

WP 02-RC.01  
Revision 4

# Hazardous and Universal Waste Management Plan

Cognizant Organization: Site Environmental Compliance

Approved By: Stewart Jones



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**1.0 INTRODUCTION** <sup>1, 2, 3,4</sup>

This plan delineates the responsibilities and handling requirements for hazardous and universal wastes generated at the Waste Isolation Pilot Plant (WIPP). It is meant to ensure that these wastes are properly handled, accumulated, and transported to an approved Treatment, Storage, Disposal Facility (TSDF) in accordance with applicable state and federal regulations, U.S. Department of Energy (DOE) Orders, and Washington TRU Solutions LLC (WTS) policies and procedures. This plan implements applicable sections of 20.4.1, New Mexico Administrative Code, (NMAC) *Hazardous Waste Management*, Subparts I-VII and X (incorporating 40 Code of Federal Regulations [CFR] Parts 260-268 and 273). For simplicity, citations from 40 CFR are used in the text of this plan.

**2.0 RECORDS**

Records generated by this plan include the Resource Conservation and Recovery Act (RCRA) Biennial Report, the Annual Hazardous Waste Fee Report, Toxic Release Inventory (TRI) Report, exception reports, and requests for Satellite Accumulation Area (SAA) activation, relocation, and deactivation.

**3.0 DEFINITIONS**

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**NOTE**

Acutely hazardous waste is not presently generated, nor is it anticipated to be generated at the WIPP. In the event acutely hazardous waste is generated, Site Environmental Compliance (SEC) will provide direct oversight and direction to ensure the waste is managed in accordance with 40 CFR Parts 261 and 262, including the disposition of an empty container containing a P listed waste.

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Accumulation Date - the date when a container in an SAA is filled to its capacity, or the date hazardous waste or hazardous waste pending analysis is first placed in a container.

Container - any portable device in which a material is stored, transported, treated, disposed of, or otherwise handled.

Empty - a container is considered empty if the following are met:

- (1) All wastes have been removed that can be removed using the practices commonly employed to remove materials from that type of container (e.g., pouring, pumping, and aspirating), and
- (2) No more than 2.5 centimeters (one inch) of residue remains on the bottom of the container, or

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- (3) No more than 3 percent by weight of the total capacity of the container remains in the container if the container is less than 110 gallons in size, or
  - (4) No more than 0.3 percent by weight of the total capacity of the container remains in the container if the container is greater than 110 gallons in size.
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**NOTE**

For compressed gases a container is empty when the pressure in the container approaches atmospheric pressure.

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Excess Accumulation Date - the date that any amount of waste in excess of 55 gallons is generated in a SAA.

Generator - any person whose act or process produces hazardous waste.

Hazardous Waste - a waste that meets at least one of the following:

- (1) It exhibits any of the characteristics of ignitability, corrosivity, reactivity, or toxicity as defined in 40 CFR Part 261, Subpart C, or
- (2) It is listed in 40 CFR Part 261, Subpart D.

Hazardous Waste Generation - the act or process of producing hazardous waste.

Hazardous Waste Management (HWM) - systematic control of hazardous waste from its generation point to its ultimate treatment or disposal at an approved facility.

Hazardous Waste Pending Analysis - a waste that is managed as hazardous waste until it is sampled and the analytical data report is received at WIPP.

Hazardous Waste Staging Area (Area 474) - an area designated for the temporary accumulation of hazardous waste until that waste is manifested and shipped to an off-site permitted hazardous waste TSD facility.

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**NOTE**

Examples of incompatible wastes are provided in 40 CFR Part 265, Appendix V.

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Incompatible Waste - hazardous waste which is unsuitable for:

- (1) Placement in a particular device or facility because it may cause corrosion or decay of containment materials (e.g., container inner liners or tank walls), or

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- (2) Comingling with another waste or material under uncontrolled conditions because the comingling might produce heat or pressure, fire or explosion, violent reaction, toxic dusts, mists, fumes, or gases, or flammable fumes or gases.

Request for Disposal (RFD) - a form used at WIPP for the initiation of the disposal process. Instructions for using and completing the RFD are contained in WP 02-RC3108, Request for Disposal.

Satellite Accumulation Area - an area designated for the accumulation of up to 55 gallons of hazardous waste in approved containers at or near the point of generation, which are under the control of the custodian.

Satellite Accumulation Area Custodian (SAAC) - an individual appointed by WTS management, who is responsible for implementing the SAA requirements delineated in the SAAC training module and the associated authorization card.

Treatment - any method, technique, or process, including neutralization, designed to change the physical, chemical, or biological character or composition of any hazardous waste.

