

ATTACHMENT O

HAZARDOUS WASTE PERMIT APPLICATION PART A

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ATTACHMENT O

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NOTE: The "Part A - Hazardous Waste Permit Application" is the document submitted by the Permittees. It refers to management, storage, and disposal of remote-handled (RH) transuranic waste. This Permit does not authorize these activities and they have been included only to

indicate what the Permittees submitted to NMED. However, maps, facility drawings, and photographs in Appendices O2, O3, and O4 which depicted RH waste activities have been edited or removed.

1 NM4890139088

2 XII. PROCESS—CODES AND DESIGN CAPACITIES (continued)

3 The Waste Isolation Pilot Plant (WIPP) geologic repository is defined as a "miscellaneous unit"
4 under 40 CFR §260.10. "Miscellaneous unit" means a hazardous waste management unit
5 where hazardous waste is treated, stored, or disposed of and that is not a container, tank,
6 surface impoundment, waste pile, land treatment unit, landfill, incinerator, containment building,
7 boiler, industrial furnace, or underground injection well with appropriate technical standards
8 under 40 CFR Part 146, corrective action management unit, or unit eligible for research,
9 development, and demonstration permit under 40 CFR §270.65. The WIPP is a geologic
10 repository designed for the disposal of defense-generated transuranic (TRU) waste. Some of
11 the TRU wastes disposed of at the WIPP contain hazardous wastes as co-contaminants. More
12 than half the waste to be disposed of at the WIPP also meets the definition of debris waste. The
13 debris categories include manufactured goods, biological materials, and naturally occurring
14 geological materials. Approximately 120,000 cubic meters (m³) of the 175,600 m³ of WIPP
15 wastes is categorized as debris waste. The geologic repository has been divided into ten
16 discrete hazardous waste management units (HWMU) which are being permitted under 40 CFR
17 Part 264, Subpart X.

18 During the Disposal Phase of the facility, which is expected to last 25 years, the total amount of
19 waste received from off-site generators and any derived waste will be limited to 175,600 m³ of
20 TRU waste of which up to 7,080 m³ may be remote-handled (RH) TRU mixed waste. For
21 purposes of this application, all TRU waste is managed as though it were mixed.

22 On March 25, 1996, the DOE reached the conclusion that in order to comply with 40 CFR 191
23 §13 which regulates the long-term release of radionuclides from a geologic disposal facility, it is
24 necessary to add magnesium oxide to each disposal room. This additive is to be placed as a
25 backfill. The function of the backfill is to chemically alter the composition of brine that may
26 accumulate in the disposal region. The result of the chemical alteration is to significantly reduce
27 the solubility of the prevalent TRU radionuclides.

28 The process design capacity for the miscellaneous unit (composed of ten underground HWMUs
29 in the geologic repository) shown in Section XII B, is for the maximum amount of waste that may
30 be received from off-site generators plus the maximum expected amount of derived wastes that
31 may be generated at the WIPP facility. In addition, two HWMUs have been designated as
32 container storage units (S01) in Section XII. One is inside the Waste Handling Building (WHB)
33 and consists of the contact-handled (CH) bay, conveyance loading room, waste hoist entry
34 room, RH bay, cask unloading room, hot cell, transfer cell, and facility cask loading room. This
35 HWMU will be used for waste receipt, handling, and storage (including storage of derived
36 waste) prior to emplacement in the underground geologic repository. No treatment or disposal
37 will occur in this S01 HWMU. The capacity of this S01 unit for storage is 87.7 m³, based on 40
38 standard waste boxes or seven-packs of drums on pallets and in the TRUDOCKs, one standard
39 waste box of derived waste, seven RH canisters in the transfer cell, and five RH canisters in the
40 hot cell. The second S01 HWMU is the parking area outside the WHB where the Contact
41 Handled Package trailers and the road cask trailers will be parked awaiting waste handling
42 operations. The capacity of this unit is 12 TRUPACT-IIs and three road casks or four rail casks
43 with a combined volume of 47.1 m³. The railroad side tracks are included in this area to

1 accommodate rail shipments of RH TRU mixed waste. The HWMUs are shown in Appendix O3
2 as Figures O3-2, O3-3, and O3-4.

