

ATTACHMENT A
GENERAL FACILITY DESCRIPTION AND PROCESS INFORMATION

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ATTACHMENT A

**GENERAL FACILITY DESCRIPTION AND
PROCESS INFORMATION**

A-1 Facility Description

Abstract

NAME OF FACILITY: Waste Isolation Pilot Plant

OWNER and CO-OPERATOR: U.S. Department of Energy
P.O. Box 3090
Carlsbad, NM 88221

CO-OPERATOR: Washington TRU Solutions LLC
P.O. Box 2078
Carlsbad, NM 88221

RESPONSIBLE OFFICIALS: David. C. Moody, Manager
DOE/Carlsbad Field Office
Farok Sharif, General Manager
Washington TRU Solutions LLC

FACILITY MAILING ADDRESS: U.S. Department of Energy
P.O. Box 3090
Carlsbad, NM 88221

FACILITY LOCATION: 30 miles east of Carlsbad on the Jal Highway, in
Eddy County.

TELEPHONE NUMBER: 575/234-7300

U.S. EPA I.D. NUMBER: NM4890139088

GEOGRAPHIC LOCATION: 32° 22' 30" N
103° 47' 30" W

DATE OPERATIONS BEGAN: November 26, 1999

1 A-2 Description of Activities

2 The Waste Isolation Pilot Plant (**WIPP**) is a facility for the management, storage, and disposal of
3 transuranic (**TRU**) mixed waste subject to regulation under Title 20 of the New Mexico
4 Administrative Code, Chapter 4, Part 1, Subpart 500 (20.4.1.500 NMAC). Both contact-handled
5 (**CH**) and remote-handled (**RH**) TRU mixed wastes are permitted for storage ~~or~~ and disposal at
6 the WIPP facility.

7 A-3 Property Description

8 The WIPP facility-property has been divided into functional areas. The Property Protection Area
9 (**PPA**), surrounded by a chain-link security fence, encompasses 34.16 acres and provides
10 security and protection for all major surface structures. The DOE Off Limits Area encloses the
11 PPA, and is approximately 1,454 acres. These areas define the DOE exclusion zone within
12 which certain items and material are prohibited. The final zone is marked by the WIPP Site
13 Boundary (WIPP ~~I~~ and ~~W~~ Withdrawal a Area), a 16-section Federal land area under the
14 jurisdiction of the DOE.

15 A-4 Facility Type

16 There are three basic groups of structures associated with the WIPP facility: surface structures,
17 shafts and underground structures. The surface structures accommodate the personnel,
18 equipment, and support services required for the receipt, preparation, and transfer of TRU
19 mixed waste from the surface to the underground. There are two surface locations where TRU
20 mixed waste ~~will be is~~ managed and stored. The first area is the Waste Handling Building
21 (**WHB**) Container Storage Unit (**WHB Unit**) for TRU mixed waste management and storage.
22 The WHB Unit consists of the WHB contact-handled (**CH**) Bay and the remote-handled (**RH**)
23 Complex. The second area designated for managing and storing TRU mixed waste is the
24 Parking Area Container Storage Unit (**Parking Area Unit**), an outside container storage area
25 which extends south from the WHB to the rail siding. The Parking Area Unit provides storage
26 space for up to 50 loaded Contact-Handled Packages and 14 loaded Remote-Handled
27 Packages on an asphalt and concrete surface. Part 3 of the permit authorizes the storage and
28 management of CH and RH TRU mixed waste containers in these two surface locations. The
29 technical requirements of 20.4.1.500 NMAC (incorporating 40 CFR §§264.170 to 264.178) are
30 applied to the operation of the WHB Unit and the Parking Area Unit. Permit Attachment A1
31 describes the container storage units, the TRU mixed waste management facilities and
32 operations, and compliance with the technical requirements of 20.4.1.500 NMAC.

33 Four vertical shafts connect the surface facility to the underground. These are the Waste Shaft,
34 the Salt Handling Shaft, the Exhaust Shaft and the Air Intake Shaft. The Waste Shaft is the only
35 shaft used to transport TRU mixed waste to the underground. The WIPP underground
36 structures are located in a mined salt bed 2,150 feet below the surface.

37 The WIPP is a geologic repository mined within a bedded salt formation, which is defined in
38 20.4.1.100 NMAC (incorporating 40 CFR §260.10) as a miscellaneous unit. As such, hazardous
39 waste management units within the repository are subject to permitting according to 20.4.1.900
40 and .901 NMAC (incorporating 40 CFR §270), and are regulated under 20.4.1.500 NMAC,
41 Miscellaneous Units.