Universal Waste - waste managed in accordance with WP 02-RC3503, Universal Waste Management, which incorporates the universal waste requirements listed in 40 CFR Part 273.

#### **4.0 REFERENCES**

29 CFR §1910.120, "Hazardous Waste Operations And Emergency Response"

40 CFR 260-268 and 273, "Resource Conservation and Recovery Act (RCRA)", applicable sections

49 CFR 100-199, "Pipeline and Hazardous Material Safety Administration", applicable sections

20.4.1 NMAC, *Hazardous Waste Management*, applicable sections

DOE Order 460.1B, *Packaging and Transportation Safety*

Hazardous Waste Facility Permit, Waste Isolation Pilot Plant, Permit No. NM 4890139088-TSDF, issued by the New Mexico Environment Department, October 27, 1999

WP 02-EC3801, Environmental Compliance Review and NEPA Screening

WP 02-RC3108, Request for Disposal

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WP 02-RC3109, Satellite Accumulation Area, Hazardous Waste Storage Area, and Universal Waste Storage Area Inspections

WP 02-RC3503, Universal Waste Management

WP 08-NT3103, Shipment of Waste

SAA-101, Satellite Accumulation Area Custodian (Self-Paced Training Module)

**5.0 GENERAL**

**5.1 Responsibilities**

SEC is responsible for:

- Developing and maintaining this plan;
- Conducting hazardous waste determinations;
- Sampling waste as required;
- Managing the hazardous waste accumulation in Area 474;
- Coordinating pick up and transfer of hazardous waste and some nonhazardous waste to the appropriate staging area within required time periods;
- Ensuring that waste containers are marked as needed;
- Designating appropriate disposal methods and facilities for disposal of the waste;
- Establishing and maintaining disposal and transportation contracts for WIPP-generated hazardous waste;
- Providing technical support for evaluating off-site disposal facilities Qualified Supplier List (QSL) evaluations);
- Providing RCRA regulatory guidance and oversight to Transportation Operations to maintain compliance with this plan;
- Coordinating off-site shipping of hazardous waste to a permitted TSDF within the required time period;
- Ensuring that the Hazardous Waste Manifest is received and filed within 35 days of shipment;

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- Preparing exception reports in accordance with 40 CFR §262.40(b) and 40 CFR §262.42;
- Maintaining records associated with the shipment and disposition of RCRA hazardous waste;
- Conducting compliance inspections of Area 474;
- Providing oversight for SAAs;
- Delineating applicable RCRA requirements for HWM training;
- Preparing the RCRA Biennial Hazardous Waste Report in accordance with instructions from the United States Environmental Protection Agency (EPA);
- Preparing the TRI Report in accordance with instructions from the EPA and New Mexico Environment Department (NMED)
- Preparing the New Mexico Annual Hazardous Waste Fee Report in accordance with New Mexico hazardous waste regulations;
- Notifying the NMED of changes in generator status; and
- Completing Land Disposal Restriction Notifications for site-generated hazardous waste.

Generator - Managers of organizations whose operations cause hazardous wastes to be generated are responsible for:

- Properly managing any waste generated;
- Ensuring weekly SAAs inspections are performed.
- Ensuring that all efforts to use materials are made prior to designating materials as waste;
- Ensuring that employees notify SEC of waste generation in any area on-site not already equipped and designated for waste management;
- Providing SEC with information on waste composition and source, including a description of the waste-generating process;
- Initiating an RFD; and
- Making arrangements for waste staging.

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Quality Assurance is responsible for:

- Evaluation of disposal facilities for inclusion into the QSL and
- Oversight of activities associated with waste management at the site.

Operations is responsible for:

- Picking up and transferring waste to designated storage or disposal areas; and
- Supporting Transportation Operations and SEC in the packaging of waste for transport.

Industrial Safety and Hygiene (IS&H) is responsible for:

- Providing WIPP employees involved in the management of hazardous and universal waste with information on hazardous properties and safe handling of these wastes; and
- Providing information on the appropriate personal protective equipment for handling hazardous and universal wastes.

Transportation Operations is responsible for:

- Providing appropriate waste containers;
- Determining and implementing applicable U.S. Department of Transportation (DOT) and DOE requirements for hazardous waste transportation; and
- Ensuring that waste is packaged, marked, and labeled properly in preparation for shipment (per WP 08-NT3103, Shipment of Waste) to approved disposal facilities.
- Reviewing vendor-supplied shipment documentation for regulatory compliance and site requirements.
- Signing hazardous waste manifests and other shipment documentation for shipments to approved disposal facilities.

