

HAZARDOUS WASTE PERMIT APPLICATION PART A

Waste Isolation Pilot Plant
Hazardous Waste Facility Permit
Draft Renewal Application
May 2009

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1
2 **HAZARDOUS WASTE PERMIT APPLICATION PART A**

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1 NM4890139088

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3 8. PROCESS—CODES AND DESIGN CAPACITIES (continued)

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

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

25
26 The process design capacity for the miscellaneous unit (composed of ten underground HWMUs
27 in the geologic repository) shown in Section XII B, is for the maximum amount of waste that
28 may be received from off-site generators plus the maximum expected amount of derived wastes
29 that may be generated at the WIPP facility. In addition, two HWMUs have been designated as
30 container storage units (S01) in Section XII. One is inside the Waste Handling Building (WHB)
31 and consists of the contact-handled (CH) bay, waste shaft conveyance loading room, waste shaft
32 conveyance entry room, RH bay, cask unloading room, hot cell, transfer cell, and facility cask
33 loading room. This HWMU will be used for waste receipt, handling, and storage (including
34 storage of derived waste) prior to emplacement in the underground geologic repository. No
35 treatment or disposal will occur in this HWMU (S01 unit). The capacity of this HWMU (S01
36 unit) for storage is 194.1 m³, based on 36 ten-drum overpacks on 18 facility pallets, four CH
37 Packages at the TRUDOCKs, one standard waste box of derived waste, two loaded casks and
38 one 55-gallon drums in the Hot Cell, one canister in the Transfer Cell and one canister in the
39 Facility Cask Unloading Room. The second HWMU (S01 unit) is the parking area outside the
40 WHB where the Contact- and Remote-Handled Package trailers and the road cask trailers will
41 be parked awaiting waste handling operations. The capacity of this unit is 50 Contact-Handled
42 Packages and twelve Remote-Handled Packages with a combined volume of 242 m³. The
43 HWMUs are shown in Part A Appendix 3 as Part A Figures 3-2, 3-3, and 3-4. (Check
44 References)

- 1 During the first and second ten-year terms of the permit, up to 148,500 m³ of CH TRU mixed
- 2 waste could be emplaced in Panels 1 to 8 and up to 2,635 m³ of RH TRU mixed waste could be
- 3 emplaced in Panel 4 to 8. The HWDUs known as Panels 9 and 10 will not receive waste for
- 4 disposal under the second term of this permit.
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APPENDIX 1
ACTIVE ENVIRONMENTAL PERMITS

Waste Isolation Pilot Plant
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Active Environmental Permits

Table Part A-1 - Active Environmental Permits for the Waste Isolation Pilot Plant - Calendar Year 2007

	Granting Agency	Type of Permit	Permit Number	Granted	Expiration
1	Department of the Interior, Bureau of Land Management	Right-of-Way for Water Pipeline	NM53809	8/17/83	None
2	Department of the Interior, Bureau of Land Management	Right-of-Way for the North Access Road	NM55676	8/24/83	None
3	Department of the Interior, Bureau of Land Management	Right-of-Way for Railroad	NM55699	9/27/83	None
4	Department of the Interior, Bureau of Land Management	Right-of-Way for Dosimetry and Aerosol Sampling Sites	NM63136	7/31/86	7/31/11
5	Department of the Interior, Bureau of Land Management	Right-of-Way for Seven Subsidence Monuments	NM65801	11/7/86	None
6	Department of the Interior, Bureau of Land Management	Right-of-Way for Aerosol Sampling Site	NM77921	8/18/89	8/18/19
7	Department of the Interior, Bureau of Land Management	Right-of-Way for 2 Survey Monuments	NM82245	12/13/89	12/13/19
8	Department of the Interior, Bureau of Land Management	Right-of-Way for telephone cable	NM46092	7/3/90	9/4/11
9	Department of the Interior, Bureau of Land Management	Right-of-Way for Valor Telecon	NM113339	8/9/05	12/31/34
10	Department of the Interior, Bureau of Land Management	Right-of-Way for SPS Powerline	NM43203	2/20/96	10/19/11
11	Department of the Interior, Bureau of Land Management	Right-of-Way for South Access Road	NM46130	8/17/81	8/17/31

Table Part A-1 - Active Environmental Permits for the Waste Isolation Pilot Plant - Calendar Year 2007

	Granting Agency	Type of Permit	Permit Number	Granted	Expiration
12	Department of the Interior, Bureau of Land Management	Right-of-Way for South Access Road Fence	NM94304	3/15/95	none
13	Department of the Interior, Bureau of Land Management	Right-of-Way for Duval telephone line	NM60174	11/6/96	3/8/15
14	Department of the Interior, Bureau of Land Management	Right-of-Way for Wells AEC-7 & AEC-8	NM108365	8/30/02	8/30/32
15	Department of the Interior, Bureau of Land Management	Right-of-Way for ERDA-6	NM108365	8/30/02	8/30/32
16	Department of the Interior, Bureau of Land Management	Right-of-Way for Monitoring Well C-2756 (P-18)	NM108365	8/30/02	8/30/32
17	Department of the Interior, Bureau of Land Management	Right-of-way for Monitoring Well C-2664 (Cabin Baby)	NM107944	4/23/02	4/23/32
18	Department of the Interior, Bureau of Land Management	Right-of-Way for Seismic Monitoring Station	NM85426	9/23/91	None
19	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)	NM108365	8/30/02	8/30/32
20	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)	NM108365	8/30/02	8/30/32
21	Department of the Interior, Bureau of Land Management	Right-of-Way for Monitoring Well WIPP-11	NM108365	9/15/04	9/20/34
22	Department of the Interior, Bureau of Land Management	Right-of-Way easement for WIPP well bore SNL-2	109174	4/15/03	4/15/33
23	Department of the Interior, Bureau of Land Management	Right-of-Way easement for WIPP well bore SNL-9	109175	4/15/03	4/15/33

Table Part A-1 - Active Environmental Permits for the Waste Isolation Pilot Plant - Calendar Year 2007

