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 March 02, 2010



Mr. James Bearzi, Chief  
 Hazardous Waste Bureau  
 New Mexico Environment Department  
 2905 Rodeo Park Drive East, Building 1  
 Santa Fe, New Mexico 87505-6303

Subject: Updated Copy of the *Resource Conservation and Recovery Act Contingency Plan*

Dear Mr. Bearzi:

The purpose of this letter is to provide you with the updated copy of the *Resource Conservation and Recovery Act Contingency Plan*, in accordance with the Permit Part 2, Section 2.12.2 (Copies of Plan). The Permittees are required to distribute the updated plan to those agencies with whom the United States Department of Energy maintains a Memorandum of Understanding for mutual aid assistance for the Waste Isolation Pilot Plant facility and to the Secretary of the New Mexico Environment Department. This revision was necessitated by the December 30, 2010 Class 1 permit modification to the Hazardous Waste Facility Permit.

We certify under penalty of law that this document and all enclosures were prepared under our direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on our inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of our knowledge and belief, true, accurate, and complete. We are aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Please contact Daniel J. Ferguson at (575) 234-8128 if you have any questions regarding this data transmittal.

Sincerely,

Edward Ziemianski, Acting Manager  
 Carlsbad Field Office

M. F. Sharif, General Manager  
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**ATTACHMENT D**  
**RCRA CONTINGENCY PLAN**

## Document Change Record

Document Title		RCRA Contingency Plan of the WIPP Hazardous Waste Facility Permit	
Page	Title	Reason for Change	Effective Date
D-74	Figure D-3	Included Panel 6; the designation on the figure was changed from "planned" to "existing" hazardous waste disposal unit.	12/30/10
D-77	Figure D-5	Included Panel 6; the designation on the figure was changed from "planned" to "existing" hazardous waste disposal unit.	12/30/10
D-84	Figure D-9	Included Panel 6; the designation on the figure was changed from "planned" to "existing" hazardous waste disposal unit.	12/30/10
<b>NOTE:</b> In addition to the figure modifications noted above, the WIPP Hazardous Waste Facility Permit was issued on November 30, 2010 with an effective date of December 30, 2010. This revision incorporates the modification of the Contingency Plan from previously being titled "Attachment F", to its current title as "Attachment D" of the WIPP Hazardous Waste Facility Permit.			

Waste Isolation Pilot Plant  
Hazardous Waste Permit  
November 30, 2010

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**ATTACHMENT D**  
**RCRA CONTINGENCY PLAN**

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1 Guard and Security Building - houses the facility security personnel and communications  
2 equipment necessary for them to perform their duties. Section D-4a specifies the duties of  
3 the security officers relative to contingency actions.

4 Safety and Emergency Services Building - houses the surface emergency response  
5 vehicles (fire truck, rescue truck, ambulance), Health Services (first aid), Emergency  
6 Operations Center, and the Dosimetry Laboratory. The Hazardous Material Response  
7 Trailer is staged at the WIPP facility in an area that is readily accessible to Emergency  
8 Services. Emergency Services is located in Building 452. Table D-6 describes emergency  
9 equipment and associated locations.

10 Support Building - houses the Central Monitoring Room (see section D-4a).

11 Transuranic Package Transporter-II (**TRUPACT-II**) Maintenance Facility - is located west  
12 of the CH bay. No TRU mixed waste management activities will occur in this facility.

13 Surface facilities used for storage of support equipment are identified in Table D-6.

14 Building 452, Safety and Emergency Services Facility, houses the emergency response  
15 vehicles, emergency equipment, the mine rescue room, mine rescue team equipment, and the  
16 Emergency Operations Center (**EOC**). The Hazardous Material Response Trailer is staged at  
17 the WIPP facility in an area readily accessible to Emergency Services. Emergency Services is  
18 located in Building 452.

19 The RCRA permit addresses TRU mixed waste management activities in the WHB Unit, the  
20 Parking Area Unit, and the disposal units. The provisions of this Contingency Plan apply to  
21 hazardous waste disposal units (**HWDU**) in the underground waste disposal panels, storage in  
22 the WHB Unit and the Parking Area Unit, the Waste Shaft, and supporting TRU mixed waste  
23 handling areas. The remainder of the facility will not manage TRU mixed waste. This  
24 Contingency Plan has also been designed in accordance with 20.4.1.300 NMAC (incorporating  
25 40 CFR § 262.34(a)(4) - Standards for Generators of Hazardous Waste), and will be  
26 implemented whenever there is a fire, explosion, or release of hazardous waste which could  
27 threaten human health or the environment. Hazardous substances in the remainder of the  
28 facility are included as possible triggers of the Contingency Plan but are outside the scope of  
29 the regulations promulgated pursuant to RCRA. This allows WIPP to maintain one emergency  
30 response plan which is consistent with the National Response Teams Integrated Contingency  
31 Plan Guidance (Federal Register, Vol. 61, No. 109, June 5, 1996). Inclusion is based on their  
32 National Fire Protection Association (**NFPA**) ratings in addition to their storage quantities. The  
33 majority of hazardous substances on-site are not expected to trigger the Contingency Plan  
34 because they are present in the same form and concentration as the product packaged for  
35 distribution and use by the general public or are used in a laboratory under the direct  
36 supervision of a technically qualified individual. Superfund Amendments and Reauthorization  
37 Act (**SARA**) Title III excludes these from emergency planning reporting. The list of hazardous  
38 substances in large enough quantities to constitute a Level II incident (Section D-3) is provided  
39 in Table D-1. In addition to TRU mixed waste, these are the only hazardous substances  
40 currently on site which, if spilled, may be of sufficient impact to cause this Contingency Plan to  
41 be implemented. Magnesium Oxide (**MgO**) is stored on-site in large quantities. It is used as  
42 backfill in the waste emplacement rooms as a pH buffer. The pH buffer will limit the solubility of  
43 radionuclides after the underground rooms are filled and closed. MgO is not a hazardous

1 substance, a release of MgO will not create hazardous waste and poses no threat to human  
2 health or the environment, and is therefore not addressed in the Contingency Plan.

3 Wastes generated as a result of maintenance or response actions will be categorized into one  
4 of three groups and disposed of accordingly. These are: 1) nonhazardous wastes to be  
5 disposed of in an approved landfill, 2) hazardous nonradioactive wastes to be disposed of at an  
6 off-site RCRA permitted facility, and 3) TRU mixed waste to be disposed of in the underground  
7 HWDUs. Disposal of TRU mixed waste in the WIPP facility is subject to regulation under  
8 20.4.1.500 NMAC. As required by 20.4.1.500 NMAC (incorporating 40 CFR §264.601), the  
9 Permittees will demonstrate that the environmental performance standards for a miscellaneous  
10 unit, which are applied to the HWDUs in the underground, will be met. In addition, the technical  
11 requirements of 20.4.1.500 NMAC (incorporating 40 CFR §264.170 to §264.178) are applied to  
12 the operation of the container storage units in the WHB Unit and in the Parking Area Unit south  
13 of the WHB. Liquid wastes that may be generated as a result of the fire fighting water or  
14 decontamination solutions will be managed as follows:

15 Non-Mixed - Hazardous waste liquids contaminated only with hazardous constituents will  
16 be placed into containers and managed in accordance with 20.4.1.300 NMAC  
17 (incorporating 40 CFR §262.34) requirements. The waste will be shipped to an approved  
18 off-site treatment, storage, or disposal facility.

19 Mixed - Liquids contaminated with TRU mixed waste (inside the WHB Unit) will be  
20 solidified as they are placed into containers with cement, Aquaset, or absorbent material in  
21 them. The solidified materials will be disposed of in the underground WIPP repository as  
22 derived waste.

23 This chapter of the permit application describes the HWDUs, the TRU mixed waste  
24 management facilities and operations, compliance with the environmental performance  
25 standards, and with the applicable technical requirements of 20.4.1.500 NMAC (incorporating  
26 40 CFR §264.170 to §264.178 and §264.601, respectively). The configuration of the WIPP  
27 facility consists of completed structures; including all buildings and systems for the operation of  
28 the facility.

#### 29 D-1a Disposal Phase Overview

30 The Disposal Phase will consist of receiving CH TRU mixed waste shipping containers,  
31 unloading and transporting the waste containers to the underground HWDUs, emplacing the  
32 waste in the underground HWDUs, and subsequently achieving closure of the underground  
33 HWDUs in compliance with applicable State and Federal regulations.

34 The TRU mixed waste that will be disposed at the WIPP facility results primarily from activities  
35 related to the reprocessing of plutonium-bearing reactor fuel and fabrication of plutonium-  
36 bearing weapons, as well as from research and development. This TRU mixed waste consists  
37 largely of such items as paper, cloth, and other organic material; laboratory glassware and  
38 utensils; tools; scrap metal; shielding; and solidified sludges from the treatment of wastewater.  
39 Much of this TRU mixed waste is also contaminated with substances that are defined as  
40 hazardous under 20.4.1.200 NMAC.

1 D-1b Waste Description

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

7 These Waste Summary Categories are:

8 S3000—Homogeneous Solids

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

16 S4000—Soils/Gravel

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

19 S5000—Debris Wastes

20 This waste summary category includes waste that is at least 50 percent by volume  
21 materials that meet the criteria for classification as debris (20.4.1.800 NMAC  
22 (incorporating 40 CFR §268.2)). Debris is a material for which a specific treatment is not  
23 provided by 20.4.1.800 NMAC (incorporating 40 CFR §268 Subpart D), including process  
24 residuals such as smelter slag from the treatment of wastewater, sludges or emission  
25 residues.

26 Debris means solid material exceeding a 2.36 inch (60 millimeter) particle size that  
27 is intended for disposal and that is: 1) a manufactured object, 2) plant or animal  
28 matter, or 3) natural geologic material.

29 Included in the S5000 Waste Summary Category are metal debris, lead containing metal  
30 debris, inorganic nonmetal debris, asbestos debris, combustible debris, graphite debris,  
31 heterogeneous debris, and composite filters, as well as other minor waste streams.  
32 Particles smaller than 2.36 inches in size may be considered debris if the debris is a  
33 manufactured object and if it is not a particle of S3000 or S4000 material.

34 Examples of waste that might be included in the S5000 Waste Summary Category are  
35 asbestos-containing gloves, fire hoses, aprons, flooring tiles, pipe insulation, boiler jackets,  
36 and laboratory tabletops. Also included are combustible debris constructed of plastic,  
37 rubber, wood, paper, cloth, graphite, and biological materials. Examples of graphite waste  
38 that would be included are crucibles, graphite components, and pure graphite.

1 Wastes may be generated at the WIPP facility as a direct result of managing the TRU and TRU  
2 mixed wastes received from the off-site generators. Such generated waste may occur in either  
3 the WHB Unit or the Underground. For example, when TRU mixed wastes are received at the  
4 WHB Unit, the CH or RH Package shipping containers and the TRU mixed waste containers are  
5 checked for surface contamination. Under some circumstances,<sup>1</sup> if contamination is detected,  
6 the shipping container and/or the TRU mixed waste containers will be decontaminated. In the  
7 underground, waste may be generated as a result of radiation control procedures used during  
8 monitoring activities. The waste generated from radiation control procedures will be assumed to  
9 be TRU and/or TRU mixed waste. Throughout the remainder of this plan, this waste is referred  
10 to as "derived waste." All such derived waste will be placed in the rooms in HWDUs along with  
11 the TRU mixed waste for disposal.

#### 12 D-1c Containers

13 The waste containers that will be used at the WIPP facility qualify as "containers," in accordance  
14 with 20.4.1.101 NMAC (incorporating 40 CFR §260.10). That is, they are "portable devices in  
15 which a material is stored, transported, treated, disposed of, or otherwise handled."

16 TRU mixed waste containers, containing off-site waste, will not be opened at the WIPP facility.  
17 Derived waste containers are kept closed at all times unless waste is being added or removed.

18 Waste, including "derived waste," containing liquid in excess of TSDF-WAC limits shall not be  
19 emplaced in the WIPP (See Permit Attachment C, Section C-1c).

20 Special requirements for ignitable, reactive, and incompatible waste are addressed in  
21 20.4.1.500 NMAC (incorporating 40 CFR §§264.176 and 177). The RCRA Permit Treatment,  
22 Storage, and Disposal Facility Waste Acceptance Criteria (**TSDF-WAC**) precludes ignitable,  
23 reactive, or incompatible TRU mixed waste from being placed into storage or disposed of at  
24 WIPP.

#### 25 D-1d Description of Containers

26 CH TRU mixed waste containers will be either 55-gallon (gal) (208-liter (L)) drums singly or  
27 arranged into seven (7)-packs, 85-gal (322-L) drums (used as singly or arranged into four (4)-  
28 packs, 100-gal (379 L) drums singly or arranged into three (3)-packs, ten-drum overpacks  
29 (**TDOP**), or 66.3 ft<sup>3</sup> (1.88 m<sup>3</sup>) SWBs.

30 RH TRU mixed waste containers are either canisters or drums. Canisters will be loaded singly in  
31 an RH-TRU 72-B cask and drums will be loaded in a CNS 10-160B cask. Drums in the CNS 10-  
32 160B cask will be arranged singly or in drum carriage units containing up to five drums each.  
33 Canisters and drums are described in Permit Attachment M1.

#### 34 D-1e Description of Surface Hazardous Waste Management Units

35 The WHB is the surface facility where waste handling activities will take place. The WHB has a  
36 total area of approximately 84,000 square feet (ft<sup>2</sup>) (7,804 square meters [m<sup>2</sup>]) of which

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<sup>1</sup> Typically contamination that is less than six square feet in area and less than 2000 disintegrations per minute (dpm) alpha or 20,000 dpm beta/gamma, may be decontaminated. Containers that exceed these thresholds will be returned to the point of origin for decontamination.

1 43,554 ft<sup>2</sup> (4,047 m<sup>2</sup>) are designated as the WHB Unit for TRU mixed waste management.  
2 Within the WHB Unit, 26,151 ft<sup>2</sup> (2,430 m<sup>2</sup>) are designated for the waste handling and container  
3 storage of CH TRU mixed waste and 17,403 ft<sup>2</sup> (1,617 m<sup>2</sup>) are designated for the handling and  
4 storage of RH TRU mixed waste. These areas are being permitted as container storage units.  
5 The concrete floors within the WHB Unit are sealed with an impermeable coating that has  
6 excellent resistance to the chemicals in TRU mixed waste and, consequently, provide  
7 secondary containment for TRU mixed waste. In addition, a Parking Area Unit south of the WHB  
8 will be used for storage of waste in sealed shipping containers awaiting unloading. This area is  
9 also being permitted as a container storage unit. The sealed shipping containers provide  
10 secondary containment in this hazardous waste management unit (HWMU).

11 D-1e(1) CH Bay Operations

12 Once unloaded from the Contact-Handled Package, CH TRU mixed waste containers (7-packs  
13 of 55-gal drums, 3-packs of 100-gal drums, 4-packs of 85-gal drums, SWBs, or TDOPs) are  
14 placed in one of two positions on the facility pallet. The waste containers are stacked on the  
15 facility pallets (one- or two-high, depending on weight considerations). The use of facility pallets  
16 will elevate the waste at least 6 inches (in.) (15 centimeters [cm]) from the floor surface. Pallets  
17 of waste will then be stored in the CH bay. This storage area will be clearly marked to indicate  
18 the lateral limits of the storage area. This storage area will have a maximum capacity of thirteen  
19 facility pallets of waste during normal operations. These pallets will typically be in the CH Bay  
20 storage area for a period of up to five days.

21 In addition, four Contact-Handled Packages, containing up to 640 ft<sup>3</sup> of CH TRU waste in  
22 containers, may occupy positions at the TRUPACT-II Unloading Docks (TRUDOCK).

23 Aisle space shall be maintained in all CH Bay waste storage areas. The aisle space shall be  
24 adequate to allow unobstructed movement of fire response personnel, spill-control equipment,  
25 and decontamination equipment that would be used in the event of an off-normal event. An aisle  
26 space between facility and containment pallets will be maintained in all CH TRU mixed waste  
27 storage areas.

28 D-1e(2) RH Complex Operations

29 Loaded RH TRU casks are received in the RH Bay of the WHB. The RH Bay is served by an  
30 overhead bridge crane used for cask handling and maintenance operations. Storage in the RH  
31 Bay occurs in the RH-TRU 72-B or CNS 10-160B casks. A maximum of two loaded casks may  
32 be stored in the RH Bay and a maximum of one cask in the Cask Unloading Room may be  
33 stored at one time. A minimum of 44 inches (1.1 m) will be maintained between loaded casks in  
34 the RH Bay. The cask serves as secondary containment in the RH Bay for the RH TRU mixed  
35 waste payload container. In addition, the RH Bay has a concrete floor.

36 Single RH TRU mixed waste canisters are unloaded from the RH-TRU 72-B casks in the  
37 Transfer Cell of the RH Complex where they are transferred to facility casks. Drums of RH TRU  
38 mixed waste will be transferred remotely from the CNS 10-160B cask, into the Hot Cell, and  
39 loaded into a canister. Storage in the Hot Cell occurs in either drums or canisters. A maximum  
40 of 12 55-gallon drums of RH TRU mixed waste and one 55-gallon drum of derived waste (94.9  
41 ft<sup>3</sup> (2.7 m<sup>3</sup>)) may be stored in the Hot Cell. Except for the derived waste drum, individual 55-  
42 gallon drums may not be stored in the Hot Cell for more than 25 days. The Transfer Cell houses  
43 the Transfer Cell Shuttle Car, which is used to facilitate transferring the canister to the facility

1 cask. Storage in this area typically occurs at the end of a shift or in an off-normal event that  
2 results in the suspension of waste handling. A maximum of one canister (31.4 ft<sup>3</sup> (0.89 m<sup>3</sup>)) may  
3 be stored in the Transfer Cell in a shielded insert in the Transfer Cell Shuttle Car or in a RH-  
4 TRU 72-B cask.

5 The Facility Cask Loading Room provides for transfer of a canister to the facility cask for  
6 subsequent transfer to the waste shaft conveyance and to the Underground Hazardous Waste  
7 Disposal Unit. The Facility Cask Loading Room also functions as an air lock between the waste  
8 shaft and the Transfer Cell. Storage in this area typically occurs at the end of a shift or in an off-  
9 normal event that results in the suspension of waste handling. A maximum of one canister  
10 (31.4 ft<sup>3</sup> (0.89 m<sup>3</sup>)) may be stored in the Facility Cask in the Facility Cask Loading Room.

11 Derived waste will be stored in the RH Bay and in the Hot Cell.

#### 12 D-1e(3) Parking Area Container Storage Unit (Parking Area Unit)

13 The area extending south from the WHB within the fenced enclosure identified as the Controlled  
14 Area on Figure A1-2 is defined as the Parking Area Container Storage Unit. This area provides  
15 storage for up to 6,734 ft<sup>3</sup> (191 m<sup>3</sup>) of CH and/or RH TRU mixed waste contained in up to 40  
16 loaded Contact-Handled Packages and 8 Remote-Handled Packages. Secondary containment  
17 and protection of the waste containers from standing rainwater are provided by the  
18 transportation containers. Up to 12 additional Contact-Handled Packages and four additional  
19 Remote-Handled Packages may be stored in the Parking Area Surge Area so long as the  
20 requirements of Permit Sections 3.1.2.3 and 3.1.2.4 are met. No more than 50 Contact-Handled  
21 and 12 Remote-Handled Packages may be stored in the Parking Area Storage Unit.

22 The safety criteria for Contact-Handled and Remote-Handled Packages require that they be  
23 opened and vented at a frequency of at least once every 60 days. During normal operations,  
24 Contact-Handled and Remote-Handled Packages will not require venting while located in the  
25 Parking Area Unit. Any off-normal event which results in the need to store a waste container in  
26 the Parking Area Unit for a period of time approaching fifty-nine (59) days shall be mitigated by  
27 returning the shipment to the generator prior to the expiration of the 60 day NRC venting period  
28 or by moving the Contact-Handled or Remote-Handled Package inside the WHB Unit where the  
29 waste will be removed and placed in one of the permitted storage areas or in the underground  
30 hazardous waste disposal unit.

#### 31 D-1f Off-Normal Events

32 Off-normal events could interrupt normal operations in the waste management process line.  
33 Shipments of waste from the generator sites will be stopped in any event which results in an  
34 interruption to normal waste handling operations that exceeds three days.

#### 35 D-1g Containment

36 The WHB Unit has concrete floors, which are sealed with a coating designed to resist all but the  
37 strongest oxidizing agents. Such oxidizing agents do not meet the TSDF-WAC and will not be  
38 accepted in TRU mixed waste at the WIPP facility. Therefore, TRU mixed wastes pose no  
39 compatibility problems with respect to the WHB Unit floor.

1 During normal operations, the floor of the normal storage areas within the CH Bay and RH  
2 Complex shall be visually inspected on a weekly basis to verify that it is in good condition and  
3 free of obvious cracks and gaps. When a RH TRU mixed waste container is present in the RH  
4 Complex, inspections will be conducted visually and/or using closed-circuit television cameras in  
5 order to manage worker dose and minimize radiation exposures. Manual inspections of the  
6 areas are performed at least annually during routine maintenance periods when waste is not  
7 present.

8 Floor areas of the WHB used during off-normal events will be inspected prior to use and weekly  
9 while in use. Containers located in the permitted storage areas shall be elevated from the  
10 surface of the floor. Facility pallets provide at least 6 in (15 centimeters [cm]) of elevation from  
11 the surface of the floor. TRU mixed waste containers that have been removed from Contact-  
12 Handled or Remote-Handled Packages shall be stored at a designated storage area inside the  
13 WHB so as to preclude exposure to the elements.

14 Secondary containment at permitted storage areas inside the WHB Unit shall be provided by the  
15 floor. The Parking Area Unit and TRUDOCK storage area of the WHB Unit do not require  
16 engineered secondary containment, since waste is not stored there unless it is protected by the  
17 Contact-Handled or Remote-Handled Packaging. Floor drains, the fire suppression water  
18 collection sump, and portable dikes, if needed, will provide containment for liquids that may be  
19 generated by fire fighting. Sump capacities and locations are shown in Drawing 41-F-087-014.  
20 Residual fire fighting liquids will be placed in containers and managed as described above.  
21 Secondary containment at storage locations inside the RH Bay, Cask Unloading Room,  
22 Transfer Cell, and Facility Cask Loading Room is provided by the cask or canisters that contain  
23 drums of RH TRU mixed waste. In the Hot Cell, secondary containment is provided by the Hot  
24 Cell subfloor. In addition, the RH Complex contains a 220-gallon (833-L) sump in the Hot Cell, a  
25 11,400-gallon (43,152-L) sump in the RH Bay, and a 220-gallon (833-L) sump in the Transfer  
26 Cell to collect any liquids.

#### 27 D-2 Response Personnel

28 Persons qualified to act as the RCRA Emergency Coordinator, as required by 20.4.1.500 NMAC  
29 (incorporating 40 CFR §264.55), are listed in Table D-2.

30 A RCRA Emergency Coordinator will be on-site at the WIPP facility 24 hours a day, seven days  
31 a week, with the responsibility for coordinating emergency response measures. RCRA  
32 Emergency Coordinators are listed in Table D-2, where four individuals have been designated  
33 primary RCRA Emergency Coordinators. This is because the on-duty Facility Shift Manager  
34 (**FSM**) is designated as the RCRA Emergency Coordinator. The four individuals shown serve as  
35 FSM on a rotating shift basis.

