

## **Necessary Information for the WIPP Ten Year Renewal Application, Part A**

### **§270.13 Contents of part A of the permit application**

Part A of the RCRA application shall include the following information:

(a) The activities conducted by the applicant which require it to obtain a permit under RCRA.

No changes are being proposed to the activities conducted at the Waste Isolation Pilot Plant (**WIPP**) facility that entail receiving, unloading, and transferring radioactive-mixed waste from the surface of the site to the underground hazardous waste management units. Waste will be emplaced in an underground geologic repository horizon located in a deep-bedded salt formation 2,150 feet beneath the surface.

(b) Name, mailing address, and location, including latitude and longitude of the facility for which the application is submitted.

Waste Isolation Pilot Plant

P.O. Box 3090

Carlsbad, New Mexico, 88221

30 miles east of Carlsbad, New Mexico, on the Jal Highway in Eddy County

Geographic location:

32° 22' 30" N

103° 47' 30" W

(c) Up to four SIC codes which best reflect the principal products or services provided by the facility.

North American Industry Classification System Code for the WIPP facility: 562211

(d) The operator's name, address, telephone number, ownership status, and status as Federal, State, private, public, or other entity.

Owner and Operator:

U.S. Department of Energy

P.O. Box 3090

Carlsbad, New Mexico, 88221

Phone Number: 575-234-7300

Black Text = Regulatory Citation

Blue Text = Permittees' Response

The WIPP facility is a Federal facility

Co-operator:

Washington TRU Solutions LLC

P.O. Box 2078

Carlsbad, New Mexico, 88221

Phone Number: 575-234-7300

(e) The name, address, and phone number of the owner of the facility.

U.S. Department of Energy

P.O. Box 3090

Carlsbad, New Mexico, 88221

Phone Number: 575-234-7300

(f) Whether the facility is located on Indian lands.

The WIPP facility is not located on Indian lands.

(g) An indication of whether the facility is new or existing and whether it is a first or revised application.

The Waste Isolation Pilot Plant facility is an existing facility renewing its Hazardous Waste Facility Permit # NM4890139088-TSDF.

(h) For existing facilities, (1) a scale drawing of the facility showing the location of all past, present, and future treatment, storage, and disposal areas; and (2) photographs of the facility clearly delineating all existing structures; existing treatment, storage, and disposal areas; and sites of future treatment, storage, and disposal areas.

Please see Part A Application Figures:

- Figure 2-1, *General Location of the WIPP Facility*
- Figure 2-2, *Planimetric Map-WIPP Facility Boundaries*
- Figure 2-2a, *Legend to Figure 2-2*
- Figure 2-3, *Topographic Map with Underground Facilities*

- Figure 3-1, *Spatial View of the WIPP Facility*
- Figure 3-2, *Repository Horizon*
- Figure 3-3, *Waste Handling Building*
- Figure 3-3a, *Waste Handling Building - CH TRU Mixed Waste Container Storage and Surge Areas*
- Figure 3-3b, *Waste Handling Building - RH TRU Mixed Waste Container Storage*
- Figure 3-3c, *Waste Handling Building - RH Storage, Hot Cell Storage Area (above grade)*
- Figure 3-3d, *Waste Handling Building - RH Canister Transfer Cell Storage Area, (below grade)*
- Figure 3-4, *Parking Area – Container Storage and Surge Areas*
- Renewal Application, Drawing 51-W-214-W *Underground Facilities Typical Disposal Panel*
- Photographs 4-1 through 4-11

(i) A description of the processes to be used for treating, storing, and disposing of hazardous waste, and the design capacity of these items.

The Permittees propose no change in the manner in which they store or dispose of transuranic (TRU) mixed waste, except for requesting the authorization for the disposal of TRU-mixed waste in Panel 8. The Permittees do not treat TRU mixed waste.

(j) A specification of the hazardous wastes listed or designated under 40 CFR part 261 to be treated, stored, or disposed of at the facility, an estimate of the quantity of such wastes to be treated, stored, or disposed annually, and a general description of the processes to be used for such wastes.

The Permittees propose no change from the existing list of hazardous waste numbers. This information is found in the completed EPA Form OMB # 2050-0034 for hazardous waste numbers, estimates of annual quantity disposed per hazardous waste number, and process codes. Other information required by the form is included.

(k) A listing of all permits or construction approvals received or applied for under any of the following programs:

Black Text = Regulatory Citation

Blue Text = Permittees' Response

- (1) Hazardous Waste Management program under RCRA.
- (2) UIC program under the SWDA.
- (3) NPDES program under the CWA.
- (4) Prevention of Significant Deterioration (PSD) program under the Clean Air Act.
- (5) Nonattainment program under the Clean Air Act.
- (6) National Emission Standards for Hazardous Pollutants (NESHAPS) preconstruction approval under the Clean Air Act.
- (7) Ocean dumping permits under the Marine Protection Research and Sanctuaries Act.
- (8) Dredge or fill permits under section 404 of the CWA.
- (9) Other relevant environmental permits, including State permits.