	Granting Agency	Type of Permit	Permit Number	Granted	Expiration
24	Department of the Interior, Bureau of Land Management	Right-of-Way easement for WIPP well bore SNL-12	109176	4/15/03	4/15/33
25	Department of the Interior, Bureau of Land Management	Right-of-Way easement for WIPP well bore SNL-1 and access road	109177	6/17/03	6/17/33
26	Department of the Interior, Bureau of Land Management	Right-of-Way easement for WIPP well bore SNL-11 and access road	110735	10/16/03	10/16/33
27	Department of the Interior, Bureau of Land Management	Right-of-Way easement for WIPP well bore SNL-5 and access road	110735	10/16/03	10/16/33
28	Department of the Interior, Bureau of Land Management	Right-of-Way grant for SNL-16 and 17	NM108365	12/21/05	8/30/32
29	Department of the Interior, Bureau of Land Management	Right-of-Way grant for SNL-18 and 10	NM115315	3/21/06	12/31/35
30	Department of the Interior, Bureau of Land Management	Right-of-way reservation amendment for SNL13 and SNL-14	NM108365	1/25/05	8/30/32
31	Department of the Interior, Bureau of Land Management	Right-of-way reservation amendment for SNL6, SNL-8, and SNL-15	NM108365	3/15/05	8/30/32
32	Department of the Interior, Bureau of Land Management	Right-of-way for 20 radiological stations, 2 aerosol samplers, and 2 weather monitor site.	NM063136	7/3/86	7/2/11
33	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	5/29/80	None
34	New Mexico Commissioner of Public Lands	Right-of-Way for High Volume Air Sampler	RW-22789	10/3/85	10/3/20

Table Part A-1 - Active Environmental Permits for the Waste Isolation Pilot Plant - Calendar Year 2007

	Granting Agency	Type of Permit	Permit Number	Granted	Expiration
35	New Mexico Commissioner of Public Lands	Monitoring Well SNL-3	RW-28537	7/31/03	7/31/38
36	New Mexico Commissioner of Public Lands	Monitoring Well SNL-1	RW-28535	8/27/03	8/27/38
37	New Mexico Commissioner of Public Lands	Right-of-Way Easement for Accessing State Trust Lands in Eddy & Lea Counties	RW-25430	9/28/04	9/28/14
38	New Mexico Environment Department Air Quality Bureau	Operating Permit for two backup diesel generators	310-M-2	12/7/93	None
39	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	5/26/89	None
40	New Mexico Environment Department-UST Bureau	Underground Storage Tanks	Facility No. 31539	7/1/07	6/30/09
41	New Mexico State Engineer Office	Monitoring Well Exhaust Shaft Exploratory Borehole	C-2801	2/23/01	None
42	New Mexico State Engineer Office	Monitoring Well	C-2811	3/2/02	None
43	New Mexico State Engineer Office	Monitoring Well Exhaust Shaft Exploratory Borehole	C-2802	2/23/01	None
44	New Mexico State Engineer Office	Monitoring Well Exhaust Shaft Exploratory Borehole	C-2803	2/23/01	None
45	New Mexico State Engineer Office	Appropriation: WQSP-1 Well	C-2413	10/21/96	None
46	New Mexico State Engineer Office	Appropriation: WQSP-2 Well	C-2414	10/21/96	None
47	New Mexico State Engineer Office	Appropriation: WQSP-3 Well	C-2415	10/21/96	None

Table Part A-1 - Active Environmental Permits for the Waste Isolation Pilot Plant - Calendar Year 2007

	Granting Agency	Type of Permit	Permit Number	Granted	Expiration
48	New Mexico State Engineer Office	Appropriation: WQSP-4 Well	C-2416	10/21/96	None
49	New Mexico State Engineer Office	Appropriation: WQSP-5 Well	C-2417	10/21/96	None
50	New Mexico State Engineer Office	Appropriation: WQSP-6 Well	C-2418	10/21/96	None
51	New Mexico State Engineer Office	Appropriation: WQSP-6a Well	C-2419	10/21/96	None
52	New Mexico State Engineer Office	Monitoring Well AEC-7	C-2742	11/6/00	None
53	New Mexico State Engineer Office	Monitoring Well AEC-8	C-2744	11/6/00	None
54	New Mexico State Engineer Office	Monitoring Well Cabin Baby	C-2664	7/30/99	None
55	New Mexico State Engineer Office	Monitoring Well DOE-1	C-2757	11/6/00	None
56	New Mexico State Engineer Office	Monitoring Well DOE-2	C-2682	4/17/00	None
57	New Mexico State Engineer Office	Monitoring Well ERDA-9	C-2752	11/6/00	None
58	New Mexico State Engineer Office	Monitoring Well H-1	C-2765	11/6/00	None
59	New Mexico State Engineer Office	Monitoring Well H-2A	C-2762	11/6/00	None
60	New Mexico State Engineer Office	Monitoring Well H-2B1	C-2758	11/6/00	None
61	New Mexico State Engineer Office	Monitoring Well H-2B2	C-2763	11/6/00	None
62	New Mexico State Engineer Office	Monitoring Well H-2C	C-2759	11/6/00	None
63	New Mexico State Engineer Office	Monitoring Well H-3B1	C-2764	11/6/00	None
64	New Mexico State Engineer Office	Monitoring Well H-3B2	C-2760	11/6/00	None
65	New Mexico State Engineer Office	Monitoring Well H-3B3	C-2761	11/6/00	None
66	New Mexico State Engineer Office	Monitoring Well H-3D	C-3207	11/6/00	None
67	New Mexico State Engineer Office	Monitoring Well H-4A	C-2725	11/6/00	None
68	New Mexico State Engineer Office	Monitoring Well H-4B	C-2775	11/6/00	None
69	New Mexico State Engineer Office	Monitoring Well H-4C	C-2776	11/6/00	None
70	New Mexico State Engineer Office	Monitoring Well H-5A	C-2746	11/6/00	None

Table Part A-1 - Active Environmental Permits for the Waste Isolation Pilot Plant - Calendar Year 2007