36 Persons qualified to act as the RCRA Emergency Coordinator are thoroughly familiar with this  
37 Contingency Plan, the TRU mixed waste and hazardous waste operations and activities at the  
38 WIPP facility, the locations of TRU mixed waste and hazardous waste activities, the locations on  
39 the site where hazardous materials are stored and used, and the locations of waste staging and  
40 accumulation areas. They are familiar with the characteristics of hazardous substances, TRU  
41 mixed waste and hazardous waste handled at the WIPP facility, the location of TRU mixed  
42 waste and hazardous waste records within the WIPP facility, and the facility layout. In addition,  
43 persons qualified to act as the RCRA Emergency Coordinator have the authority to commit the

1 necessary resources to implement this Contingency Plan. Figure D-4 outlines the RCRA  
2 Emergency Coordinator's position relative to other organizations that provide support.

3 In addition to the RCRA Emergency Coordinator, the following individuals or groups have  
4 specified responsibilities during any WIPP facility emergency:

- 5 • Assistant Chief Office Warden (ACOW)—Persons assigned to take accountability for  
6 sections of the site, and then reporting the accountability to the Chief Office Warden.
- 7 • Central Monitoring Room Operator (CMRO)—The on-shift operator responsible for  
8 Central Monitoring Room (CMR) operations, including coordination of facility  
9 communications. The facility log is maintained by the CMRO.
- 10 • Chief Office Warden (COW)—A predesignated individual with responsibilities for  
11 complete surface accountability at staging areas in the event of an evacuation. The  
12 Chief Office Warden receives reports from the ACOWs.
- 13 • Emergency Response Team (ERT)—Supplemental group trained to respond to  
14 surface emergencies, to provide emergency first aid, and to respond to releases of  
15 hazardous waste or hazardous material. ERT members are part of the WIPP  
16 Supplemental Emergency Response Program.
- 17 • Emergency Services Technician (EST)/Fire Protection Technician (FPT)—Regular  
18 employee whose job is that of full-time emergency responder. During non-emergency  
19 conditions, the EST/FPT inspects facility fire suppression systems and emergency  
20 equipment. The EST/FPT completes specific sections of the "WIPP Hazardous  
21 Material Incident Report." Additional technical personnel complete identified sections  
22 of the report.
- 23 • Fire Brigade—The fire brigade is a team of five personnel who respond to site  
24 emergencies. The team consists of an Incident Commander and four fire fighters. The  
25 fire fighters are trained in accordance with NFPA Standards for Industrial Fire Brigades  
26 (Fire Brigades that perform both advanced exterior and interior structural fire fighting).
- 27 • First Line Initial Response Team (FLIRT)—Supplemental primary responders in the  
28 event of a general underground emergency for medical and hazardous material  
29 response. The FLIRT also provides backup support for the ERT in the event of a  
30 general surface-facility emergency. FLIRT members are part of the WIPP  
31 Supplemental Emergency Response Program.
- 32 • Mine Rescue Team (MRT)—Supplemental group responsible for underground reentry  
33 and rescue after an emergency evacuation. The MRT responds in accordance with 30  
34 CFR Part 49 requirements. MRT members are part of the WIPP Supplemental  
35 Emergency Response Program.
- 36 • Office Warden—An individual assigned responsibility for assuring that personnel are  
37 evacuated from his/her assigned area or building during evacuations. Office Wardens  
38 maintain a list of all personnel in their specific area. This list is compared with the

1 physical presence of personnel who assemble at the staging areas. The Office  
2 Wardens report area accountability to the ACOWs.

- 3 • EOC Staff-The EOC consists of a minimum staff of three MOC management positions  
4 (the Crisis Manager, a Safety Representative and an Operations Representative) to  
5 activate the EOC. The full EOC Staff includes the Crisis Manager, the Deputy Crisis  
6 Manager, a Safety Representative, an Operations Representative and the EOC  
7 Coordinator. Additional technical and logistics personnel will provide support as  
8 necessary. The EOC is activated by the FSM. Since EOC staff are performing duties  
9 similar to their normal job functions and providing support related to their area of  
10 expertise, no specific RCRA training is required.

11 D-3 Implementation

12 The provisions of this Contingency Plan will be implemented immediately whenever there is an  
13 emergency event (e.g., a fire, an explosion, or a natural occurrence that involves or threatens  
14 hazardous or TRU mixed wastes or a release of hazardous substances, hazardous materials, or  
15 hazardous wastes) that could threaten human health or the environment, or whenever the  
16 potential for such an event exists as determined by the RCRA Emergency Coordinator, as  
17 required under 20.4.1.500 NMAC (incorporating 40 CFR §264.51(b)). The following information  
18 is utilized for categorization of events to determine implementation of the Contingency Plan:

- 19 1. Medical Emergencies (does not implement the Contingency Plan)
- 20 2. Non-emergency (does not implement the Contingency Plan)
- 21 a. Fire already out, did not involve any hazardous materials.
- 22 b. Spill or release involved materials excluded according to the SARA Title III,  
23 Statute 42 U.S.C. 11021 (e). Such as:
- 24 1) Any substance present in the same form and concentration as product  
25 packaged for distribution and use by the general public. (Example: Cleaning  
26 solutions)
- 27 2) Any substance to the extent it is used in a laboratory under the direct  
28 supervision of a technically qualified individual.
- 29 3) Petroleum, including crude oil or any fraction thereof, which is not otherwise  
30 specifically listed or designated as a hazardous substance by Comprehensive  
31 Environmental Response, Compensation and Liability Act (**CERCLA**).
- 32 3. Incident Level I: According to the NFPA 471, Responding to Hazardous Materials  
33 Incidents (See Table D-3). If the product(s) involved in the fire, explosion, spill or  
34 leakage meets the following criteria, it will be classified as a Level I incident and does  
35 not implement the Contingency Plan.
- 36 a. The product does not require a U.S. Department of Transportation (**DOT**) placard,  
37 is a NFPA listed 0 or 1 for all categories, or is Other Regulated Materials A, B, C,  
38 or D.

- 1           b. The fire is under control and the reactivity rating of the material is less than a  
2           rating 2, indicating a low potential for subsequent explosion as the hazardous  
3           material can be considered normally stable.
- 4           c. There was no release or the release can be confined with readily available  
5           resources.
- 6           d. There is no life-threatening situation.
- 7           e. There is no potential environmental impact.
- 8           4. Incident Level II: According to NFPA 471, Responding to Hazardous Materials  
9           Incidents, (See Table D-3). If the product(s) involved in the fire, explosion, spill or  
10           leakage meets the following criteria, it will be classified as a Level II incident and the  
11           Contingency Plan will be implemented by the RCRA Emergency Coordinator.
- 12           a. The product requires a DOT placard, is an NFPA 2 for any categories, or is  
13           Environmental Protection Agency (EPA) regulated waste (Site-specific: Table D-1  
14           and TRU mixed waste) AND
- 15           b. The incident involves multiple packages.
- 16           c. There is potential for the fire to spread since the hazardous material's flammability  
17           level (rating 2) is below 200 degrees Fahrenheit, or the reactivity (rating 2)  
18           indicates that violent chemical changes are possible and thus may be explosive.
- 19           d. The release may not be controllable without special resources.
- 20           e. The incident requires evacuation of a limited area for life safety.
- 21           f. The potential for environmental impact is limited to soil and air within incident  
22           boundaries.
- 23           g. The container is damaged but able to contain the contents to allow handling or  
24           transfer of product.
- 25           5. Incident Level III: According to NFPA 471, Responding to Hazardous Materials  
26           Incidents (See Table D--3). If the product(s) involved in the fire, explosion, spill or  
27           leakage meet the following criteria, it will be classified as a Level III incident and the  
28           Contingency Plan will be implemented by the RCRA Emergency Coordinator.
- 29           a. The product is a poison A (gas), an explosive A/B, organic peroxide, flammable  
30           solid, material that is dangerous when wet, chlorine, fluorine, anhydrous  
31           ammonia, NFPA 3 and 4 for any categories including special hazards, EPA  
32           extremely hazardous substances, and cryogenics.
- 33           b. The site-specific container size for this incident level will be a tank truck.

- 1 c. There is potential for the fire to spread since the hazardous material's flammability
- 2 level (rating 3 or 4) is below 100 degrees Fahrenheit, or the reactivity (rating 3 or
- 3 4) indicates that the material may explode.
  
- 4 d. The release may not be controlled even with special resources.
  
- 5 e. The incident requires mass evacuation of a large area for life safety.
  
- 6 f. Even though the NFPA guidelines for this incident level indicate that the potential
- 7 for environmental impact is severe, due to the site engineering controls, the
- 8 impact is contained within the HWMUs.
  
- 9 g. The container is damaged to such an extent that catastrophic rupture is possible.

10 The above categories include fire situations, weather conditions, natural phenomena, and  
11 explosions which will have to be evaluated to make an incident level determination. A Level II  
12 (potential threat to human health in localized area, potential for moderate on-site environmental  
13 impact) or Level III (potential threat to human health in a larger area, potential for severe  
14 environmental impact) incident by definition is considered to be a potential threat to human  
15 health or the environment and, therefore, is considered to be an emergency requiring activation  
16 of the Contingency Plan.

#### 17 D-4 Emergency Response Method

18 Methods that describe how and when the WIPP Contingency Plan will be implemented cover  
19 the following 11 implementation areas:

- 20 1. Notification (Section D-4a)
- 21 2. Identification of hazardous materials (Section D-4b)
- 22 3. Assessment of the nature and extent of the emergency (Section D-4c)
- 23 4. Control, containment, and correction of the emergency (Section D-4d)
- 24 5. Prevention of recurrence or spread of fires, explosions, or releases (Section D-4e)
- 25 6. Management and containment of released material and waste (Section D-4f)
- 26 7. Incompatible waste (Section D-4g)
- 27 8. Post-emergency facility and equipment maintenance and reporting (Section D-4h)
- 28 9. Container spills and leakage (Section D-4i)
- 29 10. Tank spills and leakage (Section D-4j)
- 30 11. Surface impoundment spills and leakage (Section D-4k)

#### 31 D-4a Notification

32 Notification requirements in the event of an emergency at a RCRA hazardous waste  
33 management facility are defined by 20.4.1.500 NMAC (incorporating 40 CFR §§264.56(a) and  
34 (d)). Necessary notifications in case of an emergency at the WIPP facility are described in this  
35 section (Figure D-4a). Personnel at the WIPP facility are trained to respond to emergency  
36 notifications.

1 D-4a(1) Initial Emergency Response and Alerting the RCRA Emergency Coordinator

2 The first person to become aware of an incident shall immediately report the situation to the  
3 CMRO, and provide the following information, as appropriate:

- 4 • Name and telephone number of the caller
- 5 • Location of the incident and the caller
- 6 • Time and type of incident
- 7 • Severity of the incident
- 8 • Magnitude of the incident
- 9 • Cause of the incident
- 10 • Assistance needed to deal with or control the incident
- 11 • Areas or personnel affected by the incident

12 In addition to receiving incident reports, the CMRO, who is located in the Support Building  
13 (Building 451) (Figure D-1), continuously monitors (24 hours a day) the status of mechanical,  
14 electrical, and/or radiological conditions at selected points on the site, both above and below  
15 ground. Alarms to indicate abnormal conditions are located throughout the WIPP facility. The  
16 alarm(s) (e.g., fire, radiation) may be the first notification of an emergency situation received by  
17 the CMRO. The CMRO monitors alarms, takes telephone calls and radio messages, and  
18 initiates outgoing calls to emergency staff and outside agencies.

19 Once the CMRO is notified of a fire, explosion, or a release anywhere in the facility (either by  
20 eyewitness or an alarm), the RCRA Emergency Coordinator is immediately notified. Once  
21 notified, the RCRA Emergency Coordinator assumes responsibility for the management of  
22 activities related to the assessment, abatement, and/or cleanup of the incident.

23 A RCRA Emergency Coordinator is on-site at all times and, therefore, can be reached at any  
24 time via a two-way radio or over the public address (PA) and plectrons on-site. If the RCRA  
25 Emergency Coordinator is unavailable or unable to perform these duties, a qualified alternate  
26 RCRA Emergency Coordinator is available.

27 The EST/FPT is also notified in case of fire, explosion, or release. The RCRA Emergency  
28 Coordinator, as incident commander, determines if supplemental emergency responders are  
29 necessary. Notification of the ERT (surface) is made by using the ERT pagers and/or the public  
30 announcement system. Notification of the FLIRT is by using the Mine Page Phone System. If  
31 the MRT is needed the RCRA Emergency Coordinator will instruct the CMRO to make a PA  
32 announcement for the MRT to assemble in the Mine Rescue Room, located in a predetermined  
33 location.

34 Off-shift personnel may be notified using the on-call list, which is updated weekly by the  
35 Permittees. The FSM/CMRO, each individual on the on-call list, and WIPP Security receive  
36 copies of the on-call list. The CMRO may direct Security to make the notifications.

37 The response to an unplanned event will be performed in accordance with procedures based on  
38 the applicable Federal, State, or local regulations and/or guidelines for that response. These  
39 include the U.S. Mine Safety and Health Administration (**MSHA**); NMAC; CERCLA; Chapter 74,  
40 Article 4B, New Mexico Statutes Annotated 1978, New Mexico Emergency Management Act;

1 and agreements between the Permittees and local authorities (Section D-6) for emergencies  
2 throughout the WIPP facility.

3 After notification by the CMRO, the EST/FPT shall immediately investigate to determine  
4 pertinent information relevant to the actual or potential threat posed to human health or the  
5 environment. The information will include the location of release, type, and quantity of spilled or  
6 released material (or potential for release due to fire, explosion, weather conditions, or other  
7 naturally occurring phenomena), source, areal extent, and date and time of release. The  
8 EST/FPT shall provide information for classification of the incident, according to the emergency  
9 response guidelines, to the RCRA Emergency Coordinator. The RCRA Emergency Coordinator  
10 then classifies the incident after evaluation of all pertinent information. This classification will  
11 consider both direct and indirect effects of the release, fire, or explosion (e.g., the effects of any  
12 toxic, irritating, or asphyxiating gases that are generated, or the effects of any hazardous  
13 surface water run-off from water or chemical agents used to control fire and heat-induced  
14 explosions).

15 When the RCRA Emergency Coordinator determines that an Incident Level II or III has  
16 occurred, the Contingency Plan is implemented. The RCRA Emergency Coordinator then may  
17 choose to activate the EOC for additional support (Figure D-4). If the RCRA Emergency  
18 Coordinator determines that due to extenuating circumstances the potential to upgrade to an  
19 incident Level II or III exists, the RCRA Emergency Coordinator also may activate the EOC. The  
20 EOC will assist the RCRA Emergency Coordinator in mitigation of the incident with use of  
21 communications equipment and technical expertise from any WIPP organization (see Section  
22 D-4c).

23 The EOC staff will assess opportunities for coordination and the use of mutual-aid agreements  
24 with local outside agencies making additional emergency personnel and equipment available  
25 (Section D-6), as well as the use of specialized response teams available through various State  
26 and Federal agencies. As a DOE-owned facility, the WIPP facility may use the resources  
27 available from the Federal Response Plan, signed by 27 Federal departments and agencies in  
28 April 1987, and developed under the authorities of the Earthquake Hazards Reduction Act of  
29 1977 (42 U.S.C. 7701 et seq.) and amended by the Stafford Disaster Relief Act of 1988. Most  
30 resources are available within 24 hours. The WIPP facility maintains its own emergency  
31 response capabilities on-site. In addition to the supplemental emergency responders,  
32 radiological control technicians, environmental sampling technicians, wildlife biologists, and  
33 various other technical experts are available for use on an as-needed basis.

#### 34 D-4a(2) Communication of Emergency Conditions to Facility Employees

35 Procedures for notifying facility personnel of emergencies depend upon the type of emergency.  
36 Methods of notification are:

- 37 • Local Fire Alarms

38 The local fire alarms sound a bell tone and may be activated automatically or manually  
39 in the event of a fire.

1       • Surface Evacuation Signal

2           The evacuation signal is a yelp<sup>2</sup> tone and is manually activated by the CMRO when  
3           needed. The CMRO shall follow the evacuation signal with verbal instructions and  
4           ensure the Site Notification System (i.e., the plectron) has been activated.

5       • Underground Evacuation Warning System

6           The evacuation signal is a yelp tone and flashing strobe light. In the event of an  
7           evacuation signal, underground personnel will proceed to the nearest egress hoist  
8           station (Section D-7b) to be apprised of the nature of the emergency and the  
9           evacuation route to take. Underground personnel are trained to report to the  
10          underground assembly areas and await further instruction if all power fails or if  
11          ventilation stops. If evacuation of underground personnel is required, this will be done  
12          using the backup electric generators and in accordance with the applicable  
13          requirements of MSHA.

14      • Contingency Evacuation Notification

15          If the primary warning system consisting of alarms and signals fails to operate when  
16          activated (as in a total power outage and failure of the back-up power systems), WIPP  
17          Security will be notified by the CMRO to initiate the contingency evacuation plan. In  
18          this event Security officers will alert personnel to evacuate the area and will check  
19          trailers, if possible, to ensure that personnel have been alerted/evacuated.

20      WIPP facility personnel are trained and given instruction during General Employee Training to  
21      recognize the various alarm signals and the significance of each alarm. WIPP facility employees  
22      and site visitors are required to comply with directions from emergency personnel and alarm  
23      system notifications and to follow instructions concerning emergency equipment, shutdown  
24      procedures, and emergency evacuation routes and exits.

25      D-4a(3) Notification of Local, State, and Federal Authorities

26      If it is determined that the facility has had a fire, an explosion, a spill, or a release of hazardous  
27      waste or hazardous waste constituents (included in 20.4.1.200 NMAC (incorporating 40 CFR §  
28      261)) in the miscellaneous unit or TRU mixed waste handling areas, or an emergency resulting  
29      in a release of a hazardous substance (included in 40 CFR §302.4 and §302.6 or the New  
30      Mexico Emergency Management Act, §74-4B-3 and §74-4B-5) that could threaten human  
31      health or the environment outside the facility, the RCRA Emergency Coordinator, after  
32      consultation with the DOE as the owner of the facility, will assure that local authorities are  
33      notified by telephone and/or radio, including:

- 34          • Carlsbad Police Department (telephone number: [575] 885-2111) (or 911)  
35          • Carlsbad Fire Department (telephone number: [575] 885-2111) (or 911)  
36          • Eddy County Sheriff (telephone number: [575] 887-7551)  
37          • Hobbs Fire Department (telephone number: [575] 397-9265)

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<sup>2</sup> The yelp tone increases from 500 to 1,000 hertz and drops to 500 hertz.

1 After local authorities are notified, the RCRA Emergency Coordinator will ensure notification of  
2 the following:

- 3 • New Mexico Environment Department (**NMED**)  
4 Department of Public Safety  
5 24-Hour Emergency Reporting Telephone Number: (505) 827-9329  
6 FAX number: (505) 827-9368
- 7 • Department of Public Safety WIPP Coordinator  
8 Telephone Number: (505) 827-9221  
9 FAX number: (505) 829-3434
- 10 • Hazardous Materials Emergency Response, Chemical Safety Office, Department of  
11 Public Safety, State Emergency Response Commission  
12 Telephone number: (505) 476-9681  
13 FAX number: (505) 476-9695
- 14 • National Response Center  
15 Telephone number: 1-800-424-8802  
16 FAX number: (202) 479-7181
- 17 • Local Emergency Planning Committee  
18 Telephone number: (575) 885-3581  
19 Fax number: (575) 628-3973

20 The first notification of public safety and regulatory agencies will include the following:

- 21 • The name and address of the facility and the name and phone number of the reporter
- 22 • The type of incident (fire, explosion, or release)
- 23 • The date and time of the incident
- 24 • The type and quantity of material(s) involved, to the extent known
- 25 • The exact location of the incident
- 26 • The source of the incident
- 27 • The extent of injuries, if any
- 28 • Possible hazards to human health and the environment (air, soil, water, wildlife, etc.)  
29 outside the facility
- 30 • The name, address, and telephone number of the party in charge of or responsible for  
31 the facility or activity associated with the incident
- 32 • The name and the phone number of the RCRA Emergency Coordinator

- 1       • The identity of any surface and/or groundwater involved or threatened and the extent  
2       of actual and potential water pollution
  
- 3       • The steps being taken or proposed to contain and clean up the material involved in the  
4       incident

5       The RCRA Emergency Coordinator will also be available to advise the appropriate local, State,  
6       or Federal officials on whether or not local areas should be evacuated.

7       D-4a(4) Notification of the General Public

8       Immediate notification of the general public through the public safety and emergency agencies  
9       listed above will be made by, or under the direction of, the RCRA Emergency Coordinator  
10      following an evaluation to determine if local adjacent areas need to be evacuated. This  
11      evaluation will be made in consultation with the DOE who, as the owner of the facility, has  
12      management responsibility for the land withdrawal area. DOE policy is to provide accurate and  
13      timely information to the public by the most expeditious means possible concerning emergency  
14      situations at the WIPP site that may affect off-site personnel, public health and safety, and/or  
15      the environment. A DOE (DOE) Management representative is always on-call. This person is  
16      available by pager or telephone 24 hours a day.

17     A Hazards Assessment was conducted, which indicated no need for protective actions or  
18     emergency action levels, as defined by the Permittees, for the facility. Therefore, no procedures  
19     are in place for evacuation of the public. Procedures are in place for notification of the public by  
20     radio, television, and newspapers for news items which might include notification of on-site  
21     emergency situations. These procedures include a Public Affairs Coordinator in the EOC who  
22     writes and transmits press releases to the DOE office, where formal press conferences are  
23     conducted.

24     D-4b Identification of Hazardous Materials

25     The identification of hazardous wastes, hazardous waste constituents, or hazardous materials  
26     involved in a fire, an explosion, or a release to the environment is a necessary part of the  
27     assessment of an incident, as described in 20.4.1.500 NMAC (incorporating 40 CFR  
28     §264.56(b)). RCRA hazardous waste and hazardous substances and materials listed in 40 CFR  
29     §302.4 and §302.6 or New Mexico Emergency Management Act, §74-4B-3 and §74-4B-5 and,  
30     involved in any release at the WIPP facility will be identified. The identification of likely  
31     hazardous materials at any location is enhanced because hazardous materials and hazardous  
32     waste are only stored or managed in specified locations throughout the WIPP facility. An  
33     attempt will be made to identify products involved by occupancy/location, container shape,  
34     markings/color, placards/labels, United Nations/North America/Product Identification Number,  
35     on-site technical experts, or field sampling. Further, the ES&H department maintains an updated  
36     inventory of hazardous materials/substances that are brought on site, and a master MSDS  
37     listing in the Safety and Emergency Services Facility, Building 452.

38     Sources of information available to identify the hazardous wastes, substances, or materials  
39     involved in a fire, an explosion, or a release at the WIPP facility include operator/supervisor  
40     knowledge of their work areas, materials used, and work activities underway; the WIPP Waste  
41     Information System (WWIS), which identifies the location within the facility of emplaced TRU  
42     mixed waste, including emplaced derived waste; and waste manifests and other waste

1 characterization information in the operating record. The WWIS also includes information on  
2 wastes that are in the waste handling process. Also available are MSDSs for hazardous  
3 material in the various user areas throughout the facility, waste acceptance records, and  
4 materials inventories for buildings and operating groups at the WIPP facility. Information or data  
5 from the derived waste accumulation areas, the hazardous waste staging area, satellite staging  
6 areas, and nonregulated waste accumulation areas are included.

7 TRU mixed waste received by the WIPP facility during the Disposal Phase will be characterized  
8 for hazardous constituents prior to receipt, and acceptable knowledge will be used to  
9 characterize derived waste prior to emplacement.