## **5.2 Requirements**

### **5.2.1 Training**

Employees handling hazardous or universal waste are required to complete HWW-101 within six months of their job assignment and are not permitted to perform their work duties unsupervised until this training is completed. In addition, an annual eight-hour refresher class is required. This training implements applicable TSD facility personnel

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training requirements found in 40 CFR §264.16, 40 CFR §265.16, and 29 CFR §1910.120.

Supervisors are responsible for ensuring that employees receive the required training. Training is developed by WTS Technical Training in conjunction with cognizant managers.

Personnel directly involved in the transportation of hazardous material shall be trained in accordance with 49 CFR Part 172, Subpart H, and DOE Order 460.1B. Personnel responsible for preparing hazardous materials for shipment must also be trained in DOT hazardous materials transportation regulations (49 CFR Parts 100-199). All personnel will be trained according to Occupational Safety and Health Administration (OSHA) standards found in 29 CFR §1910.120.

### 5.2.2 Container Markings

All hazardous waste containers must be clearly marked with the words, "Hazardous Waste" and a brief description of the contents. Universal wastes shall be marked per requirements as found in 40 CFR §273.14.

Before placing hazardous waste in an SAA, the generator must assure that the container is properly marked with the words "Hazardous Waste" and the container contents.

Transportation Operations or SEC will provide appropriate containers.

SEC will provide labels and applicable instructions for marking for storage. Operations or SEC will appropriately mark containers. After the waste containers arrive at Area 474, or other designated storage areas, SEC will log the accumulation date in the disposition log. If a waste is being analyzed for hazards, SEC will mark the containers pending sampling results "This Waste is Being Managed as Hazardous Waste Pending Characterization Sampling" or "Solid Waste Pending Sampling," as appropriate.

### 5.2.3 Spills

All spills of hazardous or universal wastes must be reported to the Central Monitoring Room (CMR) by dialing extension 8457 or 8125. Spills must be managed in accordance with prescribed procedures and where applicable, the Hazardous Waste Facility Permit. Emergency situations must be reported to the CMR by dialing extension 8111.

## 5.3 Prohibitions

Hazardous and universal wastes must not be disposed of in the sewer, on the ground, in dumpsters, or in on-site landfills.

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Hazardous waste shall not be diluted.

Hazardous and universal wastes must not be treated except as provided in 40 CFR §265.1(c)(11)(I), (ii), and (iii) for immediate response to discharge (spills) and when applicable exemptions for treatment without a permit are implemented. In this event, treatment will be under the direction and supervision of SEC.

Hazardous and universal wastes must not be placed into a container that contains any materials or waste with which they are incompatible. Hazardous waste must be segregated from any incompatible materials by dike, berm, wall, or similar device.

Hazardous waste must not be intentionally allowed to evaporate.

Hazardous and universal wastes will **NOT** be transported in employee's privately-owned vehicles.

Hazardous waste will **NOT** be transported off-site in government vehicles.

Universal waste may be transported in government vehicles from town facilities to the WIPP site, or other WIPP facilities, for the purpose of staging for off-site disposal only.

No employee will manage hazardous waste without having been properly trained.

No food, drink, or tobacco products will be consumed while handling hazardous waste.

## **5.4 Hazardous Waste Management**

### **5.4.1 Waste Management Planning**

Prior to using a hazardous material, the user shall take into consideration whether or not a waste could be generated. The manager or cognizant engineer of jobs that have the potential to generate waste should ensure that environmental screening for the job is completed in accordance with WP 02-EC3801, Environmental Compliance Review and NEPA Screening. Purchase requisitions for chemicals should be routed to SEC for approval.

If a hazardous material is no longer needed, the user will make every effort to contact other WIPP organizations in an attempt to locate another user. If another user is found, the original owner will transmit the Material Safety Data Sheet (MSDS) for the material to the new user and assist the new owner in the transfer of material. All employees shall exercise all reasonable options available to them to prevent the generation of waste.

If no other user can be found, the generator must complete and hand carry an RFD and an MSDS to SEC in accordance with WP 02-RC3108. SEC will make a hazardous waste determination.

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Surplus materials which are unopened and have no further use on-site may be transferred to the excess property list, provided that the material is still usable. Subsequent to being declared excess property, a transfer can be effected to an auctioneer under contract to WIPP, and the material can be removed from the site. An MSDS will accompany the transfer form.

All possible attempts must be made to use, reuse, and recycle materials before designating such materials as waste.