	Granting Agency	Type of Permit	Permit Number	Granted	Expiration
71	New Mexico State Engineer Office	Monitoring Well H-5B	C-2745	11/6/00	None
72	New Mexico State Engineer Office	Monitoring Well H-5C	C-2747	11/6/00	None
73	New Mexico State Engineer Office	Monitoring Well H-6A	C-2751	11/6/00	None
74	New Mexico State Engineer Office	Monitoring Well H-6BR	C-3362	12/27/07	None
75	New Mexico State Engineer Office	Monitoring Well H-6C	C-2750	11/6/00	None
76	New Mexico State Engineer Office	Monitoring Well H-7A	C-2694	4/17/00	None
77	New Mexico State Engineer Office	Monitoring Well H-7B1	C-2770	11/6/00	None
78	New Mexico State Engineer Office	Monitoring Well H-7B2	C-2771	11/6/00	None
79	New Mexico State Engineer Office	Monitoring Well H-7C	C-2772	11/6/00	None
80	New Mexico State Engineer Office	Monitoring Well H-8A	C-2780	11/6/00	None
81	New Mexico State Engineer Office	Monitoring Well H-8B	C-2781	11/6/00	None
82	New Mexico State Engineer Office	Monitoring Well H-8C	C-2782	11/6/00	None
83	New Mexico State Engineer Office	Monitoring Well H-9A	C-2785	11/6/00	None
84	New Mexico State Engineer Office	Monitoring Well H-9B	C-2783	11/6/00	None
85	New Mexico State Engineer Office	Monitoring Well H-9C	C-2784	11/6/00	None
86	New Mexico State Engineer Office	Monitoring Well H-10A	C-2779	11/6/00	None
87	New Mexico State Engineer Office	Monitoring Well H-10B	C-2778	11/6/00	None
88	New Mexico State Engineer Office	Monitoring Well H-10C	C-2695	4/17/00	None
89	New Mexico State Engineer Office	Monitoring Well H-11B1	C-2767	11/6/00	None
90	New Mexico State Engineer Office	Monitoring Well H-11B2	C-2687	4/17/00	None
91	New Mexico State Engineer Office	Monitoring Well H-11B3	C-2768	11/6/00	None
92	New Mexico State Engineer Office	Monitoring Well H-11B4	C-2769	11/6/00	None
93	New Mexico State Engineer Office	Monitoring Well H-12	C-2777	11/6/00	None

Table Part A-1 - Active Environmental Permits for the Waste Isolation Pilot Plant - Calendar Year 2007

	Granting Agency	Type of Permit	Permit Number	Granted	Expiration
94	New Mexico State Engineer Office	Monitoring Well H-14	C-2766	11/6/00	None
95	New Mexico State Engineer Office	Monitoring Well H-15	C-2685	4/17/00	None
96	New Mexico State Engineer Office	Monitoring Well H-15R	C-3361	12/27/07	None
97	New Mexico State Engineer Office	Monitoring Well H-16	C-2753	11/6/00	None
98	New Mexico State Engineer Office	Monitoring Well H-17	C-2773	11/6/00	None
99	New Mexico State Engineer Office	Monitoring Well H-18	C-2683	4/17/00	None
100	New Mexico State Engineer Office	Monitoring Well P-17	C-2774	11/6/00	None
101	New Mexico State Engineer Office	Monitoring Well WIPP-11	C-3365	12/27/07	None
102	New Mexico State Engineer Office	Monitoring Well WIPP-12	C-2639	1/12/99	None
103	New Mexico State Engineer Office	Monitoring Well WIPP-13	C-2748	11/6/00	None
104	New Mexico State Engineer Office	Monitoring Well WIPP-18	C-2684	4/17/00	None
105	New Mexico State Engineer Office	Monitoring Well WIPP-19	C-2755	11/6/00	None
106	New Mexico State Engineer Office	Monitoring Well WIPP-21	C-2754	11/6/00	None
107	New Mexico State Engineer Office	Monitoring Well WIPP-25	C-2723	7/26/00	None
108	New Mexico State Engineer Office	Monitoring Well WIPP-26	C-2724	11/6/00	None
109	New Mexico State Engineer Office	Monitoring Well WIPP-27	C-2722	11/6/00	None
110	New Mexico State Engineer Office	Monitoring Well WIPP-28	C-2636	1/12/99	None
111	New Mexico State Engineer Office	Monitoring Well WIPP-29	C-2743	11/6/00	None
112	New Mexico State Engineer Office	Monitoring Well WIPP-30	C-2727	8/4/00	None
113	New Mexico State Engineer Office	Monitoring Well SNL-2	C-2948	2/14/03	None
114	New Mexico State Engineer Office	Monitoring Well SNL-9	C-2950	2/14/03	None
115	New Mexico State Engineer Office	Monitoring Well SNL-12	C-2954	2/25/03	None
116	New Mexico State Engineer Office	Monitoring Well SNL-1	C-2953	2/25/03	None

Table Part A-1 - Active Environmental Permits for the Waste Isolation Pilot Plant - Calendar Year 2007

	Granting Agency	Type of Permit	Permit Number	Granted	Expiration
117	New Mexico State Engineer Office	Monitoring Well SNL-3	C-2949	2/14/03	None
118	New Mexico State Engineer Office	Monitoring Well WTS-4	C-2960	3/18/03	None
119	New Mexico State Engineer Office	Monitoring Well SNL-5	C-3002	10/1/03	None
120	New Mexico State Engineer Office	Monitoring Well IMC-461	C-3015	11/25/03	None
121	New Mexico State Engineer Office	Monitoring Well SNL-11	C-3003	10/1/03	None
122	New Mexico State Engineer Office	Monitoring Well SNL10	C03221	7/26/05	None
123	New Mexico State Engineer Office	Monitoring Well SNL16	C03220	7/26/05	None
124	New Mexico State Engineer Office	Monitoring Well SNL17	C03222	7/26/05	None
125	US Environmental Protection Agency Region 6	Conditions of Approval for Disposal of PCB/TRU and PCB/TRU Mixed Waste at the US Department of Energy (DOE) Waste Isolation Pilot Plant (WIPP) Carlsbad, New Mexico	NA	4/30/08	4/30/13
126	US Fish and Wildlife Service	Migratory Bird Special Purpose-Relocate	MB155189-0	7/10/07	3/31/09 Extended until USFS action on renewal application.
127	New Mexico Environment Department	Groundwater Quality Bureau Permit	DP-831	9/9/08	9/9/13