1 The underground structures include the underground Hazardous Waste Disposal Units
2 (**HWDUs**), an area for future underground HWDUs, the shaft pillar area, interconnecting drifts
3 and other areas unrelated to the RCRA-Hazardous Waste Facility Permit. The underground
4 HWDUs are defined as waste panels, each consisting of seven rooms and two access drifts.
5 The WIPP underground area is designated as Panels 1 through 10, although only Panels 1
6 through 7-8 will be used under the terms of this permit. Each of the seven rooms is
7 approximately 300 feet long, 33 feet wide and 13 feet high. Part 4 of the permit authorizes the
8 management and disposal of CH and RH TRU mixed waste containers in underground HWDUs.
9 The Disposal Phase consists of receiving CH and RH TRU mixed waste shipping containers,
10 unloading and transporting the waste containers to the underground HWDUs, emplacing the
11 waste in the underground HWDUs, and subsequently achieving closure of the underground
12 HWDUs in compliance with applicable State and Federal regulations. As required by 20.4.1.500
13 NMAC (incorporating 40 CFR §264.601), the Permittees shall ensure that the environmental
14 performance standards for a miscellaneous unit, which are applied to the underground HWDUs
15 in the geologic repository, will be met. Permit Attachment A2 describes the underground
16 HWDUs, the TRU mixed waste management facilities and operations, and compliance with the
17 technical requirements of 20.4.1.500 NMAC.

18 A-5 Waste Description

19 Wastes destined for WIPP are byproducts of nuclear weapons production and have been
20 identified in terms of waste streams based on the processes that produced them. Each waste
21 stream identified by generators is assigned to a Waste Summary Category to facilitate RCRA
22 waste characterization, and reflect the final waste forms acceptable for WIPP disposal.

23 These Waste Summary Categories are:

24 S3000—Homogeneous Solids

25 Solid process residues defined as solid materials, excluding soil, that do not meet the
26 applicable regulatory criteria for classification as debris [20.4.1.800 NMAC, (incorporating
27 40 CFR §268.2(g) and (h))]. Solid process residues include inorganic process residues,
28 inorganic sludges, salt waste, and pyrochemical salt waste. Other waste streams are
29 included in this Waste Summary Category based on the specific waste stream types and
30 final waste form. This category includes wastes that are at least 50 percent by volume
31 solid process residues.

32 S4000—Soils/Gravel

33 This waste summary category includes waste streams that are at least 50 percent by
34 volume soil. Soils are further categorized by the amount of debris included in the matrix.

35 S5000—Debris Wastes

36 This waste summary category includes waste that is at least 50 percent by volume
37 materials that meet the NMAC criteria for classification as debris (20.4.1.800 NMAC
38 (incorporating 40 CFR §268.2)). Debris means solid material exceeding a 2.36 inch (60
39 millimeter) particle size that is intended for disposal and that is: 1) a manufactured object,
40 2) plant or animal matter, or 3) natural geologic material.

41 The S5000 Waste Summary Category includes metal debris, metal debris containing lead,
42 inorganic nonmetal debris, asbestos debris, combustible debris, graphite debris,
43 heterogeneous debris, and composite filters, as well as other minor waste streams.

1 Particles smaller than 2.36 inches in size may be considered debris if the debris is a
2 manufactured object and if it is not a particle of S3000 or S4000 material.

3 If a waste does not include at least 50 percent of any given category by volume,
4 characterization shall be performed using the waste characterization process required for the
5 category constituting the greatest volume of waste for that waste stream.

6 Wastes may be generated at the WIPP facility as a direct result of managing the TRU and TRU
7 mixed wastes received from the off-site generators. Such waste may be generated in either the
8 WHB or the underground. This waste is referred to as "derived waste." All such derived waste
9 will be placed in the rooms in HWDUs along with the TRU mixed waste for disposal.

10 Non-mixed hazardous wastes generated at the WIPP, through activities where contact with TRU
11 mixed waste does not occur, are characterized, placed in containers, and stored (for periods not
12 exceeding the limits specified in 20.4.1.300 NMAC (incorporating 40 CFR §262.34)) until they
13 are transported off site for treatment and/or disposal at a permitted facility. This waste
14 generation and accumulation activity, when performed in compliance with 20.4.1.300 NMAC
15 (incorporating 40 CFR §262), is not subject to RCRA permitting requirements and, as such, is
16 not addressed in the permit.

17 A-6 Chronology of Events Relevant to Changes in Ownership or Operational Control

18 December 19, 1997 NMED received notification of a change of name/ownership from
19 Westinghouse Electric Corporation to CBS Corporation. The WIPP
20 Management and Operating Contractor (**MOC**), Westinghouse Waste
21 Isolation Division (**WID**), became a division of Westinghouse Electric
22 Company, which in turn was a division of CBS Corporation. Notification to
23 NMED was made by the permit applicant in a letter dated December 18,
24 1997. The permit application was under review, but a draft permit was not
25 yet issued.

26 September 22, 1998 NMED received notification of a pending transfer of ownership for the
27 MOC, Westinghouse WID, from CBS Corporation to an as-yet-to-be-
28 named limited liability company owned jointly by British Nuclear Fuels, plc
29 and Morrison-Knudsen Corporation. The transfer of ownership was
30 scheduled to occur on or about December 15, 1998. Notification to NMED
31 was made by the permit applicant in a letter dated September 17, 1998.
32 The draft permit had been issued for public comment, but the final permit
33 was not yet issued.