3 During the ten year period of the permit, up to ~~118,500~~ 131,250 m³ of CH TRU mixed waste
4 could be emplaced in Panels 1 to 7 and up to 3,250 m³ of RH TRU mixed waste could be
5 emplaced in Panels 3 to 7. Panels 8, 9 and 10 will be constructed under the initial term of this
6 permit. These latter areas will not receive waste for disposal under this permit.

1 NM4890139088

2 **RCRA PART A APPLICATION CERTIFICATION**

3 The U.S. Department of Energy (DOE), through its Carlsbad Field Office, has signed as "owner and
4 operator," and Washington TRU Solutions LLC, the Management and Operating Contractor (MOC),
5 has signed this application for the permitted facility as "co-operator."

6 The DOE has determined that dual signatures best reflect the actual apportionment of Resource
7 Conservation and Recovery Act (RCRA) responsibilities as follows:

8 The DOE's RCRA responsibilities are for policy, programmatic directives, funding and
9 scheduling decisions, Waste Isolation Pilot Plant (WIPP) requirements of DOE generator
10 sites, auditing, and oversight of all other parties engaged in work at the WIPP, as well as
11 general oversight.

12 The MOC's RCRA responsibilities are for certain day-to-day operations (in accordance with
13 general directions given by the DOE and in the Management and Operating Contract as part
14 of its general oversight responsibility), including, but not limited to, the following: certain
15 waste handling, monitoring, record keeping, certain data collection, reporting, technical
16 advice, and contingency planning.

17 For purposes of the certification required by Title 20 of the New Mexico Administrative
18 Code, Chapter 4, Part 1 (20.4.1 NMAC), Subpart IX, §270.11(d), the DOE's and the MOC's
19 representatives certify, under penalty of law that this document and all attachments were
20 prepared under their direction or supervision in accordance with a system designed to
21 assure that qualified personnel properly gather and evaluate the information submitted.
22 Based on their inquiry of the person or persons who manage the system, or those persons
23 directly responsible for gathering the information, the information submitted is, to the best
24 of their knowledge and belief, true, accurate, and complete for their respective areas of
25 responsibility. We are aware that there are significant penalties for submitting false
26 information, including the possibility of fine and imprisonment for knowing violations.

27 Owner and Operator Signature: Original signed by Inés R. Triay
28 Title: Acting Manager, Carlsbad Field Office
29 for: U.S. Department of Energy
30 Date: _____

31 Co-Operator Signature: Original signed by Richard D. Raaz
32 Title: General Manager
33 for: Washington TRU Solutions LLC
34 Date: 2/3/05

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**APPENDIX O1
OTHER ENVIRONMENTAL PERMITS**

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**ACTIVE ENVIRONMENTAL PERMITS AND APPROVALS FOR THE WASTE ISOLATION PILOT PLANT
 AS OF APRIL 1, 2003**