10 Information required for identifying TRU mixed hazardous constituents in case of an incident is  
11 readily available through the WWIS and the waste acceptance records. Waste accepted at  
12 WIPP is already known to be compatible with all materials used to respond to an emergency. All  
13 non-TRU mixed waste materials received on site, other than those listed in Table D-1, are in  
14 such small quantities that no reaction could develop which would trigger an Incident Level II or  
15 III response.

16 The RCRA Emergency Coordinator will have access to the WWIS through Operations, or  
17 through the Facility Shift Manager's Office.

18 The RCRA Emergency Coordinator has access to the inventory lists and MSDSs in the Safety  
19 and Emergency Services Facility at all times.

#### 20 D-4c Assessment of the Nature and Extent of the Emergency

21 Once the required notifications have been made, the RCRA Emergency Coordinator will ensure  
22 that the identity, exact source, amount, and areal extent of any released materials are  
23 determined, as required under 20.4.1.500 NMAC (incorporating 40 CFR §264.56(b)). The  
24 RCRA Emergency Coordinator will determine whether the occurrence constitutes an emergency  
25 based on knowledge of the area and access to the waste identification/characterization  
26 information described in Section D-4b. An emergency will require response by only trained  
27 emergency response personnel. The RCRA Emergency Coordinator will be responsible for  
28 responding to immediate and potential hazards, using the services of trained personnel to  
29 determine: 1) the identity of hazardous wastes, hazardous waste constituents, and other  
30 hazardous materials involved in a release, as described in Section D-4b; 2) whether or not a  
31 release involved a reportable quantity of a hazardous substance; 3) the areal extent of a  
32 release; 4) the exact source of a release; and 5) the potential hazards to human health or to the  
33 environment.

34 After the materials involved in an emergency are identified, the specific information on the  
35 associated hazards, appropriate personal protective equipment (PPE), decontamination, etc.,  
36 will be obtained from MSDSs and from appropriate chemical reference materials at the same  
37 location. These information sources may be accessed by the RCRA Emergency Coordinator or  
38 through several WIPP facility organizations.

1 The emergency assessment requires determination of hazards involving evaluation of several  
2 criteria, including:

- 3 • Exposure: magnitude of actual or potential exposure to employees, the general public,  
4 and the environment; duration of human and environmental exposure; pathways of  
5 exposure
- 6 • Toxicity: types of adverse health or environmental effects associated with exposures;  
7 the relationship between the magnitude of exposure and adverse effects
- 8 • Reactivity: hazardous materials or hazardous wastes, which are not TRU mixed  
9 wastes, involved in an incident will be assessed for reactivity through accessing the  
10 MSDSs for the affected material and the recommended method(s) for managing such  
11 waste
- 12 • Uncertainties: considerations for undeterminable or future exposures; uncertain or  
13 unknown health effects, including future health effects

#### 14 D-4d Control, Containment, and Correction of the Emergency

15 The WIPP facility is required to control an emergency and to minimize the potential for the  
16 occurrence, recurrence, or spread of releases due to the emergency situation, as described in  
17 20.4.1.500 NMAC (incorporating 40 CFR §264.56 (e)). The WIPP Emergency Response  
18 procedures utilize the incident mitigation guidelines in NFPA 471, Responding to Hazardous  
19 Materials Incidents, with initial response priority being on control, and those actions necessary  
20 to ensure confinement and containment (the first line of defense) in the early, critical stages of a  
21 spill or leak. The RCRA Emergency Coordinator is responsible for stopping processes and  
22 operations when necessary, and removing or isolating containers. TRU mixed waste will remain  
23 within the WHB Unit, the Parking Area Unit, and the underground HWDU.

#### 24 D-4d(1) All Emergencies

25 The WIPP Emergency Response procedures include, but are not limited to, the following  
26 actions appropriate for control:

- 27 1. Isolate the area from unauthorized person by fences, barricades, warning signs, or  
28 other security and site control precautions. Isolation and evacuation distances vary,  
29 depending upon the chemical/product, fire, and weather situations.
- 30 2. Identify the chemical/product according to Section D-4b.
- 31 3. Drainage controls.
- 32 4. Stabilization of physical controls (such as dikes or impoundment[s]).
- 33 5. Capping of contaminated soils to reduce migration.
- 34 6. Using chemicals and other materials to retard the spread of the release or to mitigate  
35 its effects.

- 1           7. Excavation, consolidation, removal, or disposal of contaminated soils.
- 2           8. Removal of drums, barrels, or tanks where it will reduce exposure risk during situations
- 3           such as fires.

4 If the facility stops operations in response to a fire, explosion, or release, the RCRA Emergency  
5 Coordinator shall ensure continued monitoring for leaks, pressure buildup, gas generation, or  
6 ruptures in valves, pipes, or other equipment, wherever appropriate. If operations continue,  
7 personnel normally assigned to these tasks will continue.

8 Both natural and synthetic methods will be employed to limit the releases of hazardous  
9 materials so that effective recovery and treatment can be accomplished with minimum additional  
10 risk to human health or the environment. A combination of the above methods to achieve  
11 protection of human health and the environment, with emphasis on two basic methods for  
12 mitigation of hazardous materials incidents - Physical and Chemical (Tables D-4, D-5)  
13 mitigation, will be used.

- 14           1. Physical methods of control involve any of several processes to reduce the area of the  
15           spill/leak, or other release mechanism (such as fire suppression).
  - 16           A. Absorption is the process in which materials hold liquids through the process of  
17           wetting. Absorption is accompanied by an increase in the volume of the  
18           sorbate/sorbent system through the process of swelling. Some of the materials  
19           utilized in response to Level I incidents or Level II incidents involving liquids will be  
20           absorbent sheets of polyolefin-type fibers, spill control bucket materials  
21           (specifically for solvents, neutralization, or for acids/caustics), and absorbent  
22           socks for general liquids or oils.
  - 23           B. Covering refers to a temporary form of mitigation for radioactive incidents that will  
24           be utilized in response to Level II or Level III incidents involving CH TRU mixed  
25           waste. These could include absorbent sheets, plastic, or actual ambulance  
26           blankets.
  - 27           C. Dikes or Diversions refer to the use of physical barriers to prevent or reduce the  
28           quantity of liquid flowing into the environment. Dikes may be soil or other barriers  
29           temporarily utilized to hold back the spill or leak. Diversion refers to the methods  
30           used to physically change the direction of the flow of the liquid. Absorbent socks  
31           or earth may be utilized as dikes or diversions for all levels of incidents.
  - 32           D. Overpacking is accomplished by the use of an oversized container. Overpack  
33           containers will be compatible with the hazards of the materials involved.
  - 34           E. Plug and Patch refers to the use of compatible plugs and patches to reduce or  
35           temporarily stop the flow of materials from small holes, rips, tears, or gashes in  
36           containers. A Series "A" hazardous response kit containing nonsparking  
37           equipment to control and plug leaks may be utilized for response to all levels of  
38           incidents.
  - 39           F. Transfer refers to the process of moving a liquid, gas, or some forms of solids,  
40           either manually or by pump, from a leaking or damaged container. Scoops,

1 shovels, jugs, and pails as well as drum transfer pumps for chemical and  
2 petroleum transfer are utilized as needed in response to all levels of incidents.

3 G. Vapor Suppression refers to the reduction or elimination of vapors emanating from  
4 a spilled or released material through the most efficient method or application of  
5 specially designed agents such as an aqueous foam blanket.

6 2. Chemical Methods of Mitigation

7 A. Neutralization is the process of applying acids or bases to a spill to form a neutral  
8 salt. The application of solids for neutralizing can often result in confinement of the  
9 spilled material. This would include using the neutralizing adsorbents.

10 B. Solidification is the process whereby a hazardous liquid is added to material such  
11 as an absorbent so that a solid material results.

12 The established procedures are based upon the incident level and a graded approach for  
13 nonradioactive or CH TRU waste emergencies and initiated to:

- 14 1. Minimize contamination or contact (through PPE, etc.)  
15 2. Limit migration of contaminants  
16 3. Properly dispose of contaminated materials

17 For RH TRU mixed waste, the detection of contamination on or damage to a RH TRU mixed  
18 waste canister or a facility canister may occur outside the Hot Cell during cask to cask transfer  
19 of the canister or during loading of the Shielded Insert in the Transfer Cell. When such  
20 contamination or damage is found, the Permittees have the option to decontaminate or return  
21 the canister to the generator/storage site or another site for remediation. In the case of a  
22 damaged facility canister, the Shielded Insert may be used as an overpack to facilitate further  
23 management. Contamination may also be detected within the Hot Cell during the unloading of  
24 the CNS 10-160B shipping cask. In this case, the Permittees may decontaminate the 55-gallon  
25 drums or return them to the generator/storage site or another site for remediation. Spills or  
26 releases that occur within the RH Complex or the underground as the result of RH TRU mixed  
27 waste handling will be mitigated by using appropriate measures which may include the items  
28 above.

29 D-4d(2) Fire

30 The incident level emergency response identified in Section D-3 includes fire/explosion  
31 potential. WIPP fire response includes incipient, exterior structure fires, and internal structure  
32 fires. The RCRA Emergency Coordinator can implement the Memoranda of Understanding  
33 (MOU) for additional support.

34 The first option in mine fire response will be to apply mechanical methods to stop fires (e.g., cut  
35 electrical power). The last option in mine fire response will be to reconfigure ventilation using  
36 control doors associated with the underground ventilation system. The following actions are  
37 implemented in the event of a fire:

- 38 1. All emergency response personnel at an incident will wear appropriate PPE.

- 1           2. Only fire extinguishing materials that are compatible with the materials involved in the  
2           fire will be used to extinguish fires. Compatibility with materials involved in a fire are  
3           determined by pre-fire plans, Emergency Response Guide Book (DOT, 1993), DOT  
4           labeling, and site-specific knowledge of the emergency response personnel. Water  
5           and dry chemical materials have been determined to be compatible with all  
6           components of the TRU mixed waste. Pre-fire plans for the WHB are included in  
7           Figures D-10 and D-11.

8           Fires in areas of the WHB Unit should not propagate, due to limited amount of  
9           combustibles, and the concrete and steel construction of the structures. Administrative  
10          controls, such as landlord inspections and EST/FPT inspections, help to insure good  
11          housekeeping is maintained. Combustible material and TRU mixed waste will be  
12          isolated, if possible. Firewater drain trenches collect the water and channel it into a  
13          sump. In areas not adjacent to the trenches, portable absorbent dikes (pigs) will be  
14          used to retain as much as possible, until it can be transferred to containers or sampled  
15          and analyzed for hazardous constituents.

- 16          3. If the fire spreads or increases in intensity, personnel will be directed to evacuate.
- 17          4. The RCRA Emergency Coordinator will remain in contact with responding personnel to  
18          advise them of the known hazards.
- 19          5. In order to ensure that storm drains and/or sewers do not receive potentially  
20          hazardous runoff, dikes will be built around storm drains to control discharge as  
21          needed. Collected waste will be sampled and analyzed for hazardous constituents,  
22          before being discharged to evaporation ponds. There are two ponds south of the  
23          security fence, opposite the WHB Unit, that will collect drainage from the parking area.  
24          The rest of the site, inside the security fence, drains to the large pond to the west.  
25          Samples will be taken from these ponds, after the emergency has been abated, to  
26          determine any cleanup requirements. NMED will approve any procedures associated  
27          with the sampling and analysis of the ponds.
- 28          6. The RCRA Emergency Coordinator maintains overall control of the emergency and  
29          may accept and evaluate the advice of WIPP facility personnel and emergency  
30          response organization members, but retains overall responsibility.
- 31          7. The RCRA Emergency Coordinator will be in overall control of WIPP facility  
32          emergency response efforts until the emergency is terminated.
- 33          8. Materials involved in a fire can be identified in the following ways:
- 34                 • According to Section D-4b.
- 35                 • If the contents of the waste container cannot be determined based on its  
36                 location and the label is destroyed by fire, the material will be treated as an  
37                 unknown, evaluated for radiological contamination, and analyzed according to  
38                 methods in the EPA's "Test Methods for Evaluating Solid Waste  
39                 Physical/Chemical Methods" (SW-846), Third Edition, after the fire has been  
40                 extinguished.

- 1                   • Airborne radioactivity samples may be obtained during a fire involving  
2                   radioactive materials, using portable and fixed air samplers. Response  
3                   personnel will be adequately protected from airborne radioactivity by their PPE  
4                   required for fire response.
- 5           9. Only materials compatible with the waste may be used for fire response.
- 6           10. When cleanup has proceeded to the point of finding no radionuclide activity, then the  
7           "swipe" can be sent for analysis for hazardous constituents. The use of these  
8           confirmation analyses is as follows:
  - 9                   • For waste containers, once radiologically clean and free of any visible  
10                  evidence of hazardous waste spills on the container, it will be placed in the  
11                  underground without further action.
  - 12                  • For area contamination, once the area is cleaned up and is shown to be  
13                  radiologically clean, it will be sampled for the presence of hazardous waste  
14                  residues (for further information see Section D-4d, Emergency Termination  
15                  Procedures).
- 16           11. Fire suppression materials used in response to incidents will be retained on-scene,  
17           where an evaluation will be performed to determine appropriate recovery and disposal  
18           methods.

19   D-4d(3) Explosion

20   The following actions will be implemented in the event that an explosion that involves or  
21   threatens hazardous or TRU mixed waste or hazardous materials has occurred:

- 22           1. The area will be evacuated immediately.
- 23           2. The CMRO will immediately notify the appropriate emergency response personnel and  
24           the RCRA Emergency Coordinator about the explosion.
- 25           3. Injured personnel will be treated and transported as necessary.
- 26           4. The RCRA Emergency Coordinator will remain in contact with responding personnel to  
27           advise them of the known hazards involved and the degree and location of the  
28           explosion and associated fires.
- 29           5. The RCRA Emergency Coordinator will be in command and may accept and evaluate  
30           the advice of WIPP facility personnel and emergency response organization members,  
31           but retains the overall responsibility. Selections of methods and tactics of response are  
32           the responsibility of the Incident Commander.
- 33           6. The RCRA Emergency Coordinator will be in overall control of WIPP facility  
34           emergency response efforts until the emergency is terminated.
- 35           7. When cleanup has proceeded to the point of finding no radionuclide activity, then  
36           samples may be taken for chemical analysis if there is visible evidence to suspect

1 additional hazardous waste residues. Chemical residues on floor surfaces resulting  
2 from a hazardous waste explosion will be evaluated, sampled, analyzed (if required),  
3 isolated, and returned to appropriate containers, and surfaces will be cleaned using  
4 appropriate cleaners.

- 5 8. The RCRA Emergency Coordinator may shut down operational units (e.g., process  
6 equipment and ventilation equipment) that have been affected directly or indirectly by  
7 the explosion. Once the areas have been determined safe for reentry, processes may  
8 be reactivated.

9 D-4d(4) Spills

10 Protection of response personnel at a hazardous material incident is paramount. The primary  
11 methods to protect personnel are time, distance, and shielding. If a Level II or III incident exists,  
12 the RCRA Emergency Coordinator will implement the following actions:

- 13 1. The immediate area will be evacuated.
- 14 2. The RCRA Emergency Coordinator will review facility records to determine the identity  
15 and chemical nature of released material.
- 16 3. Entry team procedures will be utilized, with special attention to the following:
- 17 • Buddy system
  - 18 • Appropriate PPE
  - 19 • Backup rescue team
  - 20 • Supplemental communication signals (hand signals and hand-light signals)
  - 21 • Monitoring equipment
  - 22 • Exposure time limitations
- 23 4. If possible, the source of the release will be secured.
- 24 5. A dike to contain runoff may be built.
- 25 6. Emergency responders will ensure that storm drains and/or sewers do not receive  
26 potentially hazardous runoff or spilled material. They may build dikes around storm  
27 drains to control discharge.
- 28 7. Released wastes may be collected and contained by stabilizing or neutralizing the  
29 spilled material, as appropriate, pouring an absorbent over the spilled material, and  
30 sweeping or shoveling the absorbed material into drums or other appropriate  
31 containers. The absorbents have been determined to be compatible with all  
32 components of the TRU mixed waste.
- 33 8. No TRU mixed waste that may be incompatible with the released material will be  
34 managed in the affected area until cleanup procedures are complete.
- 35 9. The RCRA Emergency Coordinator will direct spill control, decontamination, and  
36 termination procedures described below.

1 D-4d(5) Decontamination of Personnel

2 Decontamination of personnel with radioactive contamination is the responsibility of the  
3 Radiological Control (RC) section. If a person is contaminated with radioactivity during a site  
4 evacuation to the staging areas, the contaminated area will be covered before the person can  
5 be moved (under escort by RC personnel) to the staging area. The RC personnel will ensure the  
6 contaminated person remains segregated from other site personnel while under RC supervision.

7 In the event of an emergency that requires immediate evacuation of the area, the contamination  
8 can be covered by any method warranted, given the circumstance (e.g., clean clothing wrapped  
9 around the area). If the size of the radioactive contamination on the body is small and localized,  
10 it can be covered with clothing (e.g., glove, shoe cover, coveralls). If the size of the radioactive  
11 contamination on the body is large, it may be covered by dressing the individual in a full set of  
12 Anti-Contamination clothing (coveralls, hood, gloves, shoe covers, etc.).

13 If time and location permit and the contamination is on the face, it will be decontaminated  
14 immediately using a cloth moistened with tepid water (and a mild detergent, if necessary). If the  
15 size of the radioactive contamination on the individual's body is small and localized, it will be  
16 decontaminated using the same method as for the face, but after the individual has been  
17 transferred to an area appropriate for conducting decontamination.

18 If the individual is transferred to the staging area prior to decontamination, he/she will be  
19 decontaminated at the staging area using site procedures for personnel decontamination and  
20 using decontamination supplies and equipment as appropriate for the extent and magnitude of  
21 the contamination.

22 D-4d(6) Control of Spills or Leaking or Punctured Containers of CH and RH TRU Mixed Waste

23 In the event of spills or leaking or punctured containers of CH and RH TRU mixed waste, the  
24 WIPP responds to three distinct phases: 1) the event, 2) the re-entry, and 3) the recovery.

25 During the event, the following immediate actions are completed: 1) stop work, 2) warn others  
26 (notify CMR), 3) isolate the area, 4) minimize exposure, and 5) close off unfiltered ventilation.  
27 These actions can take place simultaneously, as long as they are completed before proceeding  
28 to the re-entry phase.

29 CH TRU Mixed Waste

30 Prior to the re-entry following an event involving containers of CH TRU mixed waste, a  
31 Radiological Work Permit (RWP) is written for personnel to enter with protective clothing to  
32 assess the conditions, take surveys and samples, and mitigate problems that could compound  
33 the hazards in the area (cover up spilled material with plastic material sheeting and or any  
34 approved fixatives such as polyvinyl alcohol (PVA) or paint, place equipment in a safe  
35 configuration, etc.). During the re-entry phase, smears and air sample filters are taken and  
36 counted. This information is used by cognizant managers, RC personnel, and As Low As  
37 Reasonably Achievable (ALARA) Committee representatives to determine an appropriate  
38 course of action to recover the area. A plan to decontaminate and recover affected areas and  
39 equipment will be approved with a separate RWP written to establish the radiological controls  
40 required for the recovery.

1 During the recovery phase, the plan will be executed to utilize the necessary resources to  
2 conduct decontamination and/or overpacking operations as needed. The completion of this  
3 phase will occur prior to returning the affected area and/or equipment to normal activities. The  
4 recovery phase will include activities to minimize the spread of contamination to other areas.  
5 These activities will involve placing the waste material in another container; vacuuming the  
6 waste material; overpacking or plugging/patching the spilled, leaking, or punctured waste  
7 container; and/or decontaminating the affected area(s). If an affected surface cannot be  
8 decontaminated to releasable levels, it may be covered with a fixative coating and established  
9 as a Fixed Contamination Area to prevent spread of contamination, or it may be removed using  
10 heavy machinery and tools, packaged in approved waste containers, and emplaced in the  
11 underground. Every reasonable effort to minimize the amount of derived waste, while providing  
12 for the health and safety of personnel, will be made.

13 Should a breach of a CH TRU mixed waste container occur at the WIPP that results in  
14 removable contamination exceeding the small area "spot" decontamination levels, the affected  
15 container(s) (e.g., breached and contaminated) will be placed into an available overpack  
16 container (e.g., 85-gal drum, SWB, TDOP), except that TDOPs will be decontaminated,  
17 repaired/patched in accordance with 49 CFR §173 and §178 (e.g., 49 CFR §173.28), or  
18 returned to the generator. The decontamination of equipment and the overpacking of  
19 contaminated/damaged waste containers will be performed in the vicinity of the incident. For  
20 example, under normal operations CH TRU mixed waste will be handled only in the areas of the  
21 WHB Unit. Therefore, it is within these same areas that decontamination and/or overpacking  
22 operations would occur. By eliminating the transport of contaminated equipment to other areas  
23 for decontamination or overpacking, the risk of spreading contamination is reduced.

24 Equipment used during a spill cleanup or CH TRU mixed waste overpacking operation could  
25 include: cloths, brushes, scoops, absorbents, squeegees, tape, bags, pails, slings, hand tools,  
26 and others as needed for a given incident.

27 At the underground emplacement room, salt contaminated by a spill of CH TRU mixed waste  
28 would be either covered or cleaned up, depending on location, extent, and spilled material, due  
29 to potential radioactive contamination spread via the salt dust. The contaminated salt would be  
30 covered to isolate it from the workers, and the stacking of waste containers would resume or  
31 would be removed and packaged as site-derived waste using applicable site procedures for  
32 decontaminating surfaces.

33 The decontamination methods will initially involve wiping down structures, equipment, and other  
34 containers in the area with absorbent cloths moistened with tepid water. Surveys of these  
35 structures will take place and the need to continue decontamination activities will be  
36 established. If further decontamination is required, nonhazardous decontaminating agents, such  
37 as Liquinox<sup>®</sup>, Simple Green<sup>®</sup>, Windex<sup>®</sup>, citric acid, Bartlett Strip Coat<sup>®</sup>, and high pressure CO<sub>2</sub>  
38 will be used to prevent generating CH TRU mixed waste.

39 RWPs and other administrative controls provide protective measures to help ensure that new  
40 hazardous constituents will not be added during decontamination activities.

41 Certain structures and/or equipment may be disassembled to facilitate decontamination or may  
42 be placed directly into a derived waste container. Items used in the spill cleanup and  
43 decontamination operations (e.g., swipes, tools, PPE, etc.) may also be placed into a derived  
44 waste container.

1 When decontamination is deemed by the recovery team to be complete, RC personnel will  
2 conduct one final, intensive radcon survey of the area and components in the area to release it  
3 for uncontrolled use. The free release criteria for items, equipment, and areas is < 20 dpm/100  
4 cm<sup>2</sup> for alpha radioactivity and < 200 dpm/100 cm<sup>2</sup> for beta-gamma radioactivity. Personnel will  
5 then perform hazardous material sampling after decontamination efforts are complete to verify  
6 the removal of hazardous waste substances. After cleanup is complete, facility personnel will  
7 complete an inspection and include the details of the spill and cleanup in the log.

