 55-gallon drums at the surface CAA.	Advanced Chemical Transport (CAR000070540) and Veolia ES Technical Solutions (NJD080631369/COD980591184)	See upcoming BR
Flammable Solids	D001	Absorbent contaminated by flammable liquids. Stored in containers at the surface CAA.	Advanced Chemical Transport (CAR000070540) and Veolia ES Technical Solutions (NJD080631369/COD980591184)	See upcoming BR
Lead-Acid batteries, contaminated	D002, D008	Vehicle, other lead acid batteries from equipment used in the radiologically contaminated areas of the underground. Stored in boxes at the MgO shed temporary CAA.	Advanced Chemical Transport (CAR000070540) and Veolia ES Technical Solutions (NJD080631369/COD980591184)	See upcoming BR
Waste petroleum gases	D001	Waste gas. Stored in containers at surface CAA.	Advanced Chemical Transport (CAR000070540) and Veolia ES Technical Solutions (NJD080631369/COD980591184)	See upcoming BR
Derived Waste	Various	Personal Protective Equipment, contaminated filters, absorbent, and other materials that become contaminated by mixed waste shipments during handling and emplacement. Accumulated in a 55-gallon drum at the waste handling building and emplaced in an underground HWDU when full.	Disposal on-site, NM489013088	None generated 2018-2019

Waste Streams (continued)

Misfired Hilti Cartridges	D001, D003, D005, D008	Off-spec and defective bolting operations cartridges used for maintenance of underground passageways. Accumulated in a 55-gallon drum in the underground SAA, then transferred to aboveground CAA.	Advanced Chemical Transport (CAR000070540) and Veolia ES Technical Solutions (NJD080631369/COD980591184)	See upcoming BR
Gas spill cleanup material	D001, D018	Cleanup of gasoline spills. Stored in 55-gallon drums at the CAA.	Advanced Chemical Transport (CAR000070540) and Veolia ES Technical Solutions (NJD080631369/COD980591184)	See upcoming BR
Leaded brine	D008 (potential)	Maintenance of the underground by removing accumulated groundwater that has seeped into the repositories' water collection sumps. Pumped into 500-gallon tote containers at the underground 90-day area, sampled, and transferred to the surface CAA for off-site disposal if sample is determined to be hazardous waste.		
Used Oil		Various facility processes, including facility vehicle maintenance. Accumulated in 55-gallon drum at the CAA.	Advanced Chemical Transport (CAR000070540) and Veolia ES Technical Solutions (NJD080631369/COD980591184)	

Results of Inspection

On February 26, 2019 NMED inspectors met with Environmental Compliance Manager Stewart Jones, RCRA Program Manager Anthony Stone, RES Manager Rick Chavez, and other WIPP staff, completed site-specific training requirements the first day, performed an entry conference, inspected the Waste Handling Building and parking area permitted areas, inspected the surface SAA and CAAs, toured the Central Monitoring Room and Fire Station, and observed future locations of the New Filter Building and New Shaft. On the second day of inspection, NMED inspectors received an escorted tour of uncontaminated areas of the underground repository, including the SAA, transition zone, waste handling and salt handling shafts, supplemental ventilation system, panel 8, emergency vehicle parking area and maintenance shop; and began review of facility records including waste manifests, inspection records, training records, and the operating record. NMED inspectors returned for a third day to complete records review.

Summary of Potential Violations

Please be advised that this list may not be inclusive and additional violations may be added after reviewing notes, pictures and documents.

This list of potential violations has been divided between the requirements for Large Quantity Generators of hazardous waste in Chapter 40 of the Code of Federal Regulations, and violations of the facilities' hazardous waste storage and disposal permit.

40 CFR violations are listed below first and provide the citation of the regulation as well as a description of the details of the violation.

Permit conditions are cited as "PC" (Permit Condition, followed by the section number and/or paragraph number where the requirement resides within the document, the corresponding 40 CFR requirement the requirement references (if any), and a description of the details of the violation.