	Granting Agency	Type of Permit	Permit Number	Granted/ Submitted	Expiration	Current Permit Status
1.	Department of the Interior, Bureau of Land Management	Right-of-Way for Water Pipeline	NM53809	08/17/83	In Perpetuity	Active
2.	Department of the Interior, Bureau of Land Management	Right-of-Way for the North Access Road	NM55676	08/24/83	None	Active
3.	Department of the Interior, Bureau of Land Management	Right-of-Way for Railroad	NM55699	09/27/83	None	Active
4.	Department of the Interior, Bureau of Land Management	Right-of-Way for Dosimetry and Aerosol Sampling Sites	NM63136	07/31/86	07/31/11	Active
5.	Department of the Interior, Bureau of Land Management	Right-of-Way for Seven Subsidence Monuments	NM65801	11/07/86	None	Active
6.	Department of the Interior, Bureau of Land Management	Right-of-Way for Aerosol Sampling Site	NM77921	08/18/89	08/18/19	Active
7.	Department of the Interior, Bureau of Land Management	Right-of-Way for 2 Survey Monuments	NM82245	12/13/89	12/13/19	Active
8.	Department of the Interior, Bureau of Land Management	Right-of-Way for telephone cable	NM46029	07/03/90	09/04/11	Active
9.	Department of the Interior, Bureau of Land Management	Right-of-Way for SPS Powerline	NM43203	02/20/96	10/19/11	Active
10.	Department of the Interior, Bureau of Land Management	Right-of-Way for South Access Road	NM46130	09/26/94	08/17/31	Active
11.	Department of the Interior, Bureau of Land Management	Right-of-Way for Duval telephone line	NM60174	11/06/96	03/08/15	Active
12.	Department of the Interior, Bureau of Land Management	Right-of-Way for Wells AEC-7 & AEC-8	NM108365	8/30/02	08/30/32	Active
13.	Department of the Interior, Bureau of Land Management	Right-of-Way for ERDA-6	NM108365	8/30/02	08/30/32	Active
14.	Department of the Interior, Bureau of Land Management	Right-of-Way for Well C-2756 (P-18)	NM108365	8/30/02	08/30/32	Active
15.	Department of the Interior, Bureau of Land Management	Right-of-Way for Monitoring Well C-2664 (Cabin Baby)	NM107944	04/23/02	04/23/32	Active
16.	Department of the Interior, Bureau of Land Management	Right-of-Way for Seismic Monitoring Station	NM85426	09/23/91	None	Active

	Granting Agency	Type of Permit	Permit Number	Granted/ Submitted	Expiration	Current Permit Status
17.	Department of the Interior, Bureau of Land Management	Right-of-Way for Wells C-2725 (H-4A), C-2775 (H-4B), & C-2776 (H-4C)	NM-6-5 Cooperative Agreement	04/27/78	None	Active
18.	Department of the Interior, Bureau of Land Management	Right-of-Way for Monitoring Wells C-2723 (WIPP-25), C-2724 (WIPP-26), C-2722 (WIPP-27), C-2636 (WIPP-28), C-2743 (WIPP-29), & C-2727 (WIPP-30)	NM-6-5 Cooperative Agreement	06/14/78	None	Active
19.	Department of the Interior, Bureau of Land Management	Right-of-Way for Aerosol Sampling Sites	NM77921	10/03/89	08/18/19	Active
20.	Department of the Interior, Bureau of Land Management	Right-of-Way easement for accessing state trust lands in Eddy & Lea Counties	NM25430	02/29/00	09/28/04	Active
21.	U.S. Department of the Interior, Fish and Wildlife Service	Concurrence that WIPP construction activities will have no significant impact on federally-listed threatened or endangered species	None	05/29/80	None	Active
22.	U.S. Department of the Interior, Fish and Wildlife Service	Master Personal Banding	#22478	05/19/93	Auto. Renewed every 3 years	Active
23.	New Mexico Commissioner of Public Lands	Right-of-Way for High Volume Air Sampler	RW-22789	10/03/85	10/03/20	Active
24.	New Mexico Environment Department Groundwater Bureau	Discharge Permit	DP-831	07/03/97	07/03/02 (Comments on Draft Renewal submitted April 10, 2003)	Active
25.	New Mexico Environment Department Air Quality Bureau	Operating Permit for two backup diesel generators	310-M-2	12/07/93	None	Active
26.	New Mexico Department of Game and Fish	Concurrence that WIPP construction activities will have no significant impact on state-listed threatened or endangered species	None 07/25/83	05/26/89	None	Active
27.	New Mexico Environment Department-UST Bureau	Underground Storage Tanks	NMED11811 (Number changes annually)	07/01/02	06/30/03 (2003 registration submitted 6/18/02)	Active