34 March 9, 1999 NMED again received notification of the pending divestiture of the MOC,
35 Westinghouse WID, by CBS Corporation to the limited liability company
36 owned jointly by British Nuclear Fuels, plc and Morrison-Knudsen
37 Corporation known as MK/BNFL GESCO LLC. The new MOC would be
38 renamed to Westinghouse Government Environmental Services
39 Company LLC. Notification to NMED was made by the permit applicant in
40 a letter dated March 2, 1999. The public hearing on the permit was
41 underway, but the final permit was not yet issued.

- 1 March 26, 1999 NMED received official notification of the divestiture of Westinghouse
2 Electric Company by CBS Corporation to MK/BNFL GESCO LLC
3 effective March 22, 1999. The MOC was renamed Westinghouse
4 Government Environmental Services Company LLC (**WGES**), of which
5 Westinghouse Waste Isolation Division was a division. This transaction
6 constituted a change of operational control under 20.4.1.900 NMAC
7 (incorporating 40 CFR §270.40). Notification to NMED was made by the
8 permit applicant in a letter dated March 24, 1999. The public hearing on
9 the permit was nearly concluded, but the final permit was not yet issued.
- 10 April 28, 1999 NMED received a revised Part A Permit Application in a letter dated April
11 21, 1999, reflecting that the Westinghouse Waste Isolation Division, co-
12 operator of the WIPP hazardous waste facility, was now a part of WGES.
13 However, the final permit, issued October 27, 1999, did not reflect the
14 change in ownership.
- 15 July 25, 2000 NMED received a Class 1 permit modification in a letter dated July 21,
16 2000, changing the name in the Permit from Westinghouse Electric
17 Corporation to Westinghouse Government Environmental Services
18 Company LLC (**WGES**), Waste Isolation Division (**WID**). However, this
19 notification did not constitute the required permit modification under
20 20.4.1.900 NMAC (incorporating 40 CFR §270.40) necessary to reflect
21 the transfer of the permit to a new operator.
- 22 December 15, 2000 DOE announced that it had awarded a five-year contract for management
23 and operation of WIPP to Westinghouse TRU Solutions LLC, a limited
24 liability company owned jointly by WGES LLC and Roy F. Weston, Inc.
25 The announcement further stated that, following a brief transition period,
26 the new contractor would assume MOC responsibilities on February 1,
27 2001. This transaction constituted a change of operational control under
28 20.4.1.900 NMAC (incorporating 40 CFR §270.40) requiring a Class 1
29 permit modification with prior written approval of NMED.
- 30 February 5, 2001 NMED received a Class 1 permit modification in a letter dated February 2,
31 2001, which notified NMED of an organizational name change of the
32 MOC from Westinghouse Government Environmental Services Company
33 LLC Waste Isolation Division to Westinghouse TRU Solutions LLC.
34 However, this notification did not constitute the required permit
35 modification under 20.4.1.900 NMAC (incorporating 40 CFR §270.40)
36 necessary to reflect the transfer of the permit to a new operator.
- 37 December 31, 2002 NMED received a Class 1 permit modification in a letter dated December
38 27, 2002, which changed the name of the MOC from Westinghouse TRU
39 Solutions LLC to Washington TRU Solutions LLC. Again, this notification
40 did not constitute the required permit modification under 20.4.1.900
41 NMAC (incorporating 40 CFR §270.40) necessary to reflect the transfer of
42 the permit to a new operator.
- 43 February 28, 2003 NMED received a Class 1 permit modification requiring prior agency
44 approval in a letter dated February 28, 2003, to satisfy the requirements

- 1 specified in 20.4.1.900 NMAC (incorporating 40 CFR §270.40) to reflect
2 the transfer of the permit to a new operator.
- 3 September 16, 2004 NMED received a Class 1 permit modification requiring prior agency
4 approval in a letter dated September 16, 2004, describing a change of
5 ownership of Washington TRU Solutions LLC (**WTS**). WTS is owned
6 jointly by WGES, managing member, and Weston Solutions, Inc. WGES
7 had been owned jointly by Washington Group International, Inc. (**WGI**),
8 and BNFL Nuclear Services, Inc. However, WGI has acquired BNFL's
9 prior interest in the former Westinghouse government services
10 businesses, which includes BNFL's prior interest in WGES.
- 11 August 6, 2007 NMED received notification in a letter dated August 2, 2007 of the
12 pending acquisition of WGI by URS Corporation at an unknown future
13 date. This acquisition would be related to operational control, because
14 WGI is the sole owner of WGES, managing member of the joint venture,
15 along with Weston Solutions, Inc., that owns WTS, the WIPP MOC. This
16 notification was submitted to assure compliance with 20.4.1.900 NMAC
17 (incorporating 40 CFR §270.40(b)).
- 18 November 26, 2007 NMED received a Class 1 permit modification requiring prior agency
19 approval in a letter dated November 19, 2007, describing a change of
20 ownership of WTS. On November 15, 2007, WGI was acquired by URS
21 Corporation. WTS is owned jointly by WGES, managing member, and
22 Weston Solutions, Inc. WGES, formerly owned by WGI, is now owned by
23 URS Corporation