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CHAPTER A

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GENERAL FACILITY DESCRIPTION AND PROCESS INFORMATION

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GENERAL FACILITY DESCRIPTION AND PROCESS INFORMATION
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1 **CHAPTER A**

2 **GENERAL FACILITY DESCRIPTION AND**
3 **PROCESS INFORMATION**

4 A-1 Facility Description

5 **Abstract**

6 NAME OF FACILITY: Waste Isolation Pilot Plant

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

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

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

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

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

22 TELEPHONE NUMBER: 575/234-7300

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

24 GEOGRAPHIC LOCATION: 32° 22' 30" N
25 103° 47' 30" W

26 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. Both contact-handled (**CH**) and remote-handled (**RH**) TRU
4 mixed wastes are permitted for storage or disposal at the WIPP facility.

5 A-3 Property Description

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

12 A-4 Facility Type

13 There are three basic groups of structures associated with the WIPP facility: surface structures,
14 shafts and underground structures. The surface structures accommodate the personnel,
15 equipment, and support services required for the receipt, preparation, and transfer of TRU mixed
16 waste from the surface to the underground. There are two surface locations where TRU mixed
17 waste will be managed and stored. The first area is the Waste Handling Building (**WHB**)
18 Container Storage Unit (WHB Unit) for TRU mixed waste management and storage. The WHB
19 Unit consists of the WHB contact-handled (**CH**) Bay and the remote-handled (**RH**) Complex.
20 The second area designated for managing and storing TRU mixed waste is the Parking Area
21 Container Storage Unit (Parking Area Unit), an outside container storage area which extends
22 south from the WHB to the rail siding. The Parking Area Unit provides storage space for up to
23 50 loaded Contact-Handled Packages and 14 loaded Remote-Handled Packages on an asphalt
24 and concrete surface.

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

29 The underground structures include the underground Hazardous Waste Disposal Units
30 (**HWDUs**), an area for future underground HWDUs, the shaft pillar area, interconnecting drifts
31 and other areas unrelated to the RCRA Hazardous Waste Permit. The underground HWDUs are
32 defined as waste panels, each consisting of seven rooms and two access drifts. The WIPP
33 underground area is designated as Panels 1 through 10, although only Panels 1 through 7~~8~~ will
34 be used under the terms of this permit. Each of the seven rooms is approximately 300 feet long,
35 33 feet wide and 13 feet high.

1 A-5 Waste Description

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

6 These Waste Summary Categories are:

7 S3000—Homogeneous Solids

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

15 S4000—Soils/Gravel

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

18 S5000—Debris Wastes

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

24 The S5000 Waste Summary Category includes metal debris, metal debris containing lead,
25 inorganic nonmetal debris, asbestos debris, combustible debris, graphite debris,
26 heterogeneous debris, and composite filters, as well as other minor waste streams.
27 Particles smaller than 2.36 inches in size may be considered debris if the debris is a
28 manufactured object and if it is not a particle of S3000 or S4000 material.

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

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

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

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

9 December 19, 1997 NMED received notification of a change of name/ownership from
10 Westinghouse Electric Corporation to CBS Corporation. The WIPP
11 Management and Operating Contractor (**MOC**), Westinghouse Waste
12 Isolation Division (**WID**), became a division of Westinghouse Electric
13 Company, which in turn was a division of CBS Corporation. Notification
14 to NMED was made by the permit applicant in a letter dated December 18,
15 1997. The permit application was under review, but a draft permit was not
16 yet issued.

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

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

33 March 26, 1999 NMED received official notification of the divestiture of Westinghouse
34 Electric Company by CBS Corporation to MK/BNFL GESCO LLC
35 effective March 22, 1999. The MOC was renamed Westinghouse
36 Government Environmental Services Company LLC (**WGES**), of which
37 Westinghouse Waste Isolation Division was a division. This transaction
38 constituted a change of operational control under 20.4.1.900 NMAC
39 (incorporating 40 CFR §270.40). Notification to NMED was made by the

1 permit applicant in a letter dated March 24, 1999. The public hearing on
2 the permit was nearly concluded, but the final permit was not yet issued.

3 April 28, 1999 NMED received a revised Part A Permit Application in a letter dated April
4 21, 1999, reflecting that the Westinghouse Waste Isolation Division, co-
5 operator of the WIPP hazardous waste facility, was now a part of WGES.
6 However, the final permit, issued October 27, 1999, did not reflect the
7 change in ownership.

8 July 25, 2000 NMED received a Class 1 permit modification in a letter dated July 21,
9 2000, changing the name in the Permit from Westinghouse Electric
10 Corporation to Westinghouse Government Environmental Services
11 Company LLC (**WGES**), Waste Isolation Division (**WID**). However, this
12 notification did not constitute the required permit modification under
13 20.4.1.900 NMAC (incorporating 40 CFR §270.40) necessary to reflect
14 the transfer of the permit to a new operator.

15 December 15, 2000 DOE announced that it had awarded a five-year contract for management
16 and operation of WIPP to Westinghouse TRU Solutions LLC, a limited
17 liability company owned jointly by WGES LLC and Roy F. Weston, Inc.
18 The announcement further stated that, following a brief transition period,
19 the new contractor would assume MOC responsibilities on February 1,
20 2001. This transaction constituted a change of operational control under
21 20.4.1.900 NMAC (incorporating 40 CFR §270.40) requiring a Class 1
22 permit modification with prior written approval of NMED.

23 February 5, 2001 NMED received a Class 1 permit modification in a letter dated February 2,
24 2001, which notified NMED of an organizational name change of the
25 MOC from Westinghouse Government Environmental Services Company
26 LLC Waste Isolation Division to Westinghouse TRU Solutions LLC.
27 However, this notification did not constitute the required permit
28 modification under 20.4.1.900 NMAC (incorporating 40 CFR §270.40)
29 necessary to reflect the transfer of the permit to a new operator.

30 December 31, 2002 NMED received a Class 1 permit modification in a letter dated December
31 27, 2002, which changed the name of the MOC from Westinghouse TRU
32 Solutions LLC to Washington TRU Solutions LLC. Again, this
33 notification did not constitute the required permit modification under
34 20.4.1.900 NMAC (incorporating 40 CFR §270.40) necessary to reflect
35 the transfer of the permit to a new operator.

36 February 28, 2003 NMED received a Class 1 permit modification requiring prior agency
37 approval in a letter dated February 28, 2003, to satisfy the requirements
38 specified in 20.4.1.900 NMAC (incorporating 40 CFR §270.40) to reflect
39 the transfer of the permit to a new operator.