#### 8 RH TRU Mixed Waste

9 For RH TRU mixed waste, the detection of contamination on or damage to a RH TRU mixed  
10 waste canister or a facility canister may occur outside the Hot Cell during cask to cask transfer  
11 of the canister or during loading of the Shielded Insert in the Transfer Cell. When such  
12 contamination or damage is found, the Permittees have the option to decontaminate or return  
13 the canister to the generator/storage site or another site for remediation. In the case of a  
14 damaged facility canister, the Shielded Insert may be used as an overpack to facilitate further  
15 management. Contamination may also be detected within the Hot Cell during the unloading of  
16 the CNS 10-160B shipping cask. In this case, the Permittees may decontaminate the 55-gallon  
17 drums or return them to the generator/storage site or another site for remediation. Spills or  
18 releases that occur within the RH Complex or the underground as the result of RH TRU mixed  
19 waste handling will be mitigated by using the following measures, as appropriate:

20 During the re-entry phase, an evaluation of the incident, including the nature of the release,  
21 amount, location, and other appropriate factors, will be performed. A RWP will be written and  
22 approved prior to personnel entering the Hot Cell with the appropriate PPE to further assess the  
23 situation, perform surveys and take samples, and, if possible, mitigate problems that could  
24 compound the hazards in the area. Based on the results of the evaluation, a determination will  
25 be made by the RCRA Emergency Coordinator, with input from the cognizant managers,  
26 radiological control personnel, and ALARA Committee representatives whether to implement the  
27 Contingency Plan and to determine the appropriate course of action to recover from the event.  
28 An action response plan to decontaminate and recover affected areas and equipment, together  
29 with an RWP establishing the radiological controls required for the recovery will be developed  
30 and approved.

31 Should a breach of a RH TRU mixed waste container occur in the Hot Cell that results in  
32 removable contamination exceeding the small area "spot" decontamination levels, the affected  
33 container(s) (e.g., breached and contaminated) will be placed into a canister and processed for  
34 disposal. The decontamination of equipment, cleanup of spilled material and the overpacking of  
35 contaminated/damaged waste containers will be performed in the vicinity of the incident. For  
36 example, under normal operations RH TRU mixed waste in 55-gallon drums will be handled  
37 only in the Hot Cell. Therefore, it is within this area that decontamination and/or overpacking  
38 operations would occur. By eliminating the transport of contaminated equipment to other areas  
39 for decontamination or overpacking, the risk of spreading contamination is reduced.  
40 Contaminated materials for the cleanup and overpacking of a breached RH TRU mixed waste  
41 container may be managed as CH TRU mixed waste, depending on the surface dose rate.

42 Equipment used during a spill cleanup or RH TRU mixed waste overpacking operation could  
43 include: cloths, brushes, scoops, absorbents, squeegees, tape, bags, pails, slings, hand tools,  
44 and other equipment as needed for a given incident.

1 The decontamination methods may initially involve wiping down structures, equipment, and  
2 other containers in the area with absorbent cloths moistened with tepid water. Surveys of these  
3 structures will take place and the need to continue decontamination activities will be  
4 established. If further decontamination is required, nonhazardous decontaminating agents, such  
5 as Liquinox<sup>®</sup>, Simple Green<sup>®</sup>, Windex<sup>®</sup>, citric acid, Bartlett Strip Coat<sup>®</sup>, and high pressure CO<sub>2</sub>  
6 will be used to prevent generating CH TRU mixed waste.

7 RWPs and other administrative controls provide protective measures to help ensure that new  
8 hazardous constituents will not be added during decontamination activities.

9 Certain structures and/or equipment within the Hot Cell may be disassembled to facilitate  
10 decontamination or may be placed directly into a derived waste container. Items used in the spill  
11 cleanup and decontamination operations (e.g., swipes, tools, PPE, etc.) may also be placed into  
12 a derived waste container.

13 When decontamination of the Hot Cell is deemed by the recovery team to be complete, RC  
14 personnel will conduct one final, intensive radcon survey of the area and components in the  
15 area to release it for continued use. The free release criteria for items and equipment that will be  
16 released for uncontrolled use are < 20 dpm/100 cm<sup>2</sup> for alpha radioactivity and < 200 dpm/100  
17 cm<sup>2</sup> for beta-gamma radioactivity. Personnel will then perform hazardous material sampling  
18 after decontamination efforts are complete to confirm the removal of hazardous waste  
19 substances. After cleanup is complete, facility personnel will complete an inspection and include  
20 the details of the spill and cleanup in the log. The recovery phase must be completed before the  
21 affected area and/or equipment are returned to service.

#### 22 D-4d(7) Natural Emergencies

23 After a natural emergency (earthquake, flood, lightning strike, etc.) that involves hazardous  
24 waste or hazardous materials, the FSM will ensure the following actions are taken:

- 25 1. Inspect containers which have not been disposed and containment for signs of  
26 leakage or damage. Inspect areas where containers are stored looking for leaking  
27 containers and for deterioration of containers and the containment system.
- 28 2. Inspect affected equipment or areas associated with hazardous waste management  
29 activities for proper operating mode in accordance with site procedures and manually  
30 check to ensure automatic and alarmed features on the units are working.
- 31 3. Inspect affected equipment or areas within the HWMUs in accordance with site  
32 procedures for damage.
- 33 4. Inspect electrical boards and overhead electrical lines for damage.
- 34 5. Check container areas for signs of leakage or damage to drums and containers.
- 35 6. Check affected buildings and fencing directly related to hazardous waste management  
36 activities for damage.
- 37 7. Conduct a general survey of the site looking for signs of land movement, etc.

1 8. Take any necessary corrective measures, however temporary, to rectify potential or  
2 real problems.

3 9. Record inspection results.

4 D-4d(8) Roof Fall

5 Roof fall is not expected to affect RH TRU mixed waste because it is emplaced in the rib of the  
6 disposal room and not subject to impact from a roof fall. The following incident description and  
7 mitigation apply to CH TRU mixed waste.

8 The WIPP underground is routinely evaluated for stability and safety of the underground  
9 openings. These evaluations can be as simple as the MSHA required visual checks by  
10 personnel working in the area or as extensive as the expert review of the roof support system  
11 for Room 1 Panel 1 conducted in 1991. An in-depth evaluation of all of the accessible  
12 underground is performed on an annual basis as part of the formal ground control operating  
13 plans. Weekly visual and sounding inspections are performed by the Permittees. More frequent  
14 inspections and evaluations are performed in areas where roof or ribs are in need of  
15 evaluations, based on visual observations, analysis of rock deformation data, excavation effects  
16 program data acquired from observation holes, and support system performance.

17 This process applies not only to the waste disposal rooms but to the entire WIPP underground.  
18 Prior to waste emplacement, stability of each room will be evaluated. This evaluation will  
19 concentrate on the age and current performance of the installed support systems (if any) and  
20 the rate of roof beam expansion based on data from installed instrumentation. The roof support  
21 system's performance and surety, to provide the support necessary for the required time will be  
22 addressed. Criteria used will include design parameters such as the amount of load, the  
23 deformation of the installed system, and the number and type of component failures observed, if  
24 any. Geotechnical criteria will include parameters such as the type and quantity of fracturing,  
25 roof beam expansion rates, and future ground performance based on a predictive model.

26 Should the evaluation results indicate that remedial actions are necessary prior to placement of  
27 waste, experiences at the WIPP indicate that rebolting or installing supplemental support can  
28 extend the safe life of a room for several years.

29 After waste emplacement commences, geomechanical monitoring will continue with monitors  
30 that are tied into a computer network program. The readings obtained will provide information  
31 needed for the roof beam stability assessment. Visual observations of the ground and the  
32 support systems will also continue in all accessible areas. Based on the experiences from the  
33 Site and Preliminary Design Validation test rooms, it has been proven that any developing  
34 instability will be detected through monitoring. Multiple measures to deal with the observed  
35 conditions can be implemented months before an event to mitigate any risk associated with a  
36 roof fall in the storage room or any affected area within the mine. At a minimum, the affected  
37 area will be isolated and withdrawn from ventilation flow. Isolation operations will utilize current  
38 available methods, materials, and equipment.

39 Ground control conditions which could result in a fall can be divided into two scenarios: The first  
40 consists of spalling (falling) of individual small and localized rock falling on waste containers.

1 By definition, they can be considered insignificant as no damage to the drums can occur. The  
2 second consists of an entire section of roof falling on multiple stacks of waste containers. Each  
3 of these scenarios is discussed below.

4 Spalling-of-Ground Scenario

5 The maximum distance between the room roof and a container of waste is 10 ft. Waste  
6 containers are designed to withstand impact loads of at least 1,000 pounds (lbs) dropped  
7 from a height of 6 ft. flat or 450 lbs dropped on a circumferential edge from a height of 4 ft.  
8 Both of which correspond to an allowable impact stress of 25,450 pounds per square inch  
9 (psi). Rocks from spalling are small and would not be of sufficient weight when striking a  
10 drum from a 10 ft vertical height to cause an impact stress of more than 25,450 psi. Taking  
11 into account the falling distance, average weight, and the typical shape of the salt rock, the  
12 conclusion is that puncturing a drum by spalling is non-credible.

13 Fall-of-Ground Scenario

14 Fall-of-ground occurs when a large section of roof beam falls onto the waste containers.  
15 As previously discussed, the possibility of this occurring in an active room is remote, due  
16 to continuous monitoring and engineered roof support systems.

17 The following actions have been developed and will be taken by the RCRA Emergency  
18 Coordinator should a rock fall occur in an active waste emplacement area of the repository:

19 Spalling-of-Ground Actions

- 20 1. Determine whether the roof conditions allow for safe entry and if the waste container or  
21 containers in question are accessible.

22 The process used to determine if a roof condition of a room will allow for safe entry is  
23 the same as the ground control inspection process used for inspection of the ground  
24 conditions and roof bolt integrity. The inspection will begin at a safe and sound roof  
25 starting point and consist of visual inspections of roof bolts, roof, and rib areas for  
26 missing or damaged bolts; deformed roof bolt plates; or roof and rib cracks, fractures,  
27 or separations. If during the visual inspection suspicious roof bolts, roof, or ribs are  
28 found, then operators will proceed with sounding the area in question with a scaling  
29 bar for loose roof bolts, bad roof, or ribs (loose roof bolts will not ring when sounded).  
30 Bad roof or ribs will have a drummy, hollow, or un-solid sound when struck with the  
31 scaling bar. When this operation is performed, a safe avenue for retreat is always  
32 maintained. Also maintained is a position such that an unexpected event will not place  
33 personnel in a position where the scaling bar or material being scaled could fall on  
34 personnel. If the inspection reveals ground that cannot be safely scaled manually or  
35 with the available mining equipment, the affected area, up to and including the entire  
36 room, will be barricaded and removed from ventilation flow.

37 The criteria used to determine whether a waste container is accessible is based on the  
38 location of the container, the amount of waste in the room, and the expense of  
39 reaching the waste container safely versus the expense of abandonment of the room.  
40 For example, if the room is 95% filled and spalling-of-ground punctured a waste

- 1 container at or near the exit of the room, the decision to isolate the room and move  
2 waste emplacement activities to the next room would be prudent.
- 3 2. Restrict access in ventilation flow path downstream of the incident.
- 4 3. Restrict ventilation to the affected room to ensure that there is no spread of  
5 contamination that may have been released. Survey for contamination and establish  
6 the boundaries.
- 7 4. Inspect accessible and affected containers and containment for signs of leakage or  
8 damage.
- 9 5. Cover the spill area with material such as plastic or fabric sheets or PVA, in a way that  
10 would safely isolate the area.
- 11 6. Determine if the covered spill area safely allows for continued waste disposal  
12 operations or whether further cleanup is required. If further cleanup is required, provide  
13 with cleanup methods described below. Note: Cleaning may not be required since this  
14 is the permitted disposal area.
- 15 7. Inspect any affected equipment (vehicles, handling equipment, and communication  
16 and alarm equipment) for proper function.
- 17 8. Repackage spilled waste and repackage, plug, or patch breached waste containers  
18 into 55 or 85-gallon drums, SWBs, or TDOPs, depending on volume. Temporarily  
19 locate overpack waste containers in an adjacent room. Remove only those intact  
20 waste containers necessary to clear the area for decontamination.
- 21 9. At the underground emplacement room, salt contaminated by a spill of TRU mixed  
22 waste will be covered with materials such as salt, plastic or fabric sheets or PVA to  
23 isolate it from the workers or removed and packaged as site derived waste in  
24 accordance with site procedures for decontaminating surfaces.
- 25 10. Manage the radioactive debris as derived waste.
- 26 11. Characterize containers of waste based on the waste containers that were damaged.
- 27 12. Replace the removed and derived waste containers into the waste stack as  
28 appropriate and update the WWIS.
- 29 13. Document activities and record results.

30 Fall-of-Ground Actions

- 31 1. Restrict access in ventilation flow path downstream of the incident.
- 32 2. Restrict the room from ventilation flow by closing bulkhead regulators.
- 33 3. Survey for radiological contamination and establish the boundary for a Radiological  
34 Buffer Area.

- 1           4. Install barricade devices to remove access.
- 2           5. At the underground emplacement room, salt contaminated by a spill of TRU mixed  
3 waste will be covered with materials such as salt, plastic or fabric sheets, or PVA to  
4 isolate it from the worker or removed and packaged as site derived waste using damp  
5 rags, hand tools, and HEPA filtered vacuums.

6           The criteria used to determine whether to close the entire panel or just the affected  
7 room of waste containers would include the location of the roof fall and the stability of  
8 the unaffected roof area in the panel. Techniques to determine the stability would be  
9 the same as previously described in this section.

10 D-4d(9) Structural Integrity Emergencies

11 In the event of a WIPP facility emergency involving underground structural integrity, the situation  
12 will be handled as a natural emergency. Monitoring and inspection procedures ensure the safety  
13 and integrity of the WIPP facility underground.

14 D-4d(10) Emergency Termination Procedures

15 For the transition from emergency phase to cleanup phase, the following items will be complete:

- 16           • Emergency scene will be stable
- 17           • Release of hazardous substance will be stopped
- 18           • Reaction of hazardous substance will be controlled
- 19           • The released hazardous substance will be contained within a localized and  
20 manageable area
- 21           • The area of contamination will be adequately secure from unauthorized entry

22 At every incident involving hazardous materials, there is a possibility that response personnel  
23 and their equipment will become contaminated. Emergency response personnel have  
24 procedures to minimize contamination or contact, and to properly dispose of contaminated  
25 materials.

26 For nonemergencies and Incident Level I emergencies, the following methods of  
27 decontamination are available for personnel, environment, and/or equipment according to  
28 emergency response procedures:

- 29           • Absorption
- 30           • Adsorption
- 31           • Chemical degradation
- 32           • Dilution
- 33           • Disposal
- 34           • Isolation

- 1 • Neutralization
- 2 • Solidification

3 Any necessary verification of air, soil, or water samples will be directed by the RCRA  
4 Emergency Coordinator. Immediately after an emergency, the RCRA Emergency Coordinator  
5 will provide for treating, storing, or disposing of recovered waste, contaminated soil or surface  
6 water, or any other material that results from a release, fire, or explosion at the facility in  
7 accordance with standard operating procedures.

8 For Level II and III incidents after the emergency itself is controlled and contained, the RCRA  
9 Emergency Coordinator will be responsible for the development and implementation of an  
10 incident-specific decontamination plan.

11 PPE will be decontaminated or disposed according to procedure before it is returned to its  
12 storage location.

13 As part of the facility's defense-in-depth approach, equipment will be assumed to be  
14 contaminated after each hazardous material response and a thorough check for radioactive  
15 contamination will be conducted. If contamination is found, a technically sound decontamination  
16 process will be followed. Many types of equipment are difficult to decontaminate and may have  
17 to be discarded as hazardous or derived waste. Whenever possible, pieces of equipment will be  
18 disposable or made of nonporous material.

19 If radioactive contamination is detected on equipment or on structures, it will be assumed that  
20 hazardous constituents may also be present. Radiological surveys to determine whether a  
21 potential release of hazardous constituents has occurred (Permit Attachment I3) will be used  
22 along with other techniques as a detection method to determine when decontamination is  
23 required. Radiological cleanup standards will be used to determine the effectiveness of  
24 decontamination efforts. To provide verification of the effectiveness of the removal of hazardous  
25 waste constituents, once a contaminated surface is demonstrated to be radiologically clean, the  
26 "swipe" can be sent for analysis for hazardous constituents. The use of these confirmation  
27 analyses is as follows:

28 For waste containers, the analyses become documentation of the condition of the  
29 container at the time of emplacement. These containers will be placed in the underground  
30 without further action, once the radiological contamination is removed, unless there is  
31 visible evidence of hazardous waste spills or hazardous waste on the container and this  
32 contamination is considered likely to be released prior to emplacement in the  
33 underground. In no case shall these containers contain a total liquid content equal to, or  
34 which exceeds, one volume percent of the container.

35 For area contamination, once the area is cleaned up and is shown to be radiologically  
36 clean, it will be sampled for the presence of hazardous waste residues. If the area is large,  
37 a sampling plan will be developed. The sampling plan will be approved by the NMED  
38 before it is implemented. If the area is small, swipes will be used. If the results of the  
39 analysis show that residual contamination remains, a decision will be made whether  
40 further cleaning will be beneficial or whether final clean up will be deferred until closure.  
41 Appropriate notations will be entered into the operating record to assure proper  
42 consideration of formerly contaminated areas at the time of closure. Furthermore,

1 measures such as covering, barricading, and/or placarding will be used as needed to mark  
2 areas that remain contaminated.

3 For all Contingency Plan emergency responses, the RCRA Emergency Coordinator will ensure,  
4 in keeping with standard operating procedures, that, in the affected area(s) of the facility:

- 5 • No waste that may be incompatible with the released material is treated, stored, or  
6 disposed of until cleanup procedures are completed
- 7 • All emergency equipment listed in the Contingency Plan is cleaned and fit for its  
8 intended use, or replaced before operations are resumed

9 D-4e Prevention of Recurrence or Spread of Fires, Explosions, or Releases

10 During an emergency, the RCRA Emergency Coordinator will ensure that reasonable measures  
11 are taken so that fires, explosions, and releases do not occur, recur, or spread to TRU mixed  
12 waste or other hazardous materials at the facility, as required under 20.4.1.500 NMAC  
13 (incorporating 40 CFR §§264.56(e) and (f)). These measures include:

- 14 • Stopping processes and operations.
- 15 • Collecting and containing released wastes and materials.
- 16 • Removing or isolating containers of waste or hazardous substances posing a threat.
- 17 • Ensuring that wastes managed during an emergency are handled, stored, or treated  
18 with due consideration for compatibility with other wastes and materials on site and  
19 with containers utilized (Section D-4h).
- 20 • Restricting personnel not needed for response activities from the scene of the incident.
- 21 • Evacuating the area.
- 22 • Curtailing nonessential activities in the area.
- 23 • Conducting preliminary inspections of adjacent facilities and equipment to assess  
24 damage.
- 25 • Overpacking and/or removing damaged containers/drums from affected areas.  
26 Damaged equipment and facilities will be repaired as appropriate.
- 27 • Constructing, monitoring, and reinforcing temporary dikes as needed.
- 28 • Maintaining fire equipment on standby at the incident site in cases where ignitable  
29 liquids have been or may be released and ensuring that all ignition sources are kept  
30 out of the area. Ignitable liquids will be segregated, contained, confined, diluted, or  
31 otherwise controlled to preclude inadvertent explosion or detonation.

1 No operation that has been shut down in response to the incident will be restarted until  
2 authorized by the RCRA Emergency Coordinator. Sections D-4g, Incompatible Waste, and D-  
3 4h, Post-Emergency Facility and Equipment Maintenance and Reporting, address specific  
4 issues related to decreasing the possibility of a recurrence or spread of a release, a fire, or an  
5 explosion.

6 After resolution of the incident, a Root Cause Analysis will be conducted to review all Level II  
7 and Level III incidents for determination of cause, and the corrective action plan to prevent  
8 recurrence.

9 D-4f Management and Containment of Released Material and Waste

10 Once initial release or spill containment has been completed, the RCRA Emergency  
11 Coordinator will ensure that recovered hazardous materials and waste are properly stored  
12 and/or disposed, as required by 20.4.1.500 NMAC (incorporating 40 CFR §264.56(g)). For spills  
13 of liquid, the perimeter of the spill will be diked with an absorbent material that is compatible with  
14 the material(s) released. Free-standing liquid will be transferred to a marked compatible  
15 container. The remaining liquid will be absorbed with an absorbent material and swept or  
16 scooped into a marked compatible container. Spill residue will be removed. Spills of dry material  
17 will be swept or shoveled into a labeled compatible recovery container. Material recovered from  
18 the spill will be transferred to clean containers or tanks or to containers or tanks that have held a  
19 compatible material. All containers will meet DOT specifications for shipping the wastes, and  
20 materials will be recovered.

21 Nonradioactive hazardous waste resulting from the cleanup of a fire, an explosion, or a release  
22 involving a nonradioactive hazardous waste or hazardous substance at the WIPP facility will be  
23 contained and managed as a hazardous waste until such time as the waste is disposed of, or  
24 determined to be nonhazardous, as defined in 20.4.1.200 NMAC (incorporating 40 CFR §261)  
25 Subparts C and D. In most cases, hazardous materials inventories for the various buildings and  
26 areas at the facility will allow a determination of the hazardous materials present in any cleanup  
27 of a release or of the residues from an emergency condition (The quantities of such spills are so  
28 small, it is not likely to trigger an Incident Level II or III). When necessary samples of the waste  
29 will be collected and analyzed to determine the presence of any hazardous characteristics  
30 and/or hazardous waste constituents; this information is needed to evaluate disposal options.  
31 EPA-approved sampling and analytical methods will be utilized. Hazardous wastes will be  
32 transferred to the Hazardous Waste Staging Area. The staging area is used to store hazardous  
33 waste awaiting transfer to an off-site treatment or disposal facility in accordance with applicable  
34 regulations (e.g., 20.4.1 NMAC and DOT regulations). The Hazardous Waste Staging Area for  
35 nonradioactive hazardous waste is Buildings 474A and 474B, as shown in Figure D-1.  
36 Nonradioactive hazardous wastes will be shipped off-site for disposal at a RCRA permitted  
37 disposal facility.

38 Under normal operations, administrative controls will be implemented to ensure that hazardous  
39 materials and incompatible materials will not be introduced to the radioactive materials area  
40 during TRU mixed waste handling operations. Examples of administrative controls include  
41 restricting the waste received in the TRU mixed waste management area(s) to TRU mixed  
42 waste properly manifested from the generator sites and ensuring that materials used in these  
43 area(s) are restricted to only those that have previously been determined to be compatible with  
44 the TRU mixed waste. The RCRA Emergency Coordinator will have access to building design  
45 information and information on specific equipment used within an area upon which to base a

1 determination of the compatibility of materials with the area. If necessary, the RCRA Emergency  
2 Coordinator will use EPA-600/2-80-076, "A Method for Determining the Compatibility of  
3 Hazardous Waste," (EPA, 1980) for making compatibility determinations. Waste resulting from  
4 the cleanup of a fire, explosion, or release in the miscellaneous unit, the CH TRU mixed waste  
5 handling areas, or the RH Complex will be considered derived from the received TRU mixed  
6 waste and may be treated and managed as CH TRU mixed waste depending on the surface  
7 dose rate.

8 In the event of a prolonged cessation of TRU mixed waste handling operations, TRU mixed  
9 waste can be placed in areas of the WHB Unit that are available for such contingencies. These  
10 areas and the TRU mixed waste containers in them would be located so that adequate aisle  
11 space would be maintained for unobstructed movement of personnel and equipment in an  
12 emergency. Permit Attachments A1 and A2 describe the HWMUs in detail, including the facility  
13 description, support structures and equipment, security, waste handling areas, ventilation, and  
14 fire protection.