Waste Isolation Pilot Plant
Draft Hazardous Waste Permit
November 23, 2005

	Granting Agency	Type of Permit	Permit Number	Granted/ Submitted	Expiration	Current Permit Status
28.	New Mexico State Engineer Office	Monitoring Well Exhaust Shaft Exploratory Borehole	C-2801	02/23/01	None	Active
29.	New Mexico State Engineer Office	Monitoring Well Exhaust Shaft Exploratory Borehole	C-2802	02/23/01	None	Active
30.	New Mexico State Engineer Office	Monitoring Well Exhaust Shaft Exploratory Borehole	C-2803	02/23/01	None	Active
31.	New Mexico State Engineer Office	Monitoring Well	C-2811	03/02/02	None	Active
32.	New Mexico State Engineer Office	Appropriation: WQSP-1 Well	C-2413	10/21/96	None	Active
33.	New Mexico State Engineer Office	Appropriation: WQSP-2 Well	C-2414	10/21/96	None	Active
34.	New Mexico State Engineer Office	Appropriation: WQSP-3 Well	C-2415	10/21/96	None	Active
35.	New Mexico State Engineer Office	Appropriation: WQSP-4 Well	C-2416	10/21/96	None	Active
36.	New Mexico State Engineer Office	Appropriation: WQSP-5 Well	C-2417	10/21/96	None	Active
37.	New Mexico State Engineer Office	Appropriation: WQSP-6 Well	C-2418	10/21/96	None	Active
38.	New Mexico State Engineer Office	Appropriation: WQSP-6a Well	C-2419	10/21/96	None	Active
39.	New Mexico State Engineer Office	Monitoring Well AEC-7	C-2742	11/06/00	None	Active
40.	New Mexico State Engineer Office	Monitoring Well AEC-8	C-2744	11/06/00	None	Active
41.	New Mexico State Engineer Office	Monitoring Well Cabin Baby	C-2664	07/30/99	None	Active
42.	New Mexico State Engineer Office	Monitoring Well D-268 Plugged to 220'. Livestock watering	C-2638	01/12/99	None	Active
43.	New Mexico State Engineer Office	Monitoring Well DOE-1	C-2757	11/06/00	None	Active
44.	New Mexico State Engineer Office	Monitoring Well DOE-2	C-2682	04/17/00	None	Active
45.	New Mexico State Engineer Office	Monitoring Well ERDA-9	C-2752	11/06/00	None	Active
46.	New Mexico State Engineer Office	Monitoring Well H-1	C-2765	11/06/00	None	Active

	Granting Agency	Type of Permit	Permit Number	Granted/ Submitted	Expiration	Current Permit Status
47.	New Mexico State Engineer Office	Monitoring Well H-2A	C-2762	11/06/00	None	Active
48.	New Mexico State Engineer Office	Monitoring Well H-2B1	C-2758	11/06/00	None	Active
49.	New Mexico State Engineer Office	Monitoring Well H-2B2	C-2763	11/06/00	None	Active
50.	New Mexico State Engineer Office	Monitoring Well H-2C	C-2759	11/06/00	None	Active
51.	New Mexico State Engineer Office	Monitoring Well H-3B1	C-2764	11/06/00	None	Active
52.	New Mexico State Engineer Office	Monitoring Well H-3B2	C-2760	11/06/00	None	Active
53.	New Mexico State Engineer Office	Monitoring Well H-3B3	C-2761	11/06/00	None	Active
54.	New Mexico State Engineer Office	Monitoring Well H-3D	pending	11/06/00	None	Active
55.	New Mexico State Engineer Office	Monitoring Well H-4A	C-2725	11/06/00	None	Active
56.	New Mexico State Engineer Office	Monitoring Well H-4B	C-2775	11/06/00	None	Active
57.	New Mexico State Engineer Office	Monitoring Well H-4C	C-2776	11/06/00	None	Active
58.	New Mexico State Engineer Office	Monitoring Well H-5A	C-2746	11/06/00	None	Active
59.	New Mexico State Engineer Office	Monitoring Well H-5B	C-2745	11/06/00	None	Active
60.	New Mexico State Engineer Office	Monitoring Well H-5C	C-2747	11/06/00	None	Active
61.	New Mexico State Engineer Office	Monitoring Well H-6A	C-2751	11/06/00	None	Active
62.	New Mexico State Engineer Office	Monitoring Well H-6B	C-2749	11/06/00	None	Active
63.	New Mexico State Engineer Office	Monitoring Well H-6C	C-2750	11/06/00	None	Active
64.	New Mexico State Engineer Office	Monitoring Well H-7A	C-2694	04/17/00	None	Active
65.	New Mexico State Engineer Office	Monitoring Well H-7B1	C-2770	11/06/00	None	Active