Violations of 40 CFR Large Quantity Generator Requirements

1. **Regulation: 40 CFR 262.255 – Failure to maintain sufficient aisle space at a hazardous waste storage area**

NMED inspectors observed materials in storage behind and to the right of the pallets of hazardous waste lead-acid batteries stored in a temporary CAA at the MgO shed. The pallets of batteries were configured in such a way that it would have been overly difficult to reach the rear pallets in case of a spill or an emergency. The aisle space on each side, against the wall on left and abutting materials at the rear and on the right, was less than 2 feet.

*This potential violation was corrected during the inspection.

Violations of Hazardous Waste Permit

No potential violations of the hazardous waste facility permit were observed during this inspection.

Areas of Concern

- a. Please ensure all hazardous waste containers are properly labeled.
- b. Please ensure that electrical panels are protected from water spraying from the safety shower at the main CAA.
- c. Recommend adding notations/color codes/tiers or other avenues to training records to denote employees not fully authorized to perform job tasks due to lapsed or missing training and/or inactive status due to leave or other reasons. This may be used by the facility to ensure that new employees not yet trained, or employees lapsed in their training, are properly supervised.
- d. Remember during the next revision to the Contingency Plan to include the Quick Reference Guide for use by emergency response authorities.
- e. Please review the TO-15 EPA method for SUMO canister sampling, and ensure that current methods meet all specifications, as required in the permit. Specifically, recommend examining potential issues with same-day temperature changes during sampling events.
- f. Please ensure that roof bolting is maintained at the underground tool crib SAA, for the purpose of worker safety and for the reason that reactive hazardous waste may be/is stored there. During the inspection, a potential overhead hazard was observed in the waste storage area.
- g. Please ensure that proper housekeeping is maintained in the underground. NMED's finding was that, in general, housekeeping was excellent in the underground. However, a water bottle containing cigarette butts was observed stored in a non-smoking area, on top of electrical equipment, near drums of combustible material, near the maintenance area. Although it is uncertain whether this item was brought from a different area for temporary storage, and the bottle was intact and not actively a concern for damaging electrical equipment, please ensure that workers in the underground are only smoking in approved areas, and that cigarette butts are accumulated in proper disposal receptacles.
- h. Recommend creating a site-specific contingency plan if needing to set up a temporary CAA. A site-wide contingency plan would need to be revised with additional emergency equipment locations specific to a

DATE: 02/26/2019

FACILITY: DOE Waste Isolation Pilot Plant

EPA IDENTIFICATION #: NM4890139088

new CAA, which could require a permit modification that would not be required if site-specific Contingency Plans were established for non-permitted storage areas.

- i. Please ensure that mine pager phones used in the underground are intelligible to underground staff. During at least one occasion, and announcement through the phone speaker was very hard to understand.

Exit Conference

Date of Exit Conference: 2/28/2019

Time of Exit: 1230

Discussion/Explanation of Potential Violation(s):

Explain Review Process by NMED/HWB Management:

NMED Anticipated Timetable for Possible Enforcement Action(s):

Explain Availability of On Site Technical Assistance: N/A

Advised Facility Representative, no potential violation(s) of 20 NMAC 4.1 were identified. Also, explained that Facility remains obligated to comply with all applicable laws and regulations.

Advised Facility Representative of the potential violation(s) identified during the inspection. Explained that in accordance with § 74-1-10 NMSA 1978 (Repl. Pamp. 2000), NMED may: (1) issue a Notice of Violation requesting voluntary compliance within a specified time period; (2) issue a Compliance Order requiring compliance immediately or within a specified time assessing a civil penalty for any past or current violations of up to \$10,000 per day of noncompliance with each violation or both; or (3) commence a civil action in district court for appropriate relief, including a temporary or permanent injunction. Any such order issued may include a suspension or revocation of any permit issued by NMED.

Participants:

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