15 The contaminated area will be decontaminated. If a release is to a permeable surface, such as  
16 soil, asphalt, concrete, or other surface, the surface material will be removed and placed in  
17 containers meeting applicable DOT requirements. Contaminated soil, asphalt, concrete, or other  
18 surface material, as well as materials used in the cleanup (e.g., rags and absorbent material)  
19 will be contained and disposed of in the same manner as dictated for the contaminant. Clean  
20 soil, new asphalt, or new concrete will be emplaced at the spill location.

21 If a spill occurs on an impermeable surface, the surface will be decontaminated with water  
22 and/or a detergent. In the event that the spilled material is water reactive, a compatible  
23 nonhazardous cleaning solution will be used. Contaminated wash water or cleaning solution will  
24 be transferred to an appropriate container, marked, and managed as described above for  
25 nonradioactive or radioactive liquid wastes.

26 In the event of a hazardous material or hazardous waste release, the RCRA Emergency  
27 Coordinator will ensure that no wastes will be received or disposed of in the affected areas until  
28 cleanup operations have been completed. This is to ensure that incompatible waste will not be  
29 present in the vicinity of the release.

30 Because of the restrictions which the WIPP facility places on generators, and because of control  
31 of WIPP operations, TRU mixed wastes and derived wastes will not contain any incompatible  
32 wastes. However, the areas established for the temporary holding of nonradioactive waste  
33 routinely generated at the WIPP facility is divided into bays to accommodate the management of  
34 wastes that may be incompatible. If waste is generated as the result of a spill or release of  
35 hazardous materials or nonradioactive hazardous waste, the waste generated as a result of  
36 abatement and cleanup will be evaluated to determine its compatibility with other wastes being  
37 managed in the temporary holding areas. The evaluation will be by identifying the material or  
38 waste that was spilled or released and determining its characteristics (e.g., ignitable, reactive,  
39 corrosive, or toxic). The waste generated by the abatement and cleanup activities will be stored  
40 in that part of the temporary holding area that has been established to manage wastes with  
41 which it is compatible.

42 For small nonemergency liquid spills (e.g., a detergent solution leaking out of the pump handle  
43 during decontamination, a spill of hydraulic fluid while servicing a vehicle), spill control  
44 procedures will be used to contain and absorb free-standing liquid. The contaminated absorbent

1 will be swept or shoveled into a compatible container and managed as described above. No  
2 notifications will be required, but site procedures require documentation of the incident.

3 D-4g Incompatible Waste

4 Implementation of the TSDF-WAC for the WIPP ensures that incompatible TRU mixed waste  
5 will not be shipped to the WIPP facility. Nonradioactive waste at the WIPP facility will be  
6 carefully segregated during handling and holding and will be transported within and off the  
7 facility. The RCRA Emergency Coordinator will not allow hazardous or TRU mixed waste  
8 operations to resume in a building or area in which incompatible materials have been released  
9 prior to completion of necessary post-emergency cleanup operations to remove potentially  
10 incompatible materials. In making the determination of compatibility, the RCRA Emergency  
11 Coordinator will have available the resources and information described in Section D-4b,  
12 Identification of Hazardous Materials. In addition, ES&H department personnel will be available  
13 for consultation. Finally, the RCRA Emergency Coordinator may use EPA-600/2-80-076, (EPA,  
14 1980).

15 D-4h Post-Emergency Facility and Equipment Maintenance and Reporting

16 The RCRA Emergency Coordinator will ensure that emergency equipment that is located or  
17 used in the affected area(s) of the facility and listed in the Contingency Plan is cleaned and  
18 ready for its intended use before operations are resumed, as specified in 20.4.1.500 NMAC  
19 (incorporating 40 CFR §264.56(h)(2)). Any equipment that cannot be decontaminated will be  
20 discarded as waste (e.g., hazardous, mixed, solid), as appropriate. The WIPP facility is  
21 committed to replacing any needed equipment or supplies that cannot be reused following an  
22 emergency. After the equipment has been cleaned, repaired, or replaced, a post-emergency  
23 facility and equipment inspection will be performed, and the results will be documented.

24 Cleaning and decontaminating equipment will be accomplished by physically removing gross or  
25 solid residue; rinsing with water or another suitable liquid, if required; and/or washing with  
26 detergent and water. Decontamination and cleaning will be conducted in a confined area, such  
27 as a wash pad or building equipped with a floor drain and sump isolated from the environment.  
28 Care will be taken to prevent wind dispersion of particles and spray. Liquid or particulate  
29 resulting from cleaning and decontamination of equipment will be placed in clean, compatible  
30 containers. Waste produced in an emergency cleanup in the TRU mixed waste handling areas  
31 is derived waste and will be emplaced in the underground derived waste emplacement area.  
32 Waste resulting from decontamination operations elsewhere in the WIPP facility will be analyzed  
33 for hazardous waste constituents and/or hazardous waste characteristics to ensure proper  
34 management.

35 When the WIPP facility has completed post-emergency cleanup of waste and hazardous  
36 residues from areas where waste management operations are ready to resume and the RCRA  
37 Emergency Coordinator has ensured that emergency equipment used in managing the  
38 emergency has been cleaned or replaced and is fit for service, the notifications will be made by  
39 the Permittees to the following: the EPA Region VI Administrator; the Secretary of the NMED;  
40 and any relevant local authorities. This post-emergency notification complies with 20.4.1.500  
41 NMAC (incorporating 40 CFR §264.56(i)), and is the responsibility of the RCRA Emergency  
42 Coordinator.

1 D-4i Container Spills and Leakage

2 The waste received at the WIPP facility will meet stringent TSDF-WAC (e.g., no more than one  
3 percent liquid), which will minimize the possibility of waste container degradation and liquid  
4 spills. Should a spill or release occur from a container, following an initial assessment of the  
5 event, the WIPP facility will immediately take the following actions, in compliance with  
6 20.4.1.500 NMAC (incorporating 40 CFR §264.52(a) and §264.171):

- 7 • Assemble the required response equipment, such as protective clothing and gear,  
8 heavy equipment, empty drums, overpack drums, and hand tools
- 9 • Transfer the released material to a container that is in good condition or overpack the  
10 leaking container into another container that is in good condition
- 11 • Once the release has been contained, determine the areal extent of migration of the  
12 release and proceed with appropriate cleanup action, such as chemical neutralization,  
13 vacuuming, or excavation

14 D-4j Tank Spills and Leakage

15 The TRU mixed waste handling areas at the WIPP facility do not include tank storage or  
16 treatment of hazardous waste, as defined in 20.4.1.101 NMAC (incorporating 40 CFR §260.10),  
17 and as regulated under 20.4.1.500 NMAC (incorporating 40 CFR §264) Subpart J. At the WIPP  
18 facility, tanks are used to store water and petroleum fuels only. The petroleum tanks store diesel  
19 and unleaded gasoline.

20 D-4k Surface Impoundment Spills and Leakage

21 The WIPP facility does not manage hazardous or TRU mixed waste using a surface  
22 impoundment, as defined in 20.4.1.101 NMAC (incorporating 40 CFR §260.10), and as  
23 regulated under 20.4.1.500 NMAC (incorporating 40 CFR, §264) Subpart K. Surface  
24 impoundment regulations are not applicable to the WIPP facility.

25 D-5 Emergency Equipment

26 A variety of equipment is available at the facility for emergency response, containment, and  
27 cleanup operations in both the HWMUs and the facility in general. This includes equipment for  
28 spill control, fire control, personnel protection, monitoring, first aid and medical attention,  
29 communications, and alarms. This equipment is immediately available to emergency response  
30 personnel. A listing of major emergency equipment available at the WIPP facility, as required by  
31 20.4.1.500 NMAC (incorporating 40 CFR §264.52(e)), is shown in Table D-6. Table D-7  
32 identifies the locations where fire suppression systems are provided. Locations of the  
33 underground emergency equipment are shown in Figure D-5. The firewater-distribution system  
34 map is shown in Figure D-6. The underground fuel area fire-protection system is shown in  
35 Figure D-7.

36 D-6 Coordination Agreements

37 The Permittees have established MOUs with off-site emergency response agencies for  
38 firefighting, medical assistance, hazardous materials response, and law enforcement. In the

1 event that on-site response resources are unable to provide all the needed response actions  
2 during either a medical, fire, hazardous materials, or security emergency, the RCRA Emergency  
3 Coordinator will notify appropriate off-site response agencies and request assistance. Once on  
4 site, off-site emergency response agency personnel will be under the direction of the RCRA  
5 Emergency Coordinator.

6 The MOUs with off-site cooperating agencies are available from the Permittees. A listing and  
7 description of the MOUs with state and local agencies and mining operations in the vicinity of  
8 the WIPP facility, as required by 20.4.1.500 NMAC (incorporating 40 CFR §264.37 and  
9 §264.52(c)), are:

- 10 • An agreement among the Permittees, Intrepid Potash NM LLC, and Mosaic Potash  
11 Carlsbad Inc., provides for the mutual aid and assistance, in the form of MRTs, in the  
12 event of a mine disaster or other circumstance at either of the two facilities. This  
13 provision ensures that the WIPP MOC will have two MRTs available at all times when  
14 miners are underground.
- 15 • A memorandum of agreement between the City of Carlsbad, New Mexico, and the  
16 WIPP MOC for ambulance service assistance provides that, upon notification by the  
17 WIPP MOC, the Carlsbad Fire Department/Ambulance Service will be dispatched from  
18 Carlsbad toward the WIPP site by a designated route and will accept the transfer of  
19 patient(s) being transported by the WIPP facility ambulance at the point both  
20 ambulances meet. If the patient(s) is not transferrable, the Carlsbad Fire  
21 Department/Ambulance Service will provide equipment and personnel to the WIPP  
22 facility ambulance, as necessary.
- 23 • A MOU between the DOE and the Carlsbad Medical Center provides for the treatment  
24 of radiologically contaminated personnel who have incurred injuries beyond the  
25 treatment capabilities at the WIPP facility. The DOE will provide transport of the  
26 patient(s) to the Carlsbad Medical Center for decontamination and medical treatment.
- 27 • A MOU between the DOE and the Lea Regional Medical Center provides for the  
28 treatment of radiologically contaminated personnel who have incurred injuries beyond  
29 the treatment capabilities at the WIPP facility. The DOE will provide transport of the  
30 patient(s) to the Lea Regional Medical Center for decontamination and medical  
31 treatment.
- 32 • A MOU between the DOE and the U.S. Department of Interior (DOI), represented by  
33 the Bureau of Land Management (BLM), Roswell District, provides for a fire-  
34 management program that will ensure a timely, well-coordinated, and cost-effective  
35 response to suppress wild fire within the withdrawal area using the WIPP incident  
36 commander for fire-management activities. The DOI will provide firefighting support if  
37 requested. In addition, the MOU provides for responsibilities concerning cultural  
38 resources, grazing, wildlife, mining, gas and oil production, realty/lands/rights-of-way,  
39 and reclamation.
- 40 • A mutual-aid firefighting agreement between the Eddy County Commission and the  
41 DOE provides for the assistance of the Otis and Joel Fire Departments (a volunteer  
42 fire district created under the Eddy County Commission and the New Mexico State Fire

1 Marshall's Office), including equipment and personnel, at any location within the WIPP  
2 Fire Protection Area upon request by an authorized representative of the WIPP  
3 Project. These responsibilities are reciprocal.

- 4 • A mutual-aid agreement between the City of Hobbs and the DOE provides for mutual  
5 ambulance, medical, fire, rescue, and hazardous material response services; provides  
6 for joint annual exercises; provides for use of WIPP facility radio frequencies by the  
7 City of Hobbs during emergencies; and provides for mutual security and law  
8 enforcement services, within the appropriate jurisdiction limits of each party.
  
- 9 • A mutual-aid agreement between the City of Carlsbad and the DOE provides for  
10 mutual ambulance, medical, fire, rescue, and hazardous material response services;  
11 provides for joint annual exercises; provides for use of WIPP facility radio frequencies  
12 by the City of Carlsbad during emergencies; and provides for mutual security and law  
13 enforcement services, within the appropriate jurisdiction limits of each party.
  
- 14 • A MOU between the DOE and the New Mexico Department of Public Safety (**DPS**)  
15 concerning Mutual Assistance and Emergency Management applies to any actual or  
16 potential emergency or incident that: 1) involves a significant threat to employees of  
17 the Permittees or general public; 2) involves property under the control or jurisdiction  
18 of either the DOE or the State; 3) involves a threat to the environment which is  
19 reportable to an off-site agency; 4) requires the combined resources of the DOE and  
20 the state; 5) requires a resource that the DOE has which the State does not have, or a  
21 resource the State has which DOE does not have; or 6) involves any other incident for  
22 which a joint determination has been made by the DOE and the State that the  
23 provisions of this MOU will apply. The MOU provides that the DPS shall permit  
24 qualified and security cleared DOE Emergency Management members into the State  
25 EOC for the purpose of: a) coordinating communications functions; b) evaluating and  
26 maintaining communications capabilities; c) participating in exercises; d) link the  
27 State's High Frequency radio communications network with the DOE; and e) assisting  
28 the State during radioactive materials accidents that require joint operations or the use  
29 of the DOE Radiological Assistance Program team. The DOE shall permit qualified  
30 and security cleared members the State Emergency Management community into the  
31 DOE's EOCs for the purposes of coordinating communications and activities.  
32 Additional duties for each participant are specified for assistance in incidents or  
33 emergencies.

#### 34 D-7 Evacuation Plan

35 If it becomes necessary to evacuate the WIPP facility, the assigned on-site and off-site staging  
36 areas have been established. The off-site staging areas are outside the security fence. The  
37 WIPP facility has implementation procedures for both surface and underground evacuations.  
38 Drills are performed on these procedures at the WIPP facility at least once annually. The  
39 following sections describe the evacuation plan for the WIPP facility, as required under  
40 20.4.1.500 NMAC (incorporating 40 CFR §264.52(f)).

#### 41 D-7a Surface Evacuation On-site and Off-site Staging Areas

42 Figure D-8 shows the surface staging areas. Personnel report to their Office Wardens at  
43 designated staging areas where accountability is conducted. If site evacuation is necessary, the

1 RCRA Emergency Coordinator will decide which staging areas are to be used and will advise  
2 Office Wardens of the selections. The RCRA Emergency Coordinator will communicate the  
3 locations to Office Wardens via office warden pager, radio, plectron, WIPP Security, or  
4 telephone, as appropriate. Office Wardens will direct personnel to the selected staging area  
5 outside the security fence. Personnel who are working in a contaminated area when site  
6 evacuation is announced, will assemble at specific staging areas to minimize contact with other  
7 personnel during the evacuation (Figure D-8).

8 Office Wardens conduct accountability of personnel assigned to their specific areas. For  
9 complete surface accountability, the Office Wardens report to their ACOW, who reports to the  
10 COW. When the COW has reports from all ACOWs, surface accountability is reported to the  
11 CMRO, who then notifies the RCRA Emergency Coordinator of the accountability.

12 The COW and all ACOWs have radios for communication between them and the CMRO. The  
13 Office Wardens, Assistant Office Wardens, ACOWs, and COW also have pagers with which  
14 they are notified of evacuations. At the staging areas Office Wardens report directly to their  
15 ACOW.

16 There are three off-site staging areas identified on Figure D-8. The RCRA Emergency  
17 Coordinator determines which staging area will be used. Security officers remain at the primary  
18 staging area gate 24 hours a day, and the vehicle trap is opened for personnel during  
19 emergency evacuations. The north gate has a single person gate and large gate which can be  
20 opened, similar to the main gates for the primary staging area. The east gate is a turnstile gate.  
21 Upon notification by the RCRA Emergency Coordinator, Security will respond, open gates, and  
22 facilitate egress for evacuation.

23 The on-site staging areas are identified in Figure D-8. These are used for building or area  
24 evacuations as determined by the RCRA Emergency Coordinator.

#### 25 D-7b Underground Assembly Areas and Egress Hoist Stations

26 In the event of an underground or surface event, the RCRA Emergency Coordinator can call for  
27 underground personnel to report to assembly areas (Figure D-9). Underground personnel are  
28 also trained to immediately report to assembly areas under specific circumstances (i.e. loss of  
29 underground power or ventilation). If accountability is required, the underground will be  
30 evacuated. The Underground Controller is responsible for underground accountability by  
31 comparing the brass numbers with the brass tags signed out in the lamproom. Each assembly  
32 area contains a Mine Page Phone, miner's aid station, and evacuation maps.

33 In accordance with 30 CFR §57.11, the mine maintains two escapeways. These escapeways  
34 are designated as Egress Hoist Stations. When an underground evacuation is called for, all  
35 underground personnel report to the Egress Hoist Stations.

36 Decontamination of underground personnel will be conducted the same way as described for  
37 surface decontamination. Contaminated personnel are trained to remain segregated from other  
38 personnel until RC personnel can respond to the incident at the underground location.

1 D-7c Plan for Surface Evacuation

2 Surface evacuation notification is initiated by the RCRA Emergency Coordinator directing the  
3 CMRO to sound the surface evacuation alarm. The Office Wardens assist personnel in  
4 evacuation from their areas. Evacuation routes and instructions are posted throughout the site.

5 If the EST/FPT notifies the ERT members by pager to respond to an identified area, these  
6 members will not depart the site during an evacuation, but will report to the EST/FPT for  
7 instructions and accountability. The EST/FPT notifies the COW of response members present.  
8 These personnel will not evacuate until released by the RCRA Emergency Coordinator.

9 D-7d Plan for Underground Evacuation

10 Notification for underground evacuation will be made using the underground evacuation alarm  
11 and strobe light signals.

12 Personnel will evacuate to the nearest egress hoist station. Primary underground evacuation  
13 routes (identified by green reflectors on the rib) will be used, if possible. Secondary underground  
14 evacuation routes (identified by red reflectors on the rib) will be used if necessary (Figure D-5).  
15 Brass tags will be collected from personnel at the hoist collar on the surface, and taken to the  
16 Underground Controller, who functions as an Office Warden. When all brass tags are accounted  
17 for, underground accountability is reported to the RCRA Emergency Coordinator.

18 Upon reaching the surface, personnel will report to their on-site staging area to receive further  
19 instructions.

20 Members of the FLIRT and the MRT who may be underground, will evacuate the underground  
21 when an underground evacuation is called for. A reentry by the MRT will be performed  
22 according to 30 CFR 49 and MSHA regulations for reentry into a mine. The two MRTs are  
23 trained in compliance with 30 CFR 49 in mine mapping, mine gases, ventilation, exploration,  
24 mine fires, rescue, and recovery.

25 D-7e Further Site Evacuation

26 In the event of an evacuation involving the need to transport employees, the following  
27 transportation will be available:

- 28 • Buses/vans—WIPP facility buses/vans will be available for evacuation of personnel.  
29 The buses/vans are stationed in the employee parking lot.
- 30 • Privately Owned Vehicles—Because many employees drive to work in their own  
31 vehicles, these vehicles may be utilized in an emergency. Personnel may be directed  
32 as to routes to be taken when leaving the facility.

33 These vehicles may be used to transport personnel who have been released from the site by  
34 the RCRA Emergency Coordinator.

1 D-8 Required Reports

2 The RCRA Emergency Coordinator, on behalf of the Permittees, will note in the operating  
3 record the time, date, and details of any incident that requires implementing this Contingency  
4 Plan. This notation will be in the facility log maintained by the CMRO. In compliance with  
5 20.4.1.500 NMAC (incorporating 40 CFR §264.56(j)), within 15 days after the incident, the  
6 Permittees will ensure that a written report on the incident will be submitted to the EPA Region  
7 VI Administrator and to the Secretary of the NMED. The report will include:

- 8 • The name, address, and telephone number of the Owner/Operator
- 9 • The name, address, and telephone number of the facility
- 10 • The date, time, and type of incident (e.g., fire, explosion or release)
- 11 • The name and quantity of material(s) involved
- 12 • The extent of injuries, if any
- 13 • An assessment of actual or potential hazards to human health or the environment,  
14 where this is applicable
- 15 • The estimated quantity and disposition of recovered material that resulted from the  
16 incident

17 In addition to the above report, the Permittees will ensure that the ES&H Manager, or designee,  
18 submits reports to the appropriate agencies as listed in Tables D-8 and D-9.

19 In accordance with 20.4.1.500 NMAC (incorporating 40 CFR §264.56(i)), the Permittees will  
20 notify the Secretary of the NMED and EPA Region VI Administrator that the WIPP facility is in  
21 compliance with requirements for the cleanup of areas affected by the emergency and that  
22 emergency equipment used in the emergency response has been cleaned, repaired, or  
23 replaced and is fit for its intended use prior to the resumption of waste management operations  
24 in affected areas. The means the WIPP facility will use to meet these requirements are  
25 described in Sections D-4e, D-4f, D-4g, and D-4h.

26 The WIPP requires the EST/FPT to initiate the "WIPP Hazardous Materials Incident Report" if  
27 the Contingency Plan is implemented. A form is attached as Figure D-12. The form is initiated  
28 by the EST/FPT. The RCRA Emergency Coordinator, CMRO, and Environmental Compliance  
29 representatives complete their respective sections.

30 D-9 Location of the Contingency Plan and Plan Revision

31 The owner/operator of the WIPP facility will ensure that copies of this Contingency Plan are  
32 available through the WIPP electronic controlled-document distribution system or in appropriate  
33 controlled-document locations throughout the facility, and the alternate Emergency Operations  
34 Center and the Joint Information Center at the Skeen Whitlock Building, and are, consequently,  
35 available to all emergency personnel and organizations described in Section D-2. In addition,  
36 the owner/operator will make copies available to the following outside agencies:

- 1 • Intrepid Potash NM LLC and Mosaic Potash Carlsbad Inc.
- 2 • Carlsbad Fire Department, Carlsbad
- 3 • Carlsbad Medical Center, Carlsbad
- 4 • Lea Regional Medical Center, Hobbs
- 5 • Otis Fire Department, Otis
- 6 • Hobbs Fire Department, Hobbs
- 7 • Joel Fire Department, Carlsbad
- 8 • BLM, Carlsbad
- 9 • New Mexico State Police

10 The owner/operator of the WIPP facility will ensure that this plan is reviewed annually and  
11 amended whenever:

- 12 • Applicable regulations are revised
- 13 • The RCRA Part B permit for the WIPP facility is revised in any way that would affect  
14 the Contingency Plan
- 15 • This plan fails in an emergency
- 16 • The WIPP facility design, construction, operation, maintenance, or other  
17 circumstances change in a way that materially increases the potential for fires,  
18 explosions, or releases of hazardous waste or hazardous constituents or change the  
19 response necessary in an emergency
- 20 • The list of RCRA Emergency Coordinators change
- 21 • The list of WIPP facility emergency equipment changes.

22

1 References

2 U.S. Environmental Protection Agency, "A Method for Determining the Compatibility of  
3 Hazardous Waste," EPA-600/2-80-076, 1980.

4 U.S. Department of Transportation, Emergency Response Guidebook, U.S. Government  
5 Printing Office, 1993.

6 Westinghouse Electric Corporation, 1994, "Quality Assurance Project Plan for WIPP Site  
7 Effluent and Hazardous Materials Sampling," WP 02-EM1, Westinghouse Electric Corporation,  
8 Carlsbad, New Mexico.