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APPENDIX 2

MAPS

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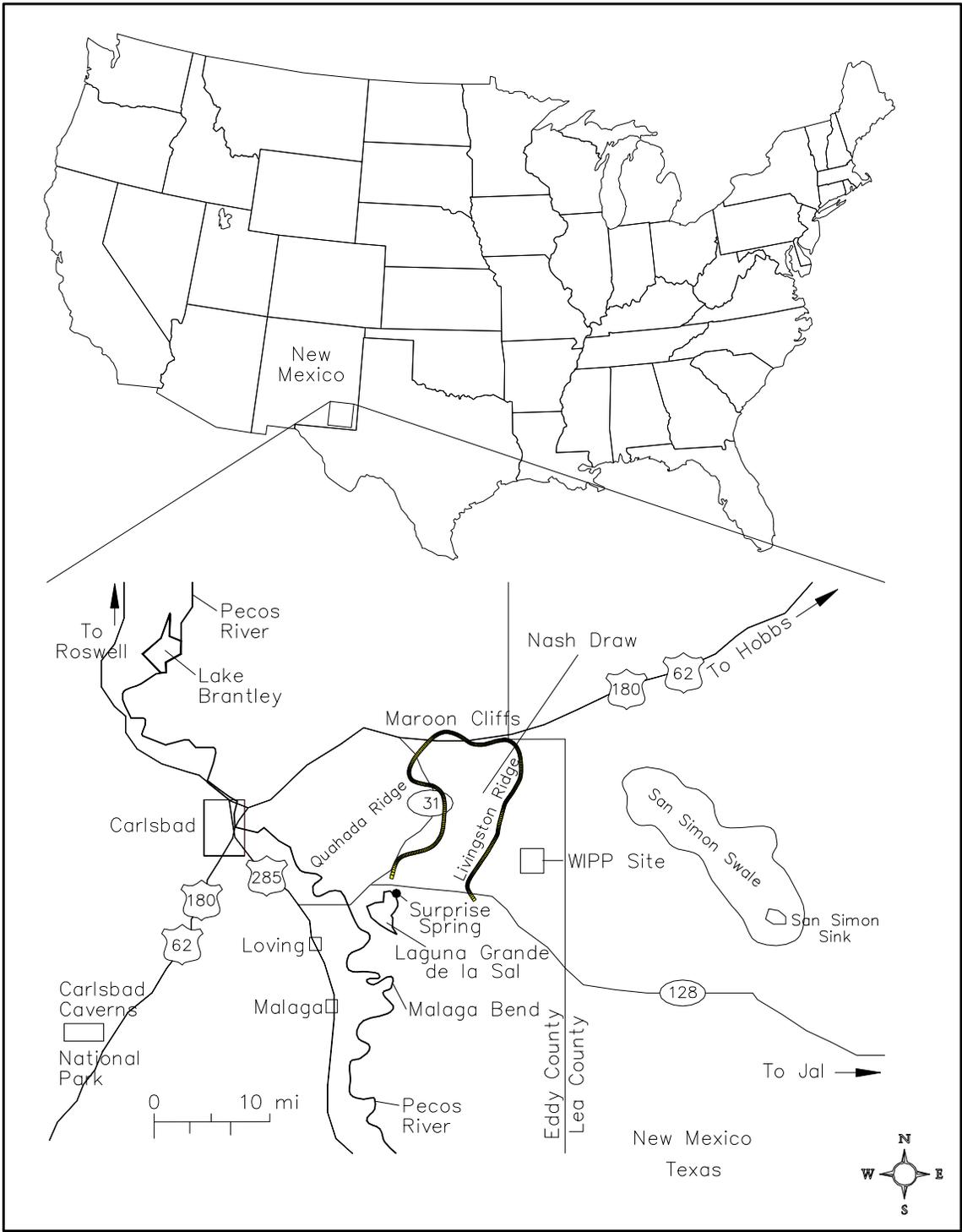
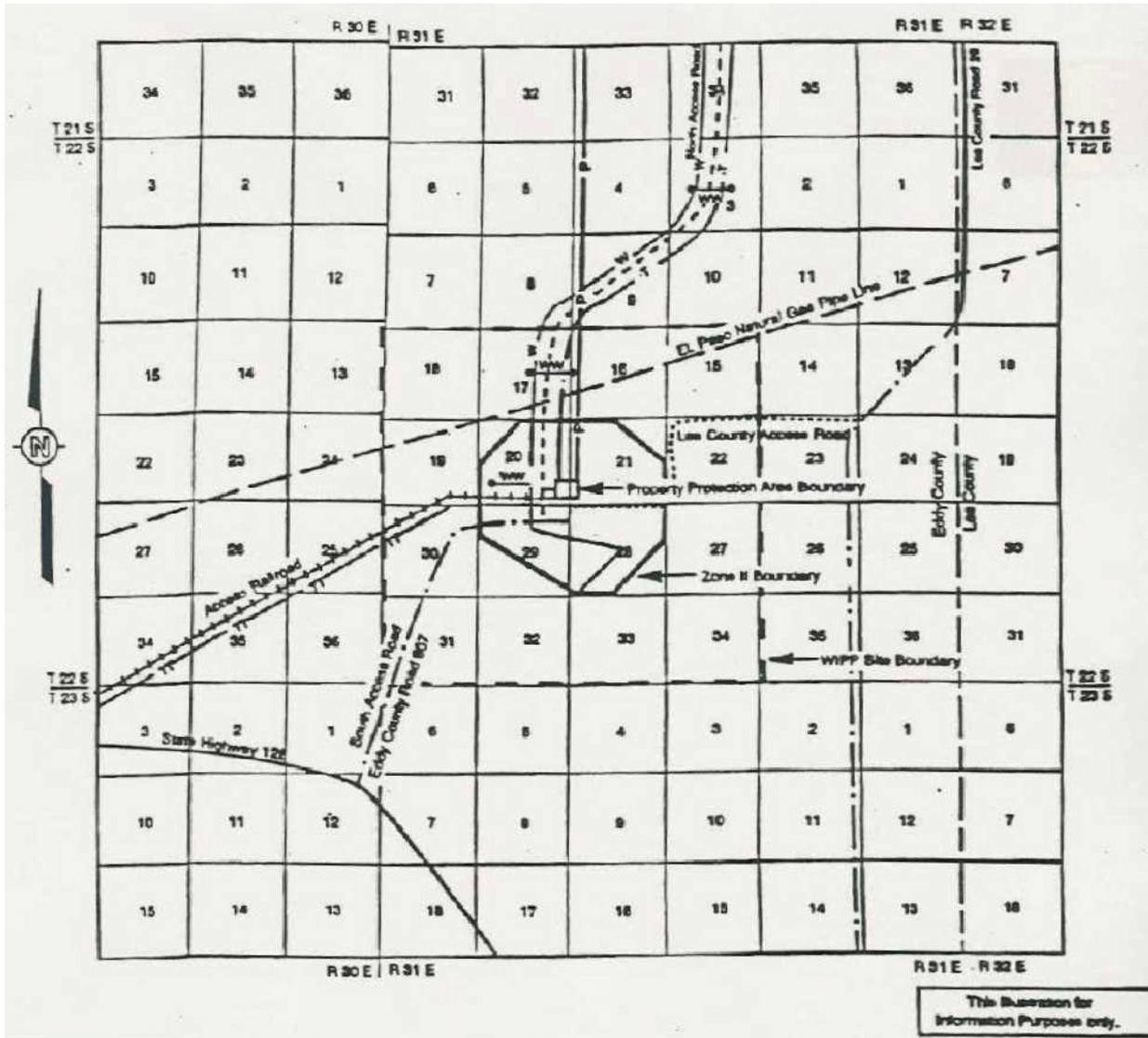