Waste Isolation Pilot Plant
Draft Hazardous Waste Permit
November 23, 2005

	Granting Agency	Type of Permit	Permit Number	Granted/ Submitted	Expiration	Current Permit Status
66.	New Mexico State Engineer Office	Monitoring Well H-7B2	C-2771	11/06/00	None	Active
67.	New Mexico State Engineer Office	Monitoring Well H-7C	C-2772	11/06/00	None	Active
68.	New Mexico State Engineer Office	Monitoring Well H-8A	C-2780	11/06/00	None	Active
69.	New Mexico State Engineer Office	Monitoring Well H-8B	C-2781	11/06/00	None	Active
70.	New Mexico State Engineer Office	Monitoring Well H-8C	C-2782	11/06/00	None	Active
71.	New Mexico State Engineer Office	Monitoring Well H-9A	C-2785	11/06/00	None	Active
72.	New Mexico State Engineer Office	Monitoring Well H-9B	C-2783	11/06/00	None	Active
73.	New Mexico State Engineer Office	Monitoring Well H-9C	C-2784	11/06/00	None	Active
74.	New Mexico State Engineer Office	Monitoring Well H-10A	C-2779	11/06/00	None	Active
75.	New Mexico State Engineer Office	Monitoring Well H-10B	C-2778	11/06/00	None	Active
76.	New Mexico State Engineer Office	Monitoring Well H-10C	C-2695	04/17/00	None	Active
77.	New Mexico State Engineer Office	Monitoring Well H-11B1	C-2767	11/06/00	None	Active
78.	New Mexico State Engineer Office	Monitoring Well H-11B2	C-2687	04/17/00	None	Active
79.	New Mexico State Engineer Office	Monitoring Well H-11B3	C-2768	11/06/00	None	Active
80.	New Mexico State Engineer Office	Monitoring Well H-11B4	C-2769	11/06/00	None	Active
81.	New Mexico State Engineer Office	Monitoring Well H-12	C-2777	11/06/00	None	Active
82.	New Mexico State Engineer Office	Monitoring Well H-14	C-2766	11/06/00	None	Active
83.	New Mexico State Engineer Office	Monitoring Well H-15	C-2685	04/17/00	None	Active
84.	New Mexico State Engineer Office	Monitoring Well H-16	C-2753	11/06/00	None	Active