9 U. S. Department of Energy, "WIPP Safety Analysis Report," DOE/WIPP-95-2065, Rev. 2

10 U. S. Department of Energy, "WP 12-5, WIPP Radiation Safety Manual".

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**TABLES**

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**Table D-1  
 Hazardous Substances in Large Enough Quantities to Constitute a Level II Incident**

<b>Chemical Description</b>	<b>Building Location</b>	<b>Hazard Category</b>
Ethylene Glycol Solution - 35%	Buildings 411; 412; 451; 452; 486; 463; 474C; FAC 414	Immediate (acute) Delayed (chronic)
Gasoline, Unleaded GASC0001	FAC 480	Fire Immediate (acute) Delayed (chronic)
No. 1 Diesel Fuel Oil GASC0210	Oil Depot U/G; FACs 480, 255.1 & 255.2; Transport Tank; Building 456 Trailer 911F	Fire Immediate (acute) Delayed (chronic)
Multiple containers of TRU Waste as described in Permit Section 3.3.1	WHB Waste Shaft U/G	Delayed (chronic)
Hazardous materials in quantities that exceed 5 times the Reportable Quantity (Per DOE O 151.1) values as defined in 40 CFR 302	It should be noted that WIPP is not expected to possess such quantities.	Fire Immediate (acute) Delayed (chronic)

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**Table D-2**  
**Resource Conservation and Recovery Act Emergency Coordinators**

<b>Name</b>	<b>Address*</b>	<b>Office Phone</b>	<b>Personal Phone*</b>
R. A. (Richard) Marshall (primary) <sup>1</sup>		234-8276 or 234-8695	
R. C. (Russ) Stroble (primary) <sup>1</sup>		234-8276 or 234-8554	
M. L. (Tex) Winans (primary) <sup>1</sup>		234-8276 or 234-8273	
J. E. (Joseph) Bealler <sup>2</sup>		234-8276 or 234-8916	
M. G. (Mike) Proctor <sup>2</sup>		234-8143	
G. L. (Gary) Kessler <sup>2</sup>		234-8326	
A. E. (Alvy) Williams <sup>1</sup> (primary)		234-8276 or 234-8216	
P. J. (Paul) Paneral <sup>2</sup>		234-8498	
J. R. (Joel) Howard <sup>2</sup>		234-8325	
M. L. (Mark) Long <sup>2</sup>		234-8170	

\* NOTE: Personal information (home addresses and personal phone numbers) has been removed from information copies of this Permit.

<sup>1</sup> The on-duty Facility Shift Manager is the primary RCRA Emergency Coordinator pursuant to 20.4.1.500 NMAC (incorporating 40 CFR §264.52), and is designated to serve as the RCRA Emergency Coordinator.

<sup>2</sup> The on-duty Facility Operations Engineer is the alternate RCRA Emergency Coordinator and is available as needed.

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**Table D-3  
 Planning Guide for Determining Incident Levels and Response**

Incident Condition	Incident Level		
	I	II *	III *
Product identifications	Placard not required, NFPA 0 or 1 all categories, all Other Regulated Materials A, B, C, and D.	DOT placarded, NFPA 2 for any categories, PCBs without fire, EPA regulated waste.  SITE SPECIFIC: Table D-1 and TRU mixed waste  AND	Poison A (gas), explosive A/B, organic peroxide, flammable, solid, materials dangerous when wet, chlorine, fluorine, anhydrous ammonia, radioactive materials, NFPA 3 and 4 for any categories including special hazards, PCBs and fire including special hazards, PCBs and fire DOT inhalation hazard, EPA extremely hazardous substances, and cryogenics.
Container size	Container size does not impact this incident level.	Involves multiple packages.	Tank truck.
Fire/explosion potential	Under control.	May spread/may be explosive.	May spread/may be explosive.
Leak severity	No release or small release contained or confined with readily available resources.	Release may not be controllable without special resources.	Release may not be controllable even with special resources.
Life safety	No life-threatening situation from materials involved.	Localized area, limited evacuation area.	Localized area, limited evacuation area.
Environmental impact (Potential)	None.	Limited to incident boundaries	Contained within the Hazardous waste Management Units.
Container integrity	Not damaged.	Damaged but able to contain the contents to allow handling or transfer of product.	Damaged to such an extent that catastrophic rupture is possible.

\* Contingency Plan is implemented

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**Table D-4  
Physical Methods of Mitigation**

Method	Chemical		Radiological	
	Liquid	Solid	Liquid	Solid
Absorption	Yes	No	Yes	No
Covering	Yes	Yes	Yes	Yes
Dikes, diversions	Yes	Yes	Yes	Yes
Overpack	Yes	Yes	Yes	Yes
Plug/patch	Yes	Yes	Yes	Yes
Transfer	Yes	Yes	Yes	Yes
Vapor suppression	Yes	Yes	No	No

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**Table D-5  
Chemical Methods of Mitigation**

Method	Chemical		Radiological	
	Liquid	Solid	Liquid	Solid
Neutralization	Yes	Yes <sup>(1)</sup>	No	No
Solidification	Yes	No	Yes <sup>(2)</sup>	No

(1) When solid neutralizing agents are used, they will be used simultaneously with water.

(2) This method could be utilized for mitigation of firewater involving TRU-waste.

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**Table D-6  
 Emergency Equipment Maintained at the Waste Isolation Pilot Plant**

Equipment	Description and Capabilities	Location
Communications		
Building Fire Alarms	Manual pull stations and automatic devices (sprinkler system flow, and smoke and thermal detectors) trigger fire alarm; locally visible and audible; visual display and alarm in Central Monitoring Room (CMR)	Guard and Security Building, Pumphouse, Warehouse/Shops, Exhaust Filter Building, Support Building, CMR/ Computer Room, Waste Handling Building, TRUPACT Maintenance Facility, SH Hoisthouse, Maintenance Shops, Guard Shack*, Auxiliary Warehouse, Core Storage Building, Engineering Building, Training Facility, Safety Building, Maintenance Shop, Hazardous Waste Storage (non-TRU) Area (Facility 474)  *local alarms; not connected to the CMR
Underground Fire Alarms	Automatic/Manual; have priority over other paging channel signals but not override intercom channels; alarms sound in the general area of the control panel and are connected to the underground evacuation alarms; they also interface with the CMR.	Fire detection and control panel locations: Waste Shaft Underground Station, SH Shaft Underground Station, Between E-140 and E-300 in S-2180 Drift, E-O/N-1200, Fuel Station
Site-wide Evacuation Alarm	Transmitted over paging channel of the public address system, overriding its normal use; manually initiated according to procedures requiring evacuation; audible alarm produced by tone generator at 10 decibels above ambient noise level (or at least 75 decibels); flashing strobe lights; radios and/or pagers are used to notify facility personnel outside alarm range. Monthly test are performed on the PA, site notification alarms, and plectrons.	Site-wide
Vehicle Siren	Manual; oscillating; emergency services/surface response vehicles, is mechanical and electronic.	WIPP surface emergency vehicles
Public Address System	Includes intercom phones; handset stations and loudspeaker assemblies, each with own amplifiers; multichannel, one for public address and pages, and others for independent party lines.	Surface and underground
Intraplant Phones	Private automatic branch exchange; direct dial; provide communication link between surface and underground operations	Throughout surface and underground

Equipment	Description and Capabilities	Location
Mine Page Phones	Battery-operated paging system	CMR, Mine Rescue Room, EOC, lamproom, underground at S550/W30, S100/W30, S1950/E140, SH Shaft Collar and Underground Station, Waste Shaft Collar and Underground Station, FSM desk.
Emergency Pagers	Manual; , intermittent alarm signals	Issued to appropriate emergency personnel
Plectrons	Tone-alert radio receivers placed in areas not accessible by the public address system	Site-wide
Portable Radios	Two-way, portable; transmits and monitors information to/from other transmitters	Issued to individuals
Plant Base Radios	Two-way, stationary, VHF-FM; linked to Eddy County Sheriff Department, NM State Police, and Otis Fire Department), and WIPP Channels 1-18 (Communication with the Lea County Sheriff's Department, the Hobbs Fire Department, Carlsbad Medical Center and Lea Regional Hospital is available via the Eddy County dispatcher) (Site Security, Site Operations and Site Emergency, maintenance, repeater to Carlsbad). Wireless communications such as cellular phones may be used to contact the Eddy County emergency responders.	Various site locations
Mobile Phones	Provide communications link between WIPP Security and key personnel	Issued to individuals plus emergency vehicles,
<b>Spill Response</b>		
SPILL-X-S Guns and Recharge Powder	Containment; (1)SPILL-X model SC-30-C(Gun) (1)SPILL-X model XC-30-S(Gun) (1)SPILL-X model SC-30-A(Gun); (1) A-Acid, 5 gallon bucket (Recharge Powder) (1)S-Solvent, 5 gallon bucket (Recharge Powder) (1)C-Caustic, 5 gallon bucket (Recharge Powder)	HAZMAT trailer
Absorbent Sheets	Containment or cleanup; (1) 3' x 100' Sheet	HAZMAT trailer
Absorbents	Grab and Go container; spill control bucket; (1) for solvents and neutralizing absorbents; 5 gallon bucket (1) for acids/caustics; 5 gallon bucket	HAZMAT trailer
Absorbent Material	Containment or cleanup; (1) 100 ft. rolled or equivalent socks "Pig" for general liquid (1) 100 ft. rolled or equivalent socks "Pig" for oil	HAZMAT trailer

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<b>Equipment</b>	<b>Description and Capabilities</b>	<b>Location</b>
Air Bag System	Extrication, Stabilization, Cribbing (1) bag system with tank kit and the following bag sizes: (1)12-ton, (1) 21.8-ton, (1)17-ton	Surface rescue truck
Air Chisel	Extrication (1) Capable of cutting 3/16" steel	Surface rescue truck
Drum Transfer Pumps and Drum Opener	Containment or cleanup; (1) unit for chemical transfer (1) hand operated pump for petroleum transfer (1) drum opener	HAZMAT trailer
Floor Squeegee	Containment or cleanup; (1) straight rubber blade, nonwood handle	HAZMAT trailer
Foam Concentrate	AFFF 6% (4) 5-gallon pail	Fire truck # 1
Gas Cylinder Leak Control Kit	(1)Series A Hazardous Material Response Kit; contains nonsparking equipment to control and plug leaks	HAZMAT trailer
Portable Generator	(1)Backup power; 5,000 watt; 120 or 240 volt	Surface rescue truck

Equipment	Description and Capabilities	Location
Hand Tools	Containment and cleanup; Underground rescue truck: (1)12# Sledge Hammer (1)3/8" Drive Socket Set (1)1/2" Drive Socket Set (1)3/4" Drive Socket Set (1)25' 1/2" Chain (1)6' Wrecking Bar (1)Bottle Jack (1)4# Hammer (1)18" Crescent Wrench (1)5' Pry Bar (1)2' Pry Bar (1)100' Extension Cord (1)4' Nylon Sling (1)6' Nylon Sling (1)10' Nylon Sling These tools are located in the HAZMAT Trailer. They are non-sparking. (1)14"L adjustable pipe wrench (1)15" multi-opening bung wrench (1)hammer/crate opener (1)8" pipe pliers (1)8" blade Phillips (1)#2 screwdriver (1)6" blade standard screwdriver (1)Claw Hammer	Underground rescue truck, HAZMAT trailer
Come-a-longs	(1) 4-ton; cable-type Ratchet lever tool designed specifically for lifting, lowering and pulling applications including jobs requiring rigging, positioning, and stretching. Used in rescue for extrication.	Surface rescue truck and underground rescue truck
Porta-power	(1) 10-ton hydraulic, hand-powered jaws used for extrication during rescues.	Surface rescue truck
Jugs	Containment or cleanup; (4) 1-gallon plastic	HAZMAT trailer
Pails	Containment or cleanup; (3) 5-gallon plastic with lid	HAZMAT trailer
Portable Lighting	(1) Emergency lighting system; 120 volts; 500-watt bulbs, suitable for wet location	Underground rescue truck
Patching Kit	Series A Hazardous Response Kit; Class A; contains nonsparking equipment to control and plug leaks.	HAZMAT trailer
Scoops and Shovels	Cleanup; plastic; various sizes; nonsparking; nonwood handles (1) Scoop (3) Shovels	HAZMAT trailer

Equipment	Description and Capabilities	Location
<b>Medical Resources</b>		
Ambulance #1	Equipped as per Federal Specifications KKK-A-1822 and New Mexico Emergency Medical Services Act General Order 35; equipped with a radio to Carlsbad Medical Center, VHF radio, UHF medical frequency, cellular phone	Surface (Safety and Emergency Services Facility)
Ambulance #2	Diesel hardcab ambulance equipped with first aid kit, 2 stretchers, and other associated medical supplies	Underground
Rescue Truck	Special purpose vehicle; light and heavy duty rescue equipment; transports 1 litter patient, medical oxygen and supplies for mass casualties, fire suppression support equipment (rescue tool, air bag, K-12 Rescue Saw, 5,000-watt generator, self-contained breathing apparatus (SCBA), and much more equipment	Surface (Safety and Emergency Services Facility)
<b>Fire Detection and Fire Suppression Equipment</b>		
Building Smoke, Thermal Detectors, or Manual Pull Stations	Ionization and photoelectric or fixed temperature/rate of rise detectors; visual display and alarm in CMR; manual pull stations. The underground has manual fire alarm pull stations located where personnel have access when evacuating. These are connected to the U/G evacuation alarm.	Guard and Security Building, Warehouse/Shops, Support Building, CMR/Computer Room, Waste Handling Building, TRUPACT Maintenance Facility, Waste Shaft Collar, Underground Fuel Station, SH Hoisthouse, Engineering Building, Industrial Safety Building, Training Facility
Fire Truck # 1	Equipped per Class "A" fire truck per NFPA; capacity 750 gallons, with pump capacity of 1200 gallons per minute	Surface (Safety and Emergency Services Facility)
Rescue Truck # 2 (U/G)	(1) 125-pound dry chemical extinguisher (1) 150-pound foam extinguisher	Underground
Extinguishers	Individual fire extinguisher stations; various types located throughout the facility, conforming to NFPA-10.	Buildings, underground, and underground vehicles
Automatic Dry Chemical Extinguishing Systems	Automatic; 1,000-pound system (Dry Chemical); actuated by thermal detectors or by manual pull stations	Underground fuel station
Sprinkler Systems	Fire alarms activated by water flow	Pumphouse, Guard and Security Building, Support Building, Waste Handling Building (contact- transuranic waste area only), Warehouse/Shops Building, Auxiliary Warehouse Building, TRUPACT Maintenance Facility, Training Facility, SH Shaft Hoisthouse, Exhaust Filter Building, Engineering Building, and Safety Building

<b>Equipment</b>	<b>Description and Capabilities</b>	<b>Location</b>
Water Tanks, Hydrants	Fire suppression water supply; one 180,000-gallon capacity tank, plus a second tank with 100,000 gallon reserve	Tanks are at southwestern edge of WIPP facility; pipelines and hydrants are throughout the surface
Fire Water Pumps	Fire suppression water supply; 125 pounds per square inch, 1,500 gallons per minute centrifugal pump, one with electric motor drive, the other with diesel engine; pressure maintenance pump	Pumphouse
<b>Personal Protection Equipment</b>		
Headlamps	Mounted on hard hat; battery operated	Each person underground
Underground Self-Rescuer Units	Short-term rebreathers; approximately 300	Each person underground
Self-Contained Self-Rescuer	At least 60 minutes of oxygen available. Approximately 400 units cached throughout the underground	Cached throughout the underground
Self-Contained Breathing Apparatus (SCBA)	Oxygen supply; 4-hour units; approximately 14 Mine Rescue Team Draeger units	Mine Rescue Training Room
Chemical and Chemical-Supported Gloves	Body protection; (12 pair) inner-cloth, (12 pair) outer-pvc, (5 pair) outer-viton	HAZMAT trailer
Suit, Acid	Body protection; (4) acid	HAZMAT trailer
Suit, Fully Encapsulated	Body protection; used with SCBAs; full outerboot; (4) Level A; (4) Level B	HAZMAT trailer
<b>Emergency Medical Equipment</b>		
Antishock Trousers	Shock treatment; (2) inflatable, one on each ambulance	Ambulance # 1 and # 2
Zoll 1600 Heart Monitor and Defibrillator	Heart Monitor/defibrillator	Ambulance # 1 and # 2
Oxygen	Patient care; Size D: (2) Ambulance #1 (1) Underground Ambulance (1) Health Services Size E: (1) Rescue Truck (2) Underground Ambulance Size M: (1) Ambulance #1	Ambulance # 1 and # 2, surface rescue truck

Equipment	Description and Capabilities	Location
Resuscitators (Bag)	Disposable bag resuscitation Ambulance #1: (2) adult size (1) child size Underground Ambulance: (2) adult size	Ambulance # 1, Ambulance # 2
Splints	Immobilize limbs; (1) Adult traction splint, lower extremity, with limb-supporting slings, padded ankle hitch and traction device per ambulance. (2) Rigid splinting devices or equivalents, suitable for immobilization of upper extremities per ambulance. (2) Rigid splinting devices or equivalents, suitable for the immobilization of lower extremities. (1) Set of Airsplints: 6 assorted splints; hand/wrist, half arm, full arm, foot/ankle, half leg, and full leg per miner's aid stations.	Ambulance # 1 and # 2, Miner's Aid Stations
Stretchers	Patient transport; (2) Spine Boards, one short and one long, with nylon straps per ambulance. (also used to perform cardiopulmonary resuscitation) (2) Emergency Stretchers or scoops, or combination per ambulance (1) All-purpose multi-level ambulance stretch (gurney), with 3 safety straps and locking mechanism per ambulance. (1) Stretcher in each miner's aid station.	Various combinations in Ambulance # 1 and # 2, Miner's Aid Station
Suctions	For medical emergencies: Portable (1) Suction unit, capable of delivering at least 300 mm. HG on each ambulance.	Ambulances #1 and #2
Trauma Kits	(1) adult blood pressure cuff and stethoscope (4) soft-roller bandages (3) triangular bandages (1) pkg. band-aids (2) trauma dressings (25) 4X4 sponges (1) roll adhesive tape (1) bite stick (1) penlight (1) sterile burn sheet (1) oropharyngeal airway (1) glucose substance (2) sterile gauze dressings	(1) kit in each: Ambulances #1 and #2, surface rescue truck

Equipment	Description and Capabilities	Location
Miner's Aid Station	For First Aid Stations in the Underground (1) Stretcher--as referenced above per station (1) Set of airsplints--as referenced above per station (1) Blanket per station (1) Box of latex gloves (50) per station (5) Pathogen Wipes per station (1) First Aid Kit (24) per station; includes, (3) Band-Aid Combo Paks (2) Swabs, PVP (1) Antibiotic Ointment (1) Sting-Kill Swab (2) Dressing, compresses (2) Roller Bandages (2) Tape (2) Triangle Bandage (1) Eyedressing Pak (1) Burn Dressing (1) Ammonia Inhalants (1) User Log Sheet	Miner's Aid Stations - Various Underground Locations
First Aid Supplies	According to General Order #35 (12) bandages, soft roller, self-adhering type--4" or 6" x 5 yards. (6) triangular bandages, 40" (1) box band-aids (1) 1 pair bandage shears (6) Trauma dressings, 30" x 10" (6) Trauma dressings, 5" x 7" (50) 4" x 4" sponges, individually wrapped and sterile (2) rolls adhesive tape (1) penlight (2) sterile burn sheets (2) oropharyngeal airways -- adult (2) oropharyngeal airways -- child (Ambulance #1 only) (2) oropharyngeal airways -- infant (Ambulance #1 only) (1) Glucose substance (3) Occlusive dressings (1) Roll aluminum foil (6) Rigid cervical collars--2 each small, medium and large sizes (4) Cold packs (4) Heat packs (2) Bite sticks	Ambulance #1
First Aid Supplies	(2) Transfer sheets (2) Blankets	Ambulances #1 and #2

<b>Equipment</b>	<b>Description and Capabilities</b>	<b>Location</b>
First Aid Supplies	(2) #16g angiosets (2) #18g angiosets (2) #20g angiosets (1) 1000cc LR IV fluid (1) 500cc NS IV fluid	Ambulances #1 and #2, surface rescue truck
<b>General Plant Emergency Equipment</b>		
Emergency Lighting	For employee rescue and evacuation, and fire/spill containment; linked to main power supply, and selectively linked to back up diesel power supply and/or battery-backed power supply	Surface and underground
Backup Power Sources	Two diesel generators, and battery-powered uninterruptible power supply (UPS); use limited to essential loads; manual or remote starting 1,100-kilowatt diesel generators with on-site fuel for 62% load for 3 days for selected loads; 30-minute battery capacity for essential loads	Generators are east of Safety and Emergency Services Building; UPS is located at the essential loads
Hoists	Hoists in Waste Shaft, Air Intake Shaft, and SH Shaft	Waste Shaft, Air Intake Shaft, SH Shaft
Radiation Monitoring Equipment	(5) Portable alpha and beta survey meters, portable air samplers, and portable continuous air monitors	Building 412
Emergency Shower	For emergency flushing of contaminated individual	Surface
Eye Wash Fountains	For emergency flushing of affected eyes	Various locations on surface and in the underground
Decon Shower Equipment	Self-contained decon shower trailer, portable decon shower unit, disposable decon shower	Surface
Overpack containers	14-85 Gallon drums 4-SWBs 1-TDOP	Building 481 Building 481 Building 481
HEPA Vacuums	2 HEPA Vacuums to be utilized for removal of contamination.	Building 481
Aquaset or Cement	100 lbs. of aquaset or cement material for solidification of liquid waste generated as a result of fire fighting water or decontamination solutions.	Building 481
Polyvinyl Alcohol or Paint	1 - 5 gallon bucket of approved fixative to be used during recovery.	Building 481
TDOP Upender	Upender facilitates overpacking standard waste boxes	Building 481
Non hazardous Decontaminating Agents	4-1 Gallon bottles for decontamination of surfaces, equipment, and personnel	Building 481

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**Table D-7  
 Types of Fire Suppression Systems by Location**

Location	AS	AD	MPS	PFE
Waste Handling Building	*		*	*
Support Building	*		*	*
Exhaust Filter Building	*		*	*
Water Pumphouse	*		*	*
Underground Support Areas (also has rescue truck) (as illustrated in Figure D-5)		*	*	*
Station A Effluent Monitoring Shed			*	*
Station B Effluent Monitoring Shed			*	*

(1) Symbols for WIPP fire-protection systems:

- AS = Automatic Wet Pipe Sprinkler System
- AD = Automatic Dry Chemical Extinguishing System
- MPS = Manual Pull Stations
- PFE = Portable Fire Extinguishers

(2) The Waste Handling Building and the Support Building contain the following:

- Automatic wet pipe sprinklers
- Fire detection in the heating, ventilation, and air conditioning instrumentation (Support Building, only)
- Manual pull stations
- Portable fire extinguishers
- Automatic detectors

The Safety and Emergency Services Building contains the following:

- Automatic wet pipe sprinklers
- Manual pull stations
- Portable fire extinguishers
- Automatic detectors

The Core Storage Building contains the following:

- Automatic wet pipe sprinklers
- Portable fire extinguishers

(3) The Exhaust Filter Building, Underground Facilities, Warehouse/Shops Building, Water Pumphouse, and Salt Handling Hoist house also have portable fire extinguishers, manual pull stations, and automatic detectors.