Figure 2-1
General Location of the WIPP Facility

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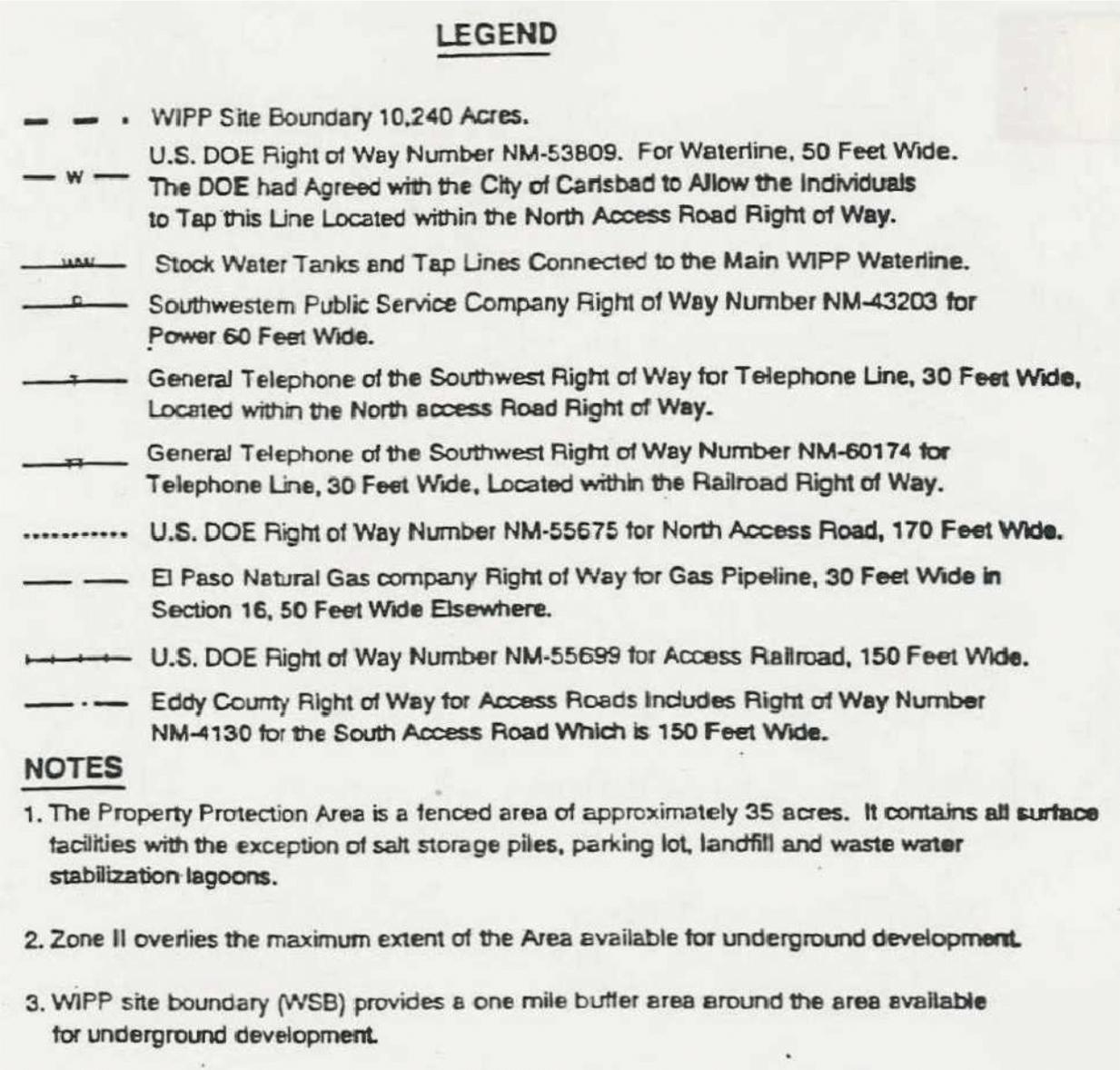
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Figure 2-2
 Planimetric Map – WIPP Facility Boundaries

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Figure 2-2a
Legend to Figure 2-2