**5.5 Hazardous Waste Satellite Accumulation Area**

Waste that will be generated over a period of time may be accumulated in an SAA as long as the generator complies with the requirements specified in the SAAC training module. All SAACs must have completed HWW-101, SAA-101, and the SAAC authorization card.

SEC is responsible for ensuring the weekly SAA inspections are completed. This inspection will be performed in accordance with WP 02-RC3109, Satellite Accumulation Area, Hazardous Waste Storage Area, and Universal Waste Storage Area Inspections. Identified nonconformances will be addressed first with the SAAC or his/her manager. If nonconformances continue, the issues will be addressed using the WIPP Form process.

**5.6 Hazardous Waste Staging Area**

Wastes awaiting sample analysis results for classification should be stored in the Area 474 and managed as hazardous waste until analytical results indicating otherwise are available. Exhaust Shaft water from the borehole interception system collected in containers in the underground will be managed as a hazardous waste, pending analysis, and is subject to the requirements of 40 CFR 262.34.

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**NOTE**

Under special circumstances determined by SEC, the Exhaust Shaft water may be managed as non-hazardous.

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No food, drink, or tobacco products are to be used in Area 474.

Waste being accumulated in the Area 474 or Exhaust Shaft water collection containers being managed as hazardous waste pending analysis must comply with the following requirements:

- A. Containers holding hazardous waste must be in good condition (e.g., free of leaks, large dents, or severe rusting which may compromise containment ability).

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- B. Containers must be made of, or lined with, materials that will not react or be otherwise incompatible with the hazardous waste being stored.
- C. Containers holding hazardous waste must always be closed during storage, except when it is necessary to add or remove waste.
- D. A container holding hazardous waste must not be opened, handled, or stored in a manner which may rupture the container or cause it to leak.
- E. Areas where containers are stored must be inspected at least weekly and the containers for leaks and deterioration caused by corrosion or other factors.
- F. Containers holding ignitable or reactive waste must be located at least 50 feet from the facility property line.
- G. Incompatible wastes must not be placed in the same container.
- H. Hazardous waste must be placed in a clean container, not one that previously held an incompatible waste or material. Consult SEC before reusing any waste container.
- I. A storage container holding a hazardous waste that is incompatible with any waste or other materials stored nearby in other containers must be separated from the other materials or protected from them by means of a dike, berm, wall, or other device.
- J. Organic waste in volumes of 26 to 122 gallons must be stored in DOT-approved containers.
- K. The accumulation date shall be clearly marked and visible on each container.
- L. The contents of each container shall be clearly identified.

**5.7 Accumulation Time**

Hazardous waste generated at the WIPP must be sent off-site for disposal within 90 days of the date of generation.

SAA containers will be transferred to Area 474 within 3 days of the date that the container is filled. Waste generated outside of SAAs will be transferred within 3 days of generation. SEC's goal is to transfer **ALL** waste to the applicable staging area within 24 hours of the date that an SAA container is filled or the waste is generated.

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## **5.8 Universal Waste Management**

### **5.8.1 Summary**

WIPP is a small-quantity handler of universal waste. Universal waste is shipped off-site to permitted TSDFs. Universal waste is managed similarly to hazardous waste. It is contained, stored in one of the universal waste storage areas (UWSAs), and inspected weekly for evidence of spillage or leakage. Any releases of universal waste will be characterized and managed similarly to releases of hazardous waste utilizing the same procedures and processes in place for hazardous waste. Handlers of universal waste and those responsible for its management are trained hazardous waste workers.

### **5.8.2 Universal Waste Storage Areas**

Universal waste that will be generated over a period of time may be accumulated in a UWSA as long as the generator complies with the requirements specified in WP 02-3503. Currently there are three UWSAs at the WIPP Site, one at the Skeen-Whitlock Building, and one at the 401 N. Canal facility in town. Site UWSAs are located in Area 474 A(c), the surface tool crib, and the underground tool crib. The tool crib UWSAs are for the staging of fluorescent bulbs, high-pressure sodium bulbs, HID, and metal halides as they are generated and placed in the area by hazardous waste workers in the field. As containers are filled, they will be transferred to the UWSA located in Area 474 A(c) through the RFD process. In addition, nickel-cadmium and lithium ion batteries may be staged in Area 474 A(c), underground tool crib, and the Skeen-Whitlock Building SAAs.

### **5.8.3 Accumulation Time for Universal Waste**

Accumulation time universal waste managed under this plan must be sent off-site for disposal or reclamation is within one year of the date of generation.

## **5.9 Hazardous and Universal Waste Disposal**

SEC is responsible for arranging for the transportation, storage, or disposal of hazardous and universal waste.