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**Table D-8  
 Hazardous Release Reporting, Federal**

Statute	Chemical Releases Covered	To Whom Report Will Be Made	What Will Be Reported	
			Immediately (Oral)	Subsequently (Written)
Comprehensive Environmental Response, Compensation and Liability Act (CERCLA)/Superfund Amendments and Reauthorization Act (SARA) (40 CFR Part 302)	"Reportable quantities" of CERCLA/SARA "hazardous substances."	National Response Center: (800) 424-8802, State Emergency Response Commission: (505) 476-9681 (New Mexico State Police, Hazardous Materials Emergency Response), and Local Emergency Planning Committee: (575) 885-3581	1) Chemical identification; 2) what hazardous substance; 3) quantity released; 4) time, location and duration of release; 5) media of release; 6) health risks and medical advice; 7) proper precautions (e.g., evacuation); and 8) name and phone number of reporter and facility.	As soon as practicable, update of oral notice and response action taken. Send report to: New Mexico State Emergency Response Commission, Department of Public Safety, Title III Bureau, P.O. Box 1628, Santa Fe, New Mexico, 87504-1628, and Local Emergency Planning Committee, 324 S. Canyon Street, Suite B, Carlsbad, New Mexico 88220. National Response Center will contact the U.S. Environmental Protection Agency (EPA). EPA may request a written report.
Emergency Planning and Community Right-to-Know Act (SARA Title III) (40 CFR Parts 302 and 355)	SARA Title III "extremely hazardous substances."	National Response Center: (800) 424-8802, State Emergency Response Commission: (505) 476-9681 (New Mexico State Police, Hazardous Materials Emergency Response), and Local Emergency Planning Committee: (575) 885-3581.	1) Chemical identification; 2) what extremely hazardous substance; 3) quantity released; 4) time, location and duration of release; 5) media of release; 6) health risks and medical advice; 7) proper precautions (e.g. evacuation); and 8) name and phone number of reporter and facility.	As soon as practicable, update of oral notice and response action taken. Send report to: New Mexico State Emergency Response Commission, Department of Public Safety, Title III Bureau, P.O. Box 1628, Santa Fe, New Mexico, 87504-1628, and Local Emergency Planning Committee, 324 S. Canyon Street, Suite B, Carlsbad, New Mexico 88220. National Response Center will contact the U.S. Environmental Protection Agency (EPA) for an address if a written report is requested by EPA.
Resource Conservation and Recovery Act (RCRA), 40 CFR §§264.56(a) and 265.56(a)	Any imminent or actual emergency situation.	State or local agencies with designated response roles, if their help is needed: Carlsbad Police Department: 885-2111; Carlsbad Fire Department: 885-2111; Eddy County Sheriff: 887-7551.	What assistance is required.	Not Applicable (NA)

Statute	Chemical Releases Covered	To Whom Report Will Be Made	What Will Be Reported	
			Immediately (Oral)	Subsequently (Written)
RCRA, 40 CFR §§264.56(d), 264.56(i), 265.56(d), and 265.56(i)	RCRA "hazardous waste" release, fire, or explosion, which could threaten human health or environment outside the facility.	National Response Center: (800) 424-8802 and State Emergency Response Commission: (505) 476-9681 (New Mexico State Police, Hazardous Materials Emergency Response).	(1) Name and telephone number of reporter; (2) name and telephone number of facility; (3) time and type of incident; (4) name and quantity of materials involved; (5) extent of injuries, if any; and (6) possible health or environmental hazards outside the facility.	Prior to resumption of operations, notify that: (1) no waste that may be incompatible with released material is treated, stored, or disposed of until cleanup is complete, and (2) all emergency equipment listed in the Contingency Plan is cleaned and fit for its intended use. Send to Secretary, New Mexico Environment Department, P.O. Box 26110, Santa Fe, New Mexico, 87502.
RCRA, 40 CFR §§264.56(i), 264.56(j), 265.56(i), and 265.56(j)	Any incident which triggers implementation of Contingency Plan.	New Mexico Environment Department, Emergency Response Office, 24-hour telephone: (505) 827-9329 (emergencies); for non-emergencies contact (866) 428-6535 (24 hour voice mail) or Monday to Friday, 8 am to 5 pm: (505) 476-6000.	NA	Within 15 days: 1) name, address and telephone number of owner/operator; 2) name, address and telephone number of facility; 3) date, time and type of incident (e.g. fire, explosion); 4) name and quantity of materials involved; 5) extent of injuries, if any; 6) possible hazards to human health or the environment; 7) estimated quantity of material that resulted from the incident. Prior to resumption of operations, notify that: 1) no waste that may be incompatible with released material is treated, stored, or disposed of until cleanup is complete, and 2) all emergency equipment listed in the Contingency Plan is cleaned and fit for its intended use. Send to Secretary, New Mexico Environment Department, P.O. Box 26110, Santa Fe, New Mexico, 87502.

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**Table D-9  
 Hazardous Release Reporting, State of New Mexico**

Regulations	Chemical Releases Covered	To Whom Report Will Be Made	What Will Be Reported	
			Immediately (Oral)	Subsequently (Written)
20.4.1.500 and 600 NMAC	RCRA "hazardous waste" releases, fire, or explosion, which could threaten human health or environment outside the facility.	National Response Center: (800) 424-8802; State Emergency Response Commission and (505) 476-9620 (New Mexico State Police, Hazardous Materials Emergency Response)	1) Name and telephone number of reporter; 2) name and telephone number of facility; 3) time and type of incident; 4) name and quantity of material involved; 5) extent of injuries, if any; and 6) possible health or environmental hazards outside the facility.	Prior to resumption of operations, notify that: 1) no waste that may be incompatible with released material is treated, stored, or disposed of until cleanup is complete, and 2) all emergency equipment listed in the Contingency Plan is cleaned and fit for its intended use. Send to Secretary, New Mexico Environment Department, P.O. Box 26110, Santa Fe, New Mexico, 87502.
20.4.1.500 and 600 NMAC	Any incident which triggers implementation of Contingency Plan.	New Mexico Environment Department, Emergency Response Office, 24-hour telephone: (505) 827-9329 (emergencies); for non-emergencies contact (866) 428-6535 (24 hour voice mail) or Monday to Friday, 8 am to 5 pm: (505) 476-6000.	1) Name and telephone number of reporter; 2) name and address of facility; 3) name and quantity of materials involved, to extent known; 4) extent of injuries, if any; and 5) possible hazards to human health or the environment, outside the facility.	Within 15 days: 1) name, address and telephone number of owner/operator; 2) name, address and telephone number of facility; 3) date, time and type of incident (e.g., fire, explosion); 4) name and quantity of materials involved; 5) extent of injuries, if any; 6) possible hazards to human health or the environment; and 7) estimated quantity of material that resulted from the incident. Prior to resumption of operations, notify that: 1) no waste that may be incompatible with released material is treated, stored or disposed of until cleanup is complete, and 2) all emergency equipment listed in the Contingency Plan is cleaned and fit for its intended use. Send to Secretary, New Mexico Environment Department, P.O. Box 26110, Santa Fe, New Mexico, 87502.

Regulations	Chemical Releases Covered	To Whom Report Will Be Made	What Will Be Reported	
			Immediately (Oral)	Subsequently (Written)
New Mexico Emergency Management Act, Section 74-4B-5	Any accident (spill) involving hazardous materials (including hazardous substances, radioactive substances, or a combination thereof) which may endanger human health or the environment.	New Mexico Environment Department: (505) 827-9329, State Emergency Response Commission: (505) 476-9681 (New Mexico State Police, Hazardous Materials Emergency Response), and Local Emergency Planning Committee: (575) 885-3581	1) Name, address and telephone number of owner or operator; 2) name, address and telephone number of facility; 3) date, time and type of incident; 4) name and quantity of material(s) involved; 5) extent of any injuries; 6) assessment of actual or potential threat to environment or human health; and 7) estimated quantity and disposition of recovered material.	Written submission within one week of time permittees become aware of discharge. Same as oral and description of noncompliance and its cause, the period of noncompliance including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence. Send reports to New Mexico Environment Department, Chief, Ground Water Quality Bureau, P.O. Box 26110, Santa Fe, New Mexico, 87502, New Mexico State Emergency Response Commission Department of Public Safety, Title III Bureau, P.O. Box 1628 Santa Fe, New Mexico, 87504-1628, and Local Emergency Planning Committee, 324 S. Canyon Street, Suite B, Carlsbad, New Mexico 88220.
New Mexico Water Quality Control Commission, Part 1, Section 203	Any discharge from any facility of oil or any other water contaminant in such quantities as may, with reasonable probability, injure or be detrimental to human health, animal or plant life, or property.	Chief, Ground Water Quality Bureau, New Mexico Environment Department, or his counterpart in any constituent agency delegated responsibility for enforcement of the rules as to any facility subject to such delegation (505) 827-2918.	Within 24 hours: 1) the name, address, and telephone number of the person or persons in charge of the facility; 2) the name, address, and telephone number of the owner/operator of the facility; 3) the date, time, location, and duration of the discharge; 4) the source and cause of the discharge; 5) a description of the discharge, including its chemical composition; and 6) the estimated volume of discharge, and immediate damage from the discharge.	Submit within seven days: verification of the prior oral notification, also provide any appropriate additions or corrections to the information contained in the prior oral notification. Within 15 days: submit a written report describing any corrective actions taken and/or to be taken relative to the discharge. Send reports to Chief, Ground Water Quality Bureau, New Mexico Environment Department, P.O. Box 26110, Santa Fe, New Mexico, 87502.

Regulations	Chemical Releases Covered	To Whom Report Will Be Made	What Will Be Reported	
			Immediately (Oral)	Subsequently (Written)
New Mexico Underground Storage Tank Regulations-2	Any known or suspected release from an Underground Storage Tank (UST) system, any spill or any other emergency situation.	New Mexico Environment Department Petroleum Storage Tank Bureau (505) 984-1741.	Within 24 hours: 1) the name, address, and telephone number of the agent in charge of the site at which the UST system is located, as well as the owner/operator of the system; 2) the name and address of the site and the location of the UST system on that site; 3) the date, time, location, and duration of the spill, release, or suspected release; 4) the source and cause of the spill, release, or suspected release; 5) a description of the spill, release, or suspected release, including its chemical composition; 6) the estimated volume of the spill, release, or suspected release; and 7) action taken to mitigate immediate damage from the spill, release, or suspected release.	Mail or deliver within seven days of the incident, a written notice describing the spill, release, or suspected release and any investigation or follow-up action taken or to be taken. Send reports to Petroleum Storage Tank Bureau, New Mexico Environment Department, 2044 Galisteo Street, Santa Fe, New Mexico, 87504.

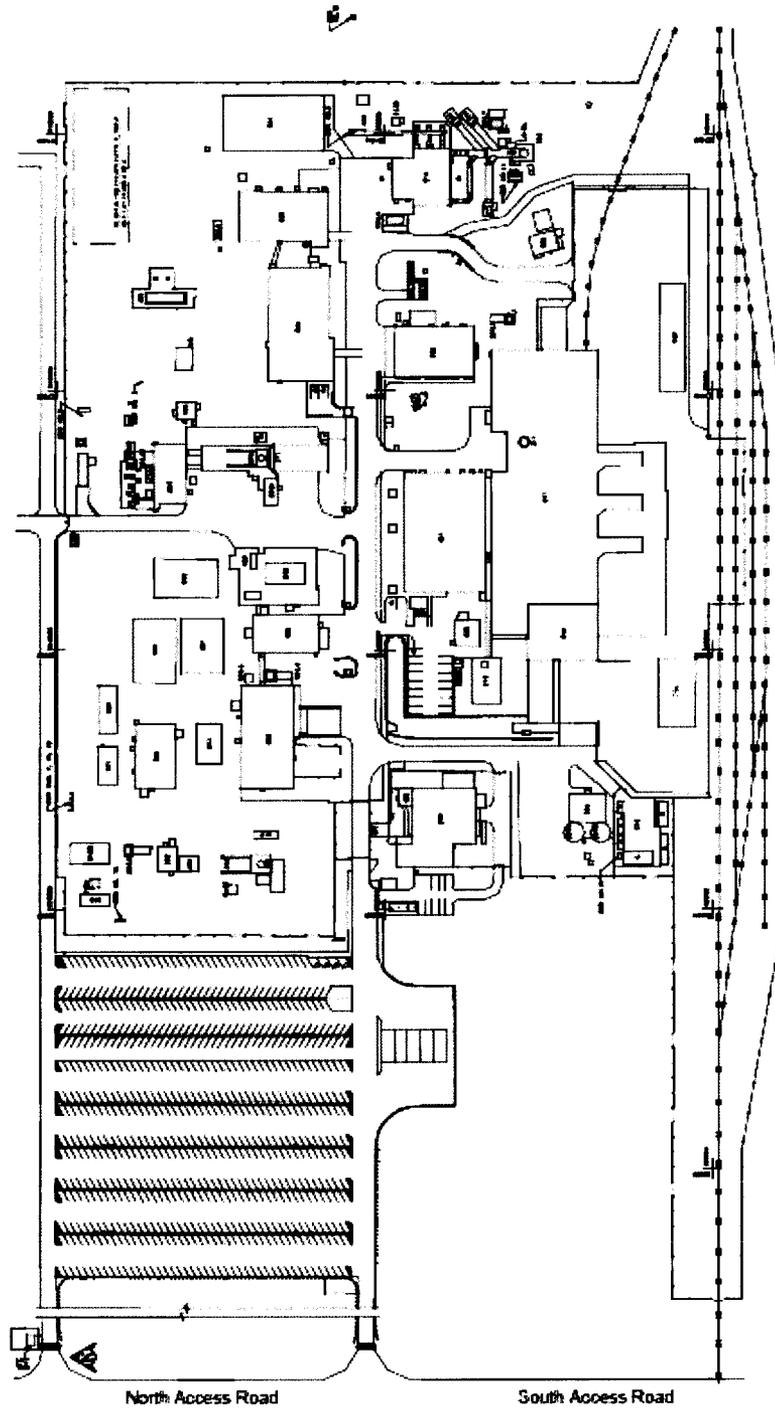
**FIGURES**

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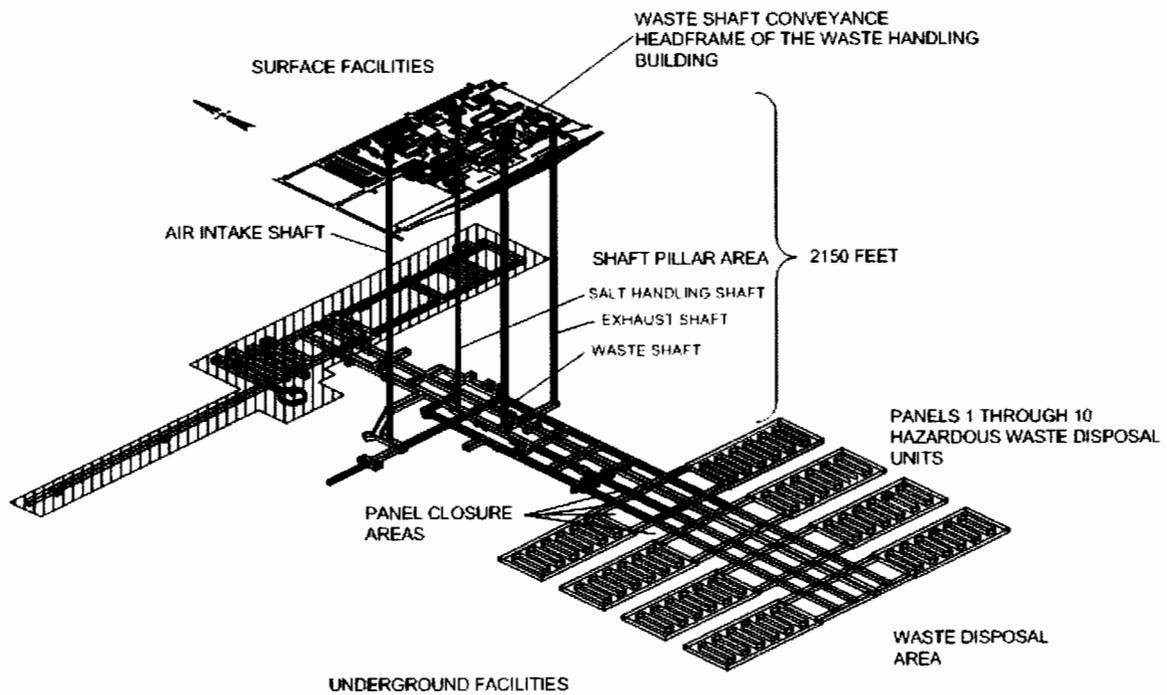


**Figure D-1**  
**WIPP Surface Structures**

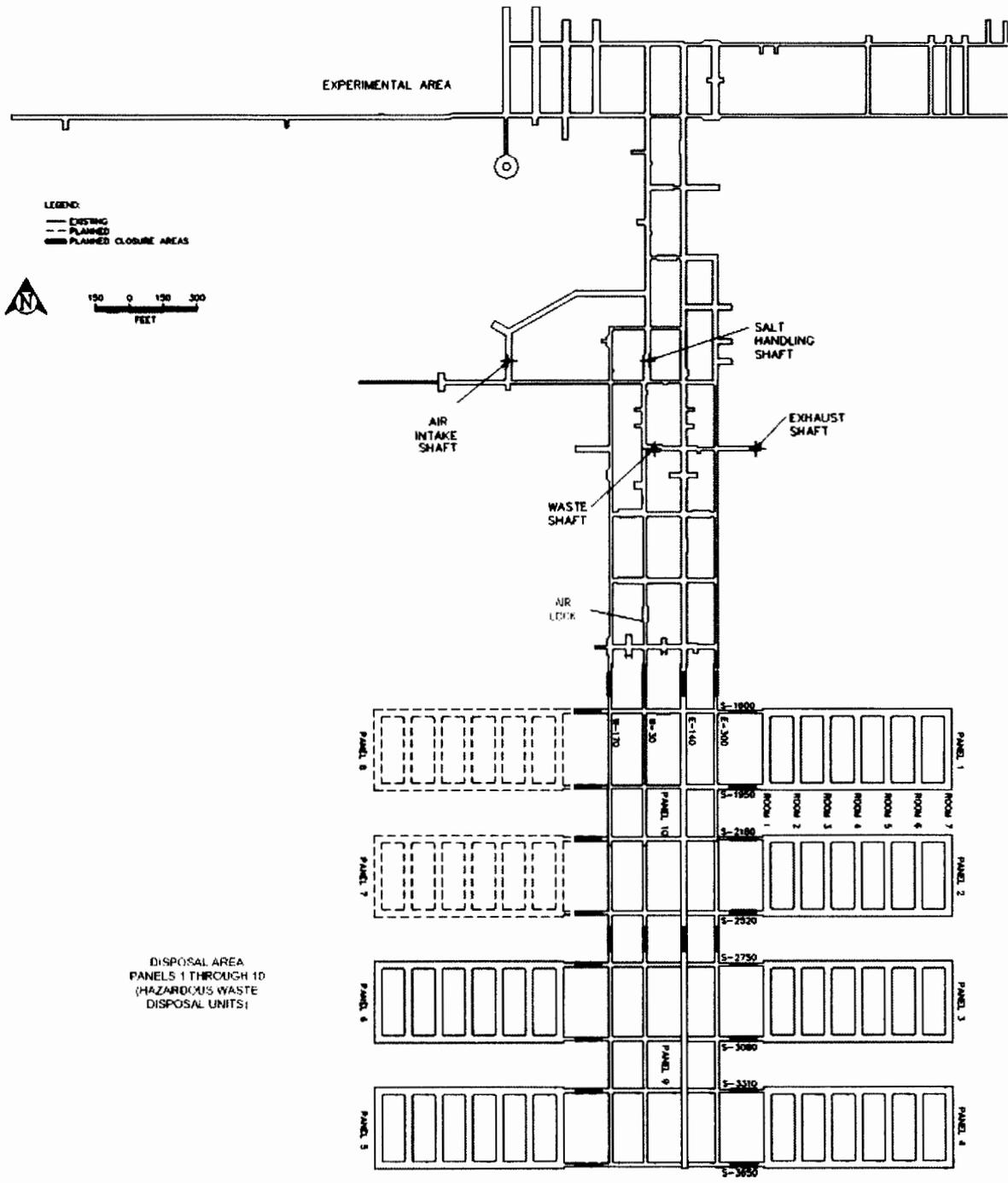
Waste Isolation Pilot Plant  
 Hazardous Waste Permit  
 November 30, 2010

BLDG / FAC #	DESCRIPTION	BLDG / FAC #	DESCRIPTION	BLDG / FAC #	DESCRIPTION
#241	EQUIPMENT SHED	#384	SALT HANDLING SHAFT HOISTHOUSE	#475	GATEHOUSE
#242	GUARDSHACK	#384A	MINING OPERATIONS	#480	VEHICLE FUEL STATION
#243	SALT HAULING TRUCKS SHELTER	#411	WASTE HANDLING BUILDING	#481	WAREHOUSE ANNEX
#245	TRUPACT TRAILER SHELTER	#412	TRUPACT MAINTENANCE BUILDING	#482	EXHAUST SHAFT HOIST EQUIP. WAREHOUSE
#246	MgO STORAGE SHELTER	#413	EXHAUST SHAFT FILTER BUILDING	#485	SULLAIR COMPRESSOR BUILDING
#253	13.8 KV SWITCHGEAR 25p-SWG15/1	#413A	MONITORING STATION A	#488	ENGINEERING BUILDING
#254.1	AREA SUBSTATION NO. 1 25P-SW15.1	#413B	MONITORING STATION B	#489	TRAINING BUILDING
#254.2	AREA SUBSTATION NO. 2 25P-SW15.2	#414	WATER CHILLER FACILITY & BLDG	#H-16	SANDIA TEST WELL
#254.3	AREA SUBSTATION NO. 3 25P-SW15.3	#451	SUPPORT BUILDING	#917	AIS MONITORING
#254.4	AREA SUBSTATION NO. 4 25P-SW15.4	#452	SAFETY & EMERGENCY SERVICES FACILITY	#918	VOC TRAILER
#254.5	AREA SUBSTATION NO. 5 25P-SW15.5	#453	WAREHOUSE/SHOPS BUILDING	#918A	VOC AIR MONITORING STATION
#254.6	AREA SUBSTATION NO. 6 25P-SW15.6	#455	AUXILIARY WAREHOUSE BUILDING	#918B	VOC LAB TRAILER
#254.7	AREA SUBSTATION NO. 7 25P-SW15.7	#456	WATER PUMPHOUSE	#950	WORK CONTROL TRAILER
#254.8	AREA SUBSTATION NO. 8 25P-SW15.8	#457N	WATER TANK 25-D-001B	#951	PROCUREMENT/PURCHASING
#254.9	480V SWITCHGEAR (25P-SWG04/9)	#457S	WATER TANK 25-D-001A	#952	TRAILER
#255.1	BACK-UP DIESEL GENERATOR #1 25-PE 503	#458	GUARD AND SECURITY BUILDING	#903	MODULAR OFFICE COMPLEX
#255.2	BACK-UP DIESEL GENERATOR #2 25-PE 504	#459	CORE STORAGE BUILDING	#971	HUMAN RESOURCES TRAILER
#256.4	SWITCHBOARD #4 (25P-SBD04/4)	#463	COMPRESSOR BUILDING	#986	PUBLICATIONS & PROCEDURES TRAILER
#311	WASTE SHAFT	#465	AUXILIARY AIR INTAKE	SWR NO 6	SWITCHRACK NO 6
#351	EXHAUST SHAFT	#468	TELEPHONE HUT	SWR NO 7	7A, 7B SWITCHRACK NO 7, 7A, 7B
#361	AIR INTAKE SHAFT	#473	ARMORY BUILDING	SWR NO 7C	SWITCHRACK NO 7C
#362	AIR INTAKE SHAFT/HOIST HOUSE	#474	HAZARDOUS WASTE STORAGE FACILITY	SWR NO 10	SWITCHRACK NO 10
#363	AIR INTAKE SHAFT/WINCH HOUSE	#474A	HAZARDOUS WASTE STORAGE BUILDING	SWR NO 11	SWITCHRACK NO 11
#364	EFFLUENT MONITORING INSTRUMENT SHED A	#474B	HAZARDOUS WASTE STORAGE BUILDING	SWR NO 12	SWITCHRACK NO 12
#365	EFFLUENT MONITORING INSTRUMENT SHED B	#474C	OIL & GREASE STORAGE BUILDING	SWR NO 15	SWITCHRACK NO 15
#366	AIR INTAKE SHAFT HEADFRAME	#474D	GAS BOTTLE STORAGE BUILDING		
#371	SALT HANDLING SHAFT	#474E	HAZARD MATERIAL STORAGE BUILDING		
#372	SALT HANDLING SHAFT HEADFRAME	#474F	WASTE OIL RETAINER		

Figure D-1a  
 Legend to Figure D-1

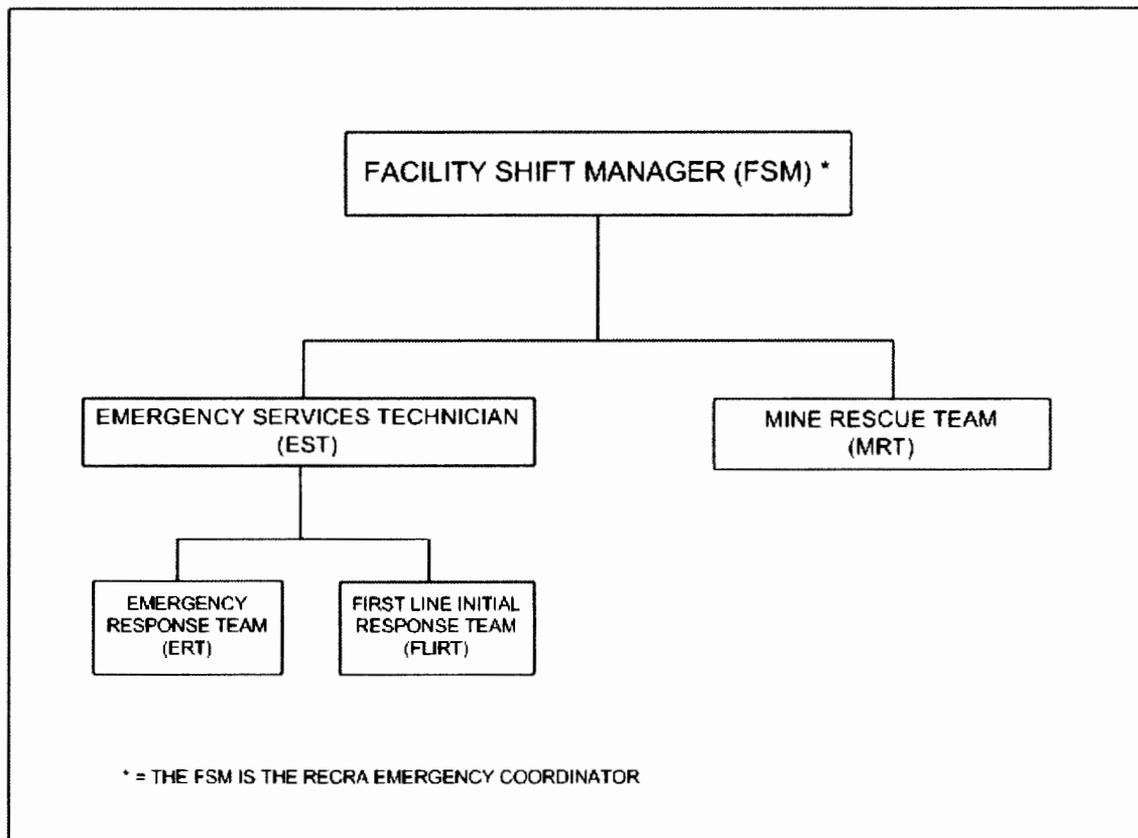


**Figure D-2**  
**Spatial View of the WIPP Facility**



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

Figure D-3  
 WIPP Underground Facilities



**Figure D-4**  
**Direction and Control Under Emergency Conditions in Which the Plan Has Been Implemented**

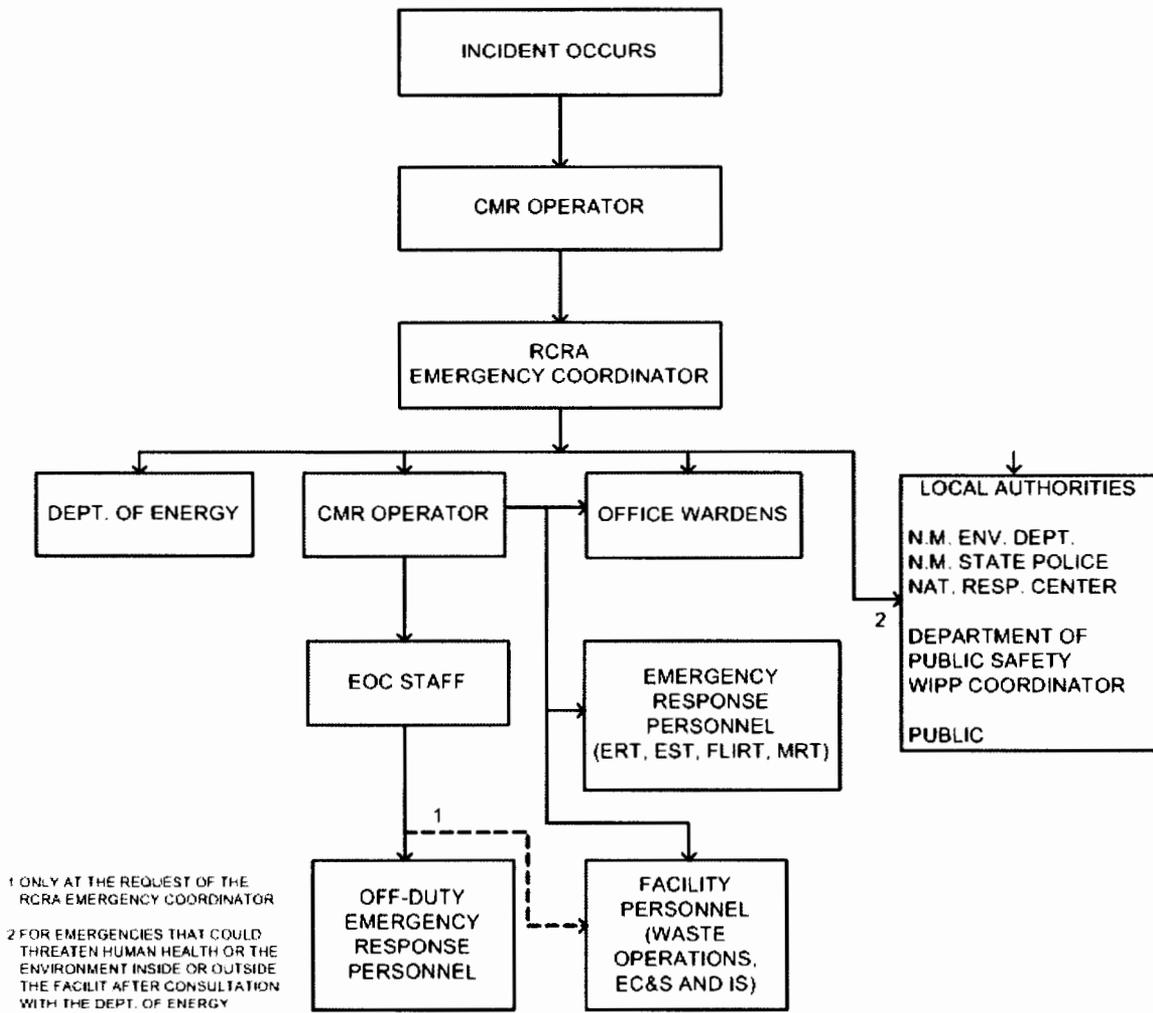
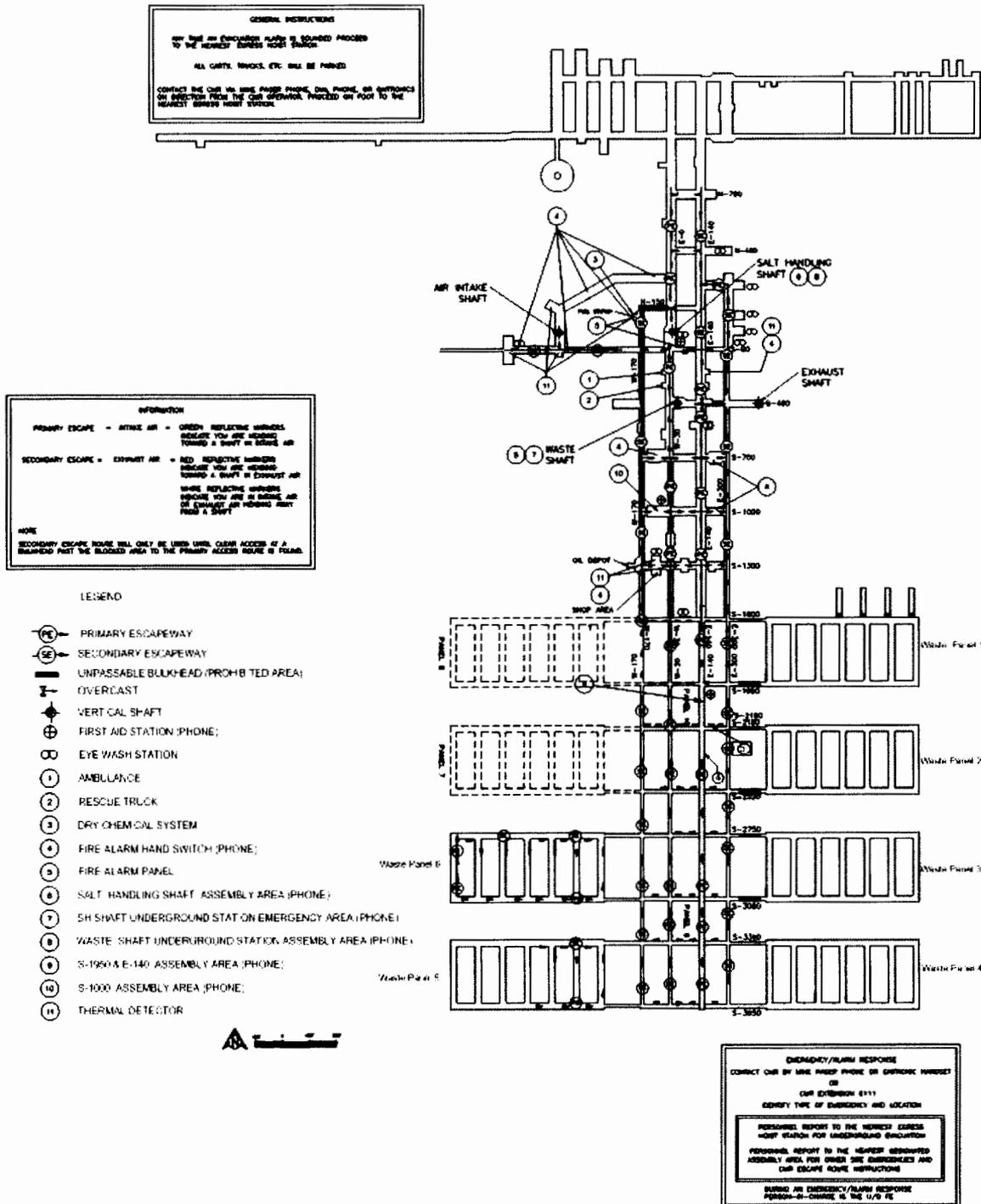
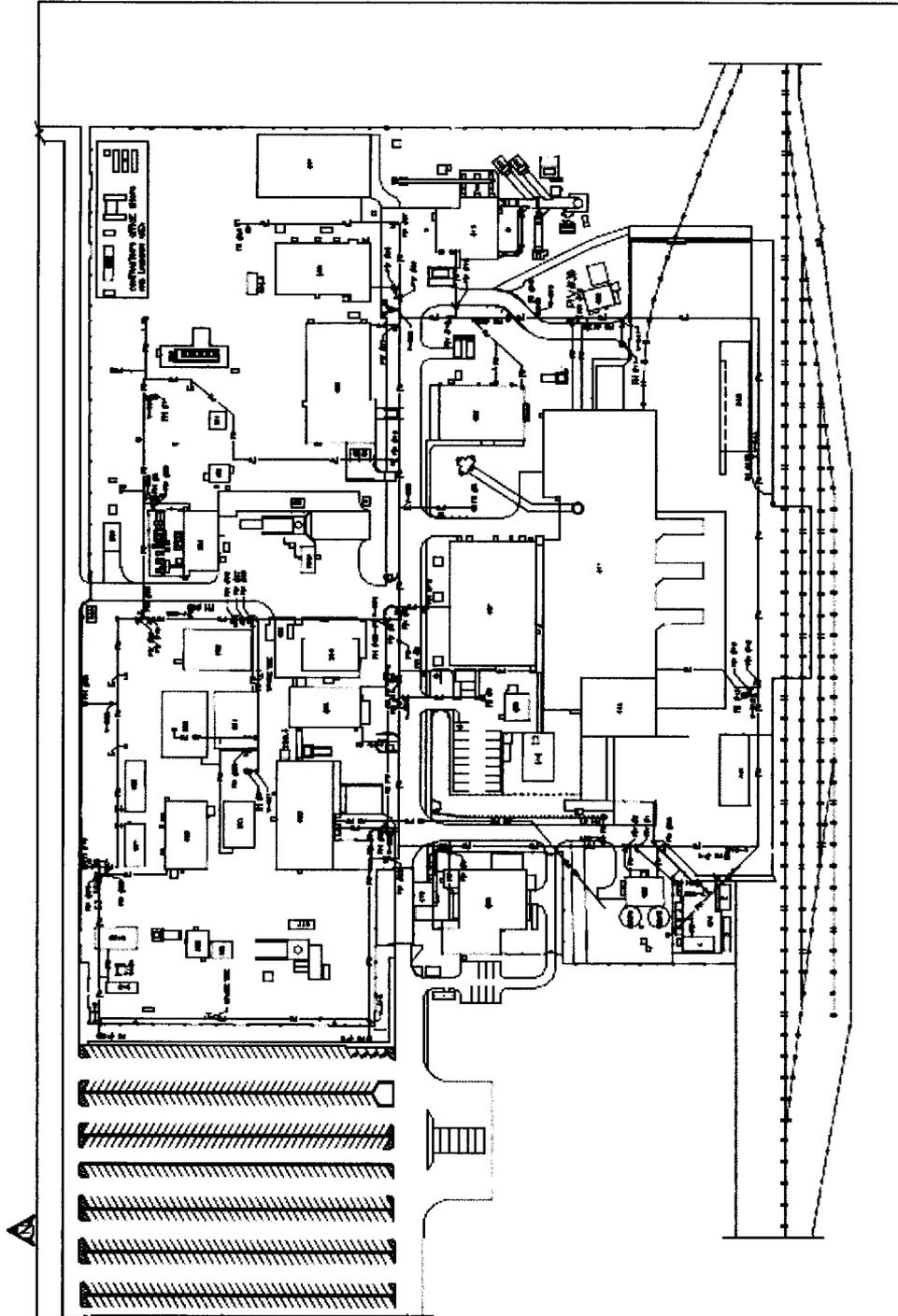


Figure D-4a  
 WIPP Facility Emergency Notifications



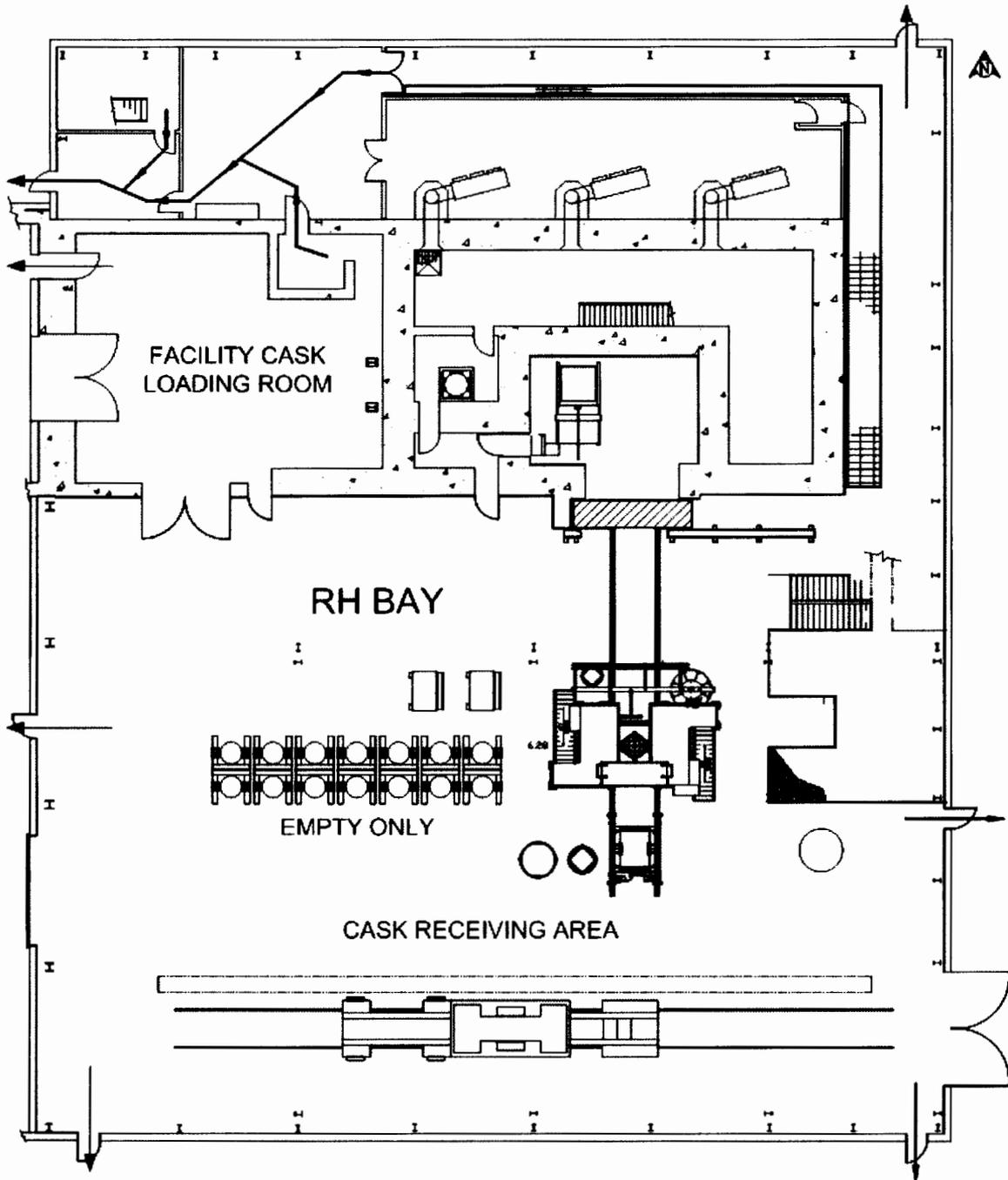
**Figure D-5**  
 Underground Emergency Equipment Locations and Underground Evacuation Routes



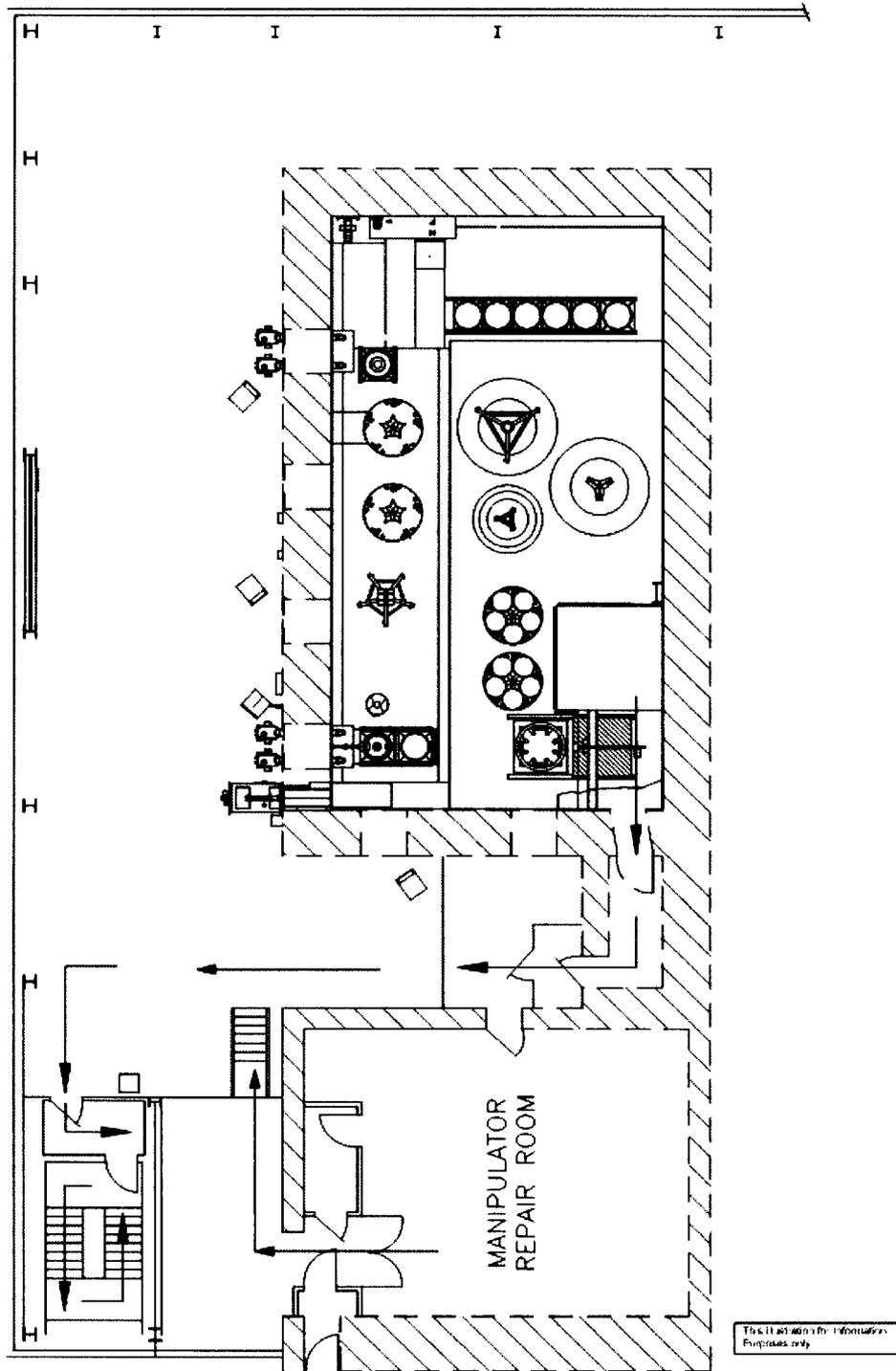
**Figure D-6**  
**Fire-Water Distribution System**







**Figure D-8a**  
**RH Bay Evacuation Routes**



**Figure D-8b**  
**RH Bay Hot Cell Evacuation Route**