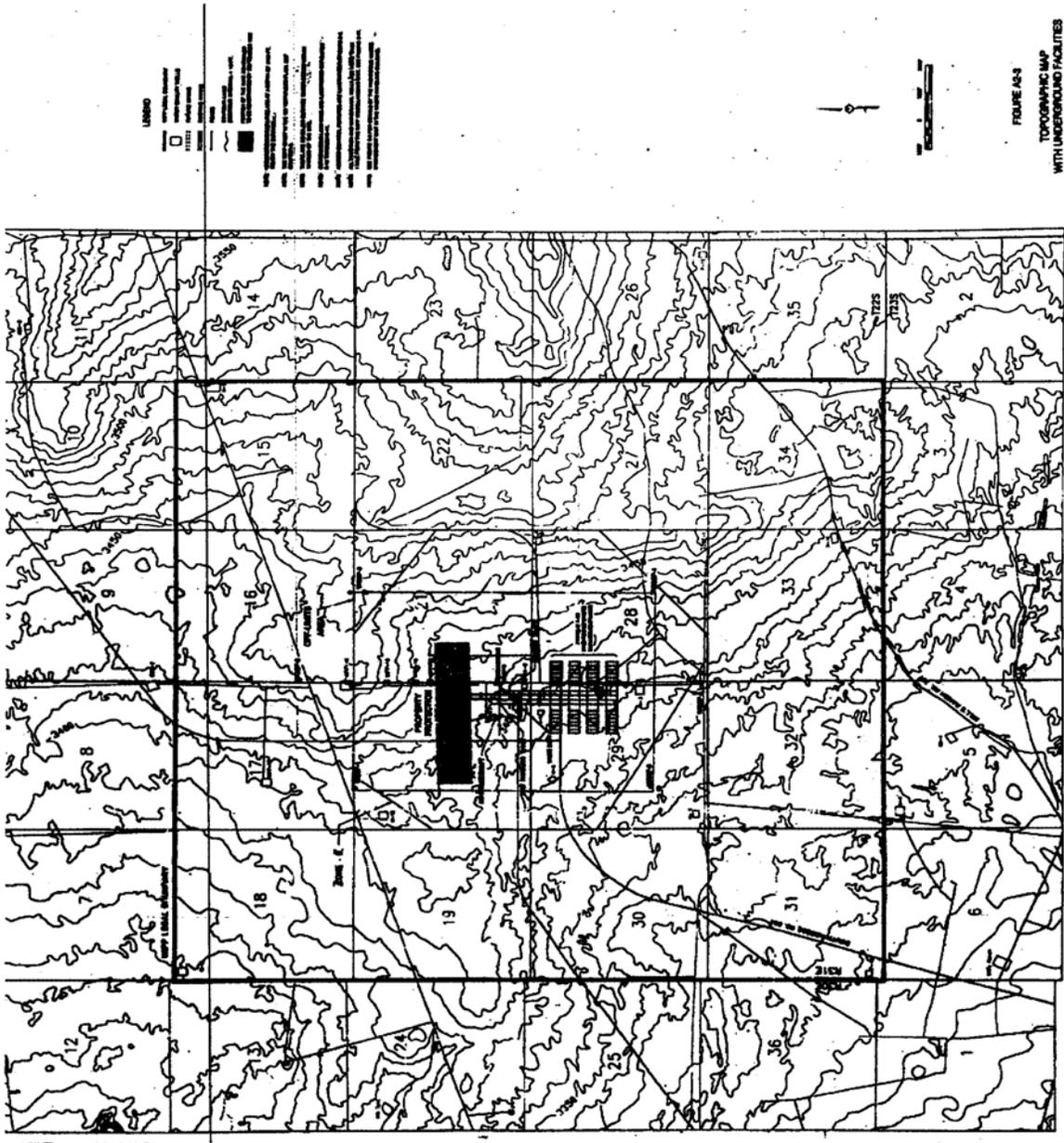


Figure 2-3
Topographical Map Designating WIPP Property Boundaries and Underground

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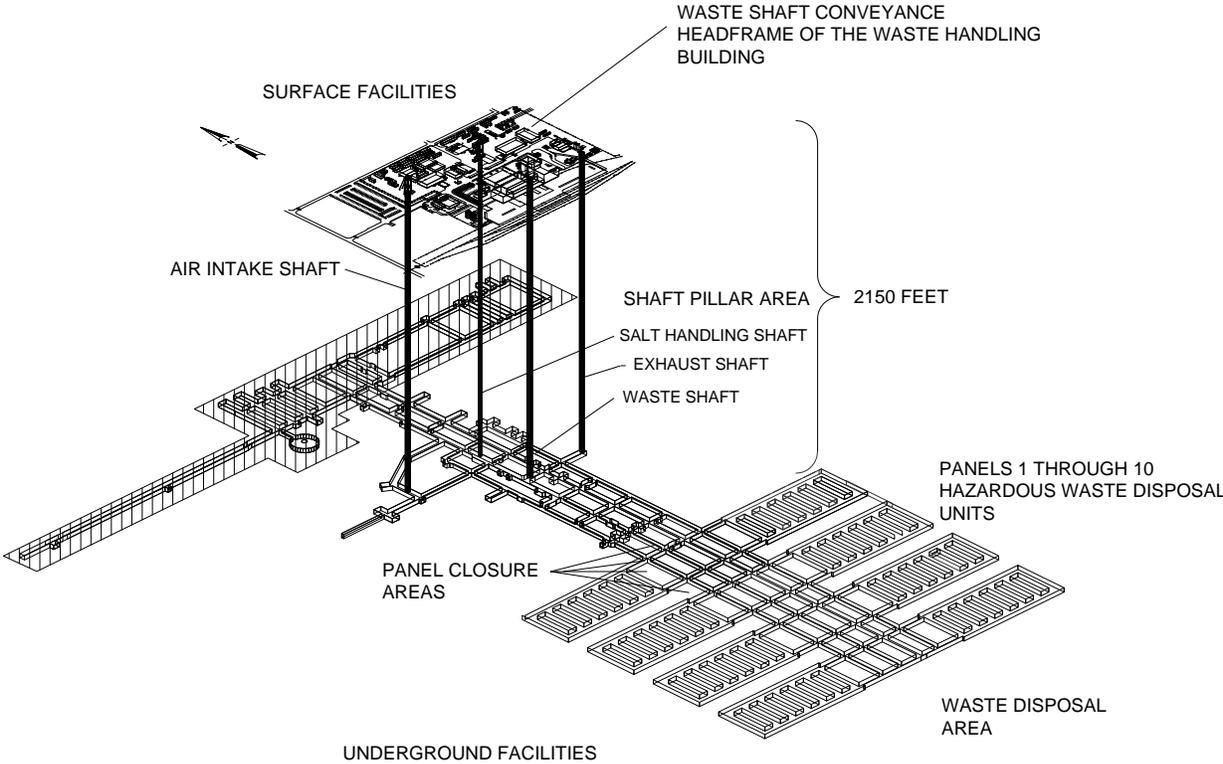
APPENDIX 3
FACILITIES

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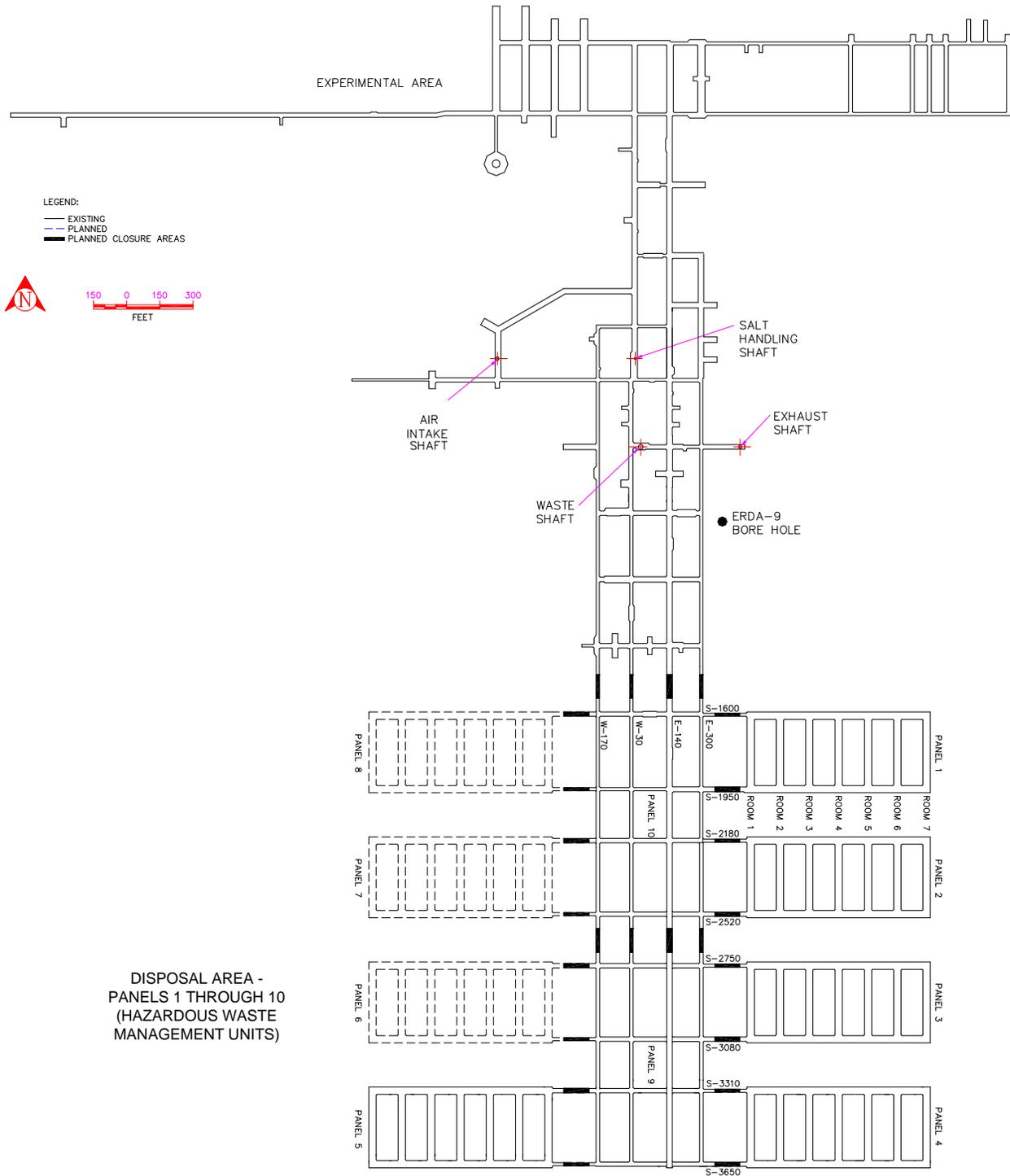
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Figure 3-1
Spatial View of the Miscellaneous Unit and Waste Handling Facility

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DISPOSAL AREA -
 PANELS 1 THROUGH 10
 (HAZARDOUS WASTE
 MANAGEMENT UNITS)

Figure 3-2
 Repository Horizon

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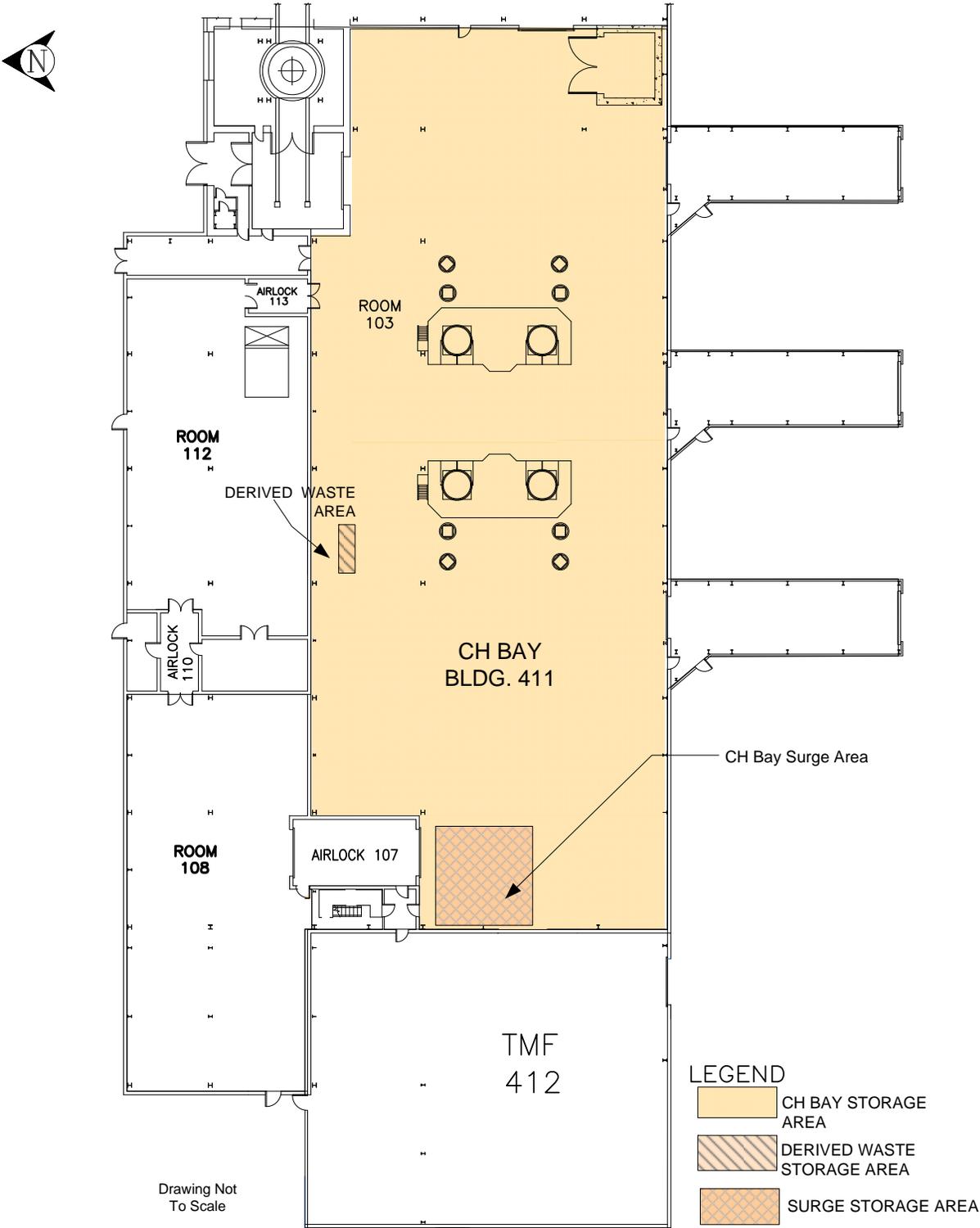
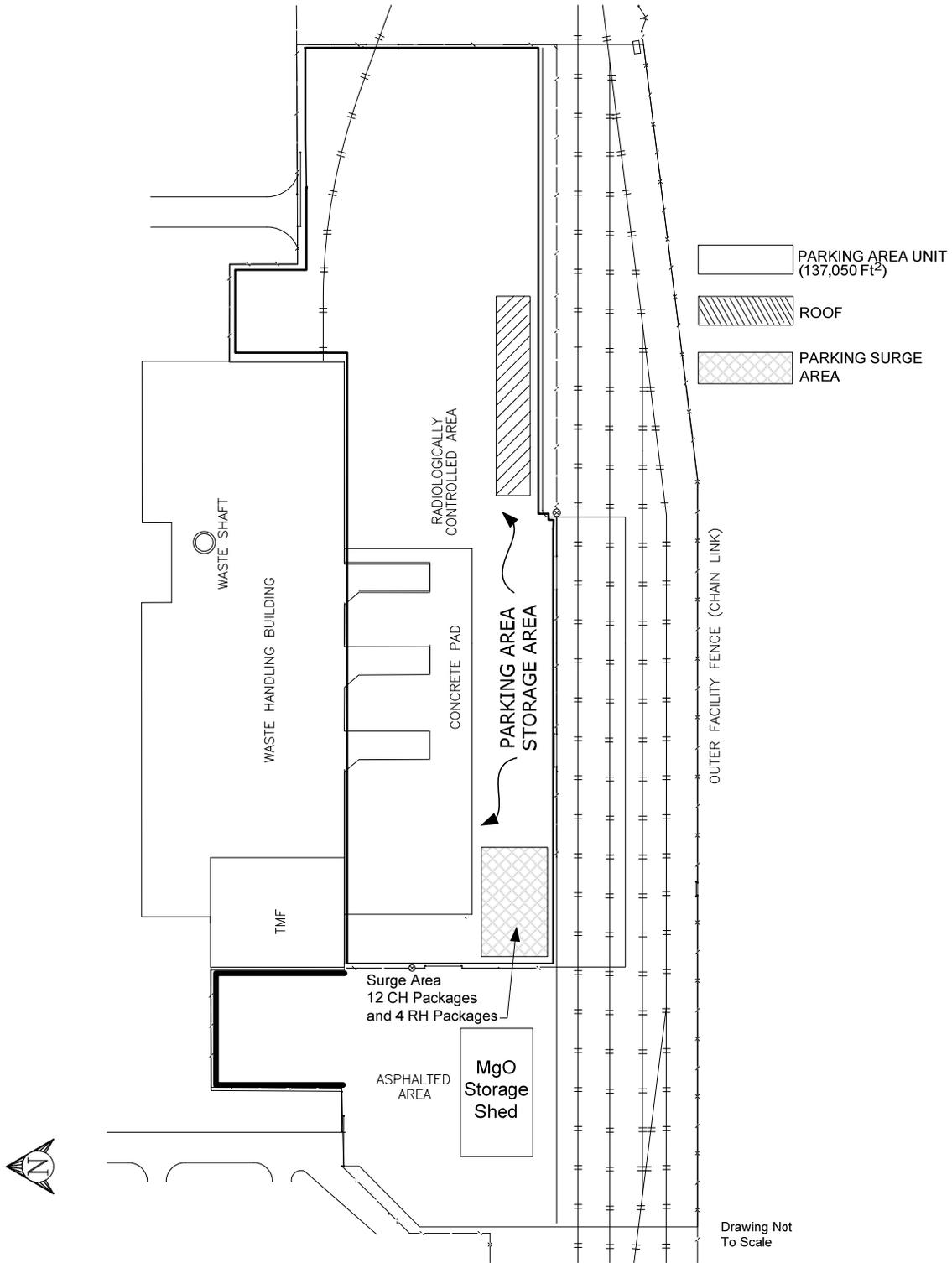


Figure 3-3
 Waste Handling Building – CH TRU Mixed Waste Container Storage and Surge Areas

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Figure 3-4
 Parking Area – Container Storage and Surge Areas