	Granting Agency	Type of Permit	Permit Number	Granted/ Submitted	Expiration	Current Permit Status
85.	New Mexico State Engineer Office	Monitoring Well H-17	C-2773	11/06/00	None	Active
86.	New Mexico State Engineer Office	Monitoring Well H-18	C-2683	04/17/00	None	Active
87.	New Mexico State Engineer Office	Monitoring Well H-19B0	C-2420	01/25/95	01/31/98	Inactive Renew when necessary
88.	New Mexico State Engineer Office	Monitoring Well H-19B1	C-2420	01/25/95	01/31/98	Inactive Renew when necessary
89.	New Mexico State Engineer Office	Monitoring Well H-19B2	C-2421	01/25/95	01/31/98	Inactive Renew when necessary
90.	New Mexico State Engineer Office	Monitoring Well H-19B3	C-2422	01/25/95	01/31/98	Inactive Renew when necessary
91.	New Mexico State Engineer Office	Monitoring Well H-19B4	C-2423	01/25/95	01/31/98	Inactive Renew when necessary
92.	New Mexico State Engineer Office	Monitoring Well H-19B5	C-2424	01/25/95	01/31/98	Inactive Renew when necessary
93.	New Mexico State Engineer Office	Monitoring Well H-19B6	C-2425	01/25/95	01/31/98	Inactive Renew when necessary
94.	New Mexico State Engineer Office	Monitoring Well H-19B7	C-2426	01/25/95	01/31/98	Inactive Renew when necessary
95.	New Mexico State Engineer Office	Monitoring Well P-14	C-2637	01/02/99	None	P&A
96.	New Mexico State Engineer Office	Monitoring Well P-15	C-2686	04/17/00	None	P&A
97.	New Mexico State Engineer Office	Monitoring Well P-17	C-2774	11/06/00	None	Active
98.	New Mexico State Engineer Office	Monitoring Well P-18	C-2756	11/06/00	None	P&A
99.	New Mexico State Engineer Office	Monitoring Well WIPP-12	C-2639	01/12/99	None	Active
100.	New Mexico State Engineer Office	Monitoring Well WIPP-13	C-2748	11/06/00	None	Active

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	Granting Agency	Type of Permit	Permit Number	Granted/ Submitted	Expiration	Current Permit Status
101.	New Mexico State Engineer Office	Monitoring Well WIPP-18	C-2684	04/17/00	None	Active
102.	New Mexico State Engineer Office	Monitoring Well WIPP-19	C-2755	11/06/00	None	Active
103.	New Mexico State Engineer Office	Monitoring Well WIPP-21	C-2754	11/06/00	None	Active
104.	New Mexico State Engineer Office	Monitoring Well WIPP-25	C-2723	07/26/00	None	Active
105.	New Mexico State Engineer Office	Monitoring Well WIPP-26	C-2724	11/06/00	None	Active
106.	New Mexico State Engineer Office	Monitoring Well WIPP-27	C-2722	11/06/00	None	Active
107.	New Mexico State Engineer Office	Monitoring Well WIPP28	C-2636	01/12/99	None	P&A
108.	New Mexico State Engineer Office	Monitoring Well WIPP-29	C-2743	11/06/00	None	Active
109.	New Mexico State Engineer Office	Monitoring Well WIPP-30	C-2727	08/04/00	None	Active

P&A - Plugged and Abandoned

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**APPENDIX O2
MAPS**

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Figure O2-1
General Location of the WIPP Facility

Figure O2-2
Planimetric Map-WIPP Facility Boundaries

Figure O2-2a
Legend to Figure O2-2

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**APPENDIX O3
FACILITIES**

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Figure O3-1
Spatial View of the WIPP Facility

Figure O3-2
Repository Horizon

Figure O3-3
Waste Handling Building-Container Storage Unit

Figure O3-4
Parking Area-Container Storage Unit

**APPENDIX O4
PHOTOGRAPHS**

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Figure O4-1
Aerial Photograph of the Waste Isolation Pilot Plant

Figure O4-2
Underground - Panel One - Waste ~~Storage~~ Disposal Room

Figure O4-3
Aerial Photograph of the Waste Handling Building

Figure O4-4
TRUDOCKs in CH Bay of the Waste Handling Building

Figure O4-5
NE Corner of CH Bay of the Waste Handling Building

Figure O4-6
Westward View of CH Bay of the Waste Handling Building

Figure O4-7
Waste Hoist Conveyance - Loading Facility Pallet with CH Waste, Waste Handling Building

Figure O4-8
RH Bay (Photo Taken July 2000)

Figure O4-9
Cask Unloading Room and Bridge Crane

Figure O4-10
Hot Cell

Figure O4-11
Transfer Cell

Figure O4-12
Facility Cask Loading Room and Facility Cask Rotating Device

**Replace this page with the
Topographic Map from the earlier
version of the draft Permit**