Please see Part A Application Appendix 1, Table Part A-1 - *Active Environmental Permits for the Waste Isolation Pilot Plant* for an updated list of other relevant environmental permits, including the number and status of individual permits.

(l) A topographic map (or other map if a topographic map is unavailable) extending one mile beyond the property boundaries of the source, depicting the facility and each of its intake and discharge structures; each of its hazardous waste treatment, storage, or disposal facilities; each well where fluids from the facility are injected underground; and those wells, springs, other surface water bodies, and drinking water wells listed in public records or otherwise known to the applicant within 1/4 mile of the facility property boundary.

A topographic map has been provided (see Figure 2-3) that depicts the facility and wells extending one mile beyond the property boundary. Because of the size of the facility and the scale of the map, intake and discharge structures; and each hazardous waste storage, or disposal facility are not shown on the map, however, they are shown in Figures 3-1 to 3-4. Fluids from the facility are not injected underground. There are no springs, other surface water bodies, and drinking water wells listed in public records or otherwise known to the applicant within 1/4 mile of the facility property boundary.

(m) A brief description of the nature of the business.

The WIPP facility geologic repository is defined as a “miscellaneous unit” under 40 CFR §260.10. “Miscellaneous unit” means a hazardous waste management unit where hazardous waste is treated, stored, or disposed of and that is not a container, tank, surface impoundment, waste pile, land treatment unit, landfill, incinerator, containment building,

boiler, industrial furnace, or underground injection well with appropriate technical standards under 40 CFR Part 146, corrective action management unit, or unit eligible for research, development, and demonstration permit under 40 CFR §270.65. Some of the TRU wastes disposed of at the WIPP facility contain hazardous wastes as co-contaminants. The geologic repository has been divided into ten discrete hazardous waste disposal units (**HWDUs**) which are being permitted under 40 CFR Part 264, Subpart X.

During the Disposal Phase of the facility, which is expected to last 25 years, the total amount of waste received from off-site generators and any derived waste will be limited to 175,600 m<sup>3</sup> of TRU waste of which up to 7,080 m<sup>3</sup> may be remote-handled (**RH**) TRU mixed waste. For purposes of this application, all TRU waste is managed as though it were mixed.

The process design capacity for the miscellaneous unit (composed of ten underground HWDUs in the geologic repository) shown in Section 8B of EPA Form 8700-23, is for the maximum amount of waste that may be received from off-site generators plus the maximum expected amount of derived wastes that may be generated at the WIPP facility. In addition, two hazardous waste management units (**HWMUs**) have been designated as container storage units (S01) in Section 8B of EPA Form 8700-23. One is inside the Waste Handling Building (**WHB**) and consists of the contact-handled (**CH**) bay, conveyance loading room, waste hoist entry room, RH bay, cask unloading room, hot cell, transfer cell, and facility cask loading room. This HWMU will be used for waste receipt, handling, and storage (including storage of derived waste) prior to emplacement in the underground geologic repository. No treatment or disposal will occur in this S01 HWMU. The capacity of this S01 unit for storage is 194.1 m<sup>3</sup>, based on 36 ten-drum overpacks on 18 facility pallets, four CH packages at the TRUDOCKs, one standard waste box of derived waste, two loaded casks and one 55-gallon drum of derived waste in the RH Bay, one loaded cask in the Cask Unloading Room, thirteen 55-gallon drums in the Hot Cell, one canister in the Transfer Cell and one canister in the Facility Cask Unloading Room. The second S01 HWMU is the parking area outside the WHB where the trailers containing the CH packages or the road cask trailers containing RH packages will be parked awaiting waste handling operations. The capacity of this unit is 50 CH packages and twelve RH packages with a combined volume of 242 m<sup>3</sup>.

During the term of this and the preceding Permit, the volume of CH TRU mixed waste emplaced in the repository will not exceed 4,920,746 ft<sup>3</sup> (139,340 m<sup>3</sup>) and the volume of RH TRU mixed waste shall not exceed 93,050 ft<sup>3</sup> (2,635 m<sup>3</sup>). CH TRU mixed waste will be disposed of in Underground HWDUs identified as Panels 5 through 8 and in any currently active HWDU. The RH TRU mixed waste may be disposed of in Panels 4 through 8.

(n) For hazardous debris, a description of the debris category(ies) and contaminant category(ies) to be treated, stored, or disposed of at the facility.

Debris Wastes at WIPP

The debris waste category (S5000) includes waste that is at least 50 percent by volume materials that meet the New Mexico Administrative Code (NMAC) criteria for classification as debris (20.4.1.800 NMAC (incorporating 40 CFR §268.2)). Debris means solid material exceeding a 2.36 inch (60 millimeter) particle size that is intended for disposal and that is: 1) a manufactured object, 2) plant or animal matter, or 3) natural geologic material. The debris category includes metal debris containing lead, inorganic nonmetal debris, asbestos debris, combustible debris, graphite debris, heterogeneous debris, and composite filters, as well as other minor waste streams. Particles smaller than 2.36 inches (60 millimeters) in size may be considered debris if the debris is a manufactured object and if it is not a particle of homogeneous solids (S3000) or soils/gravel (S4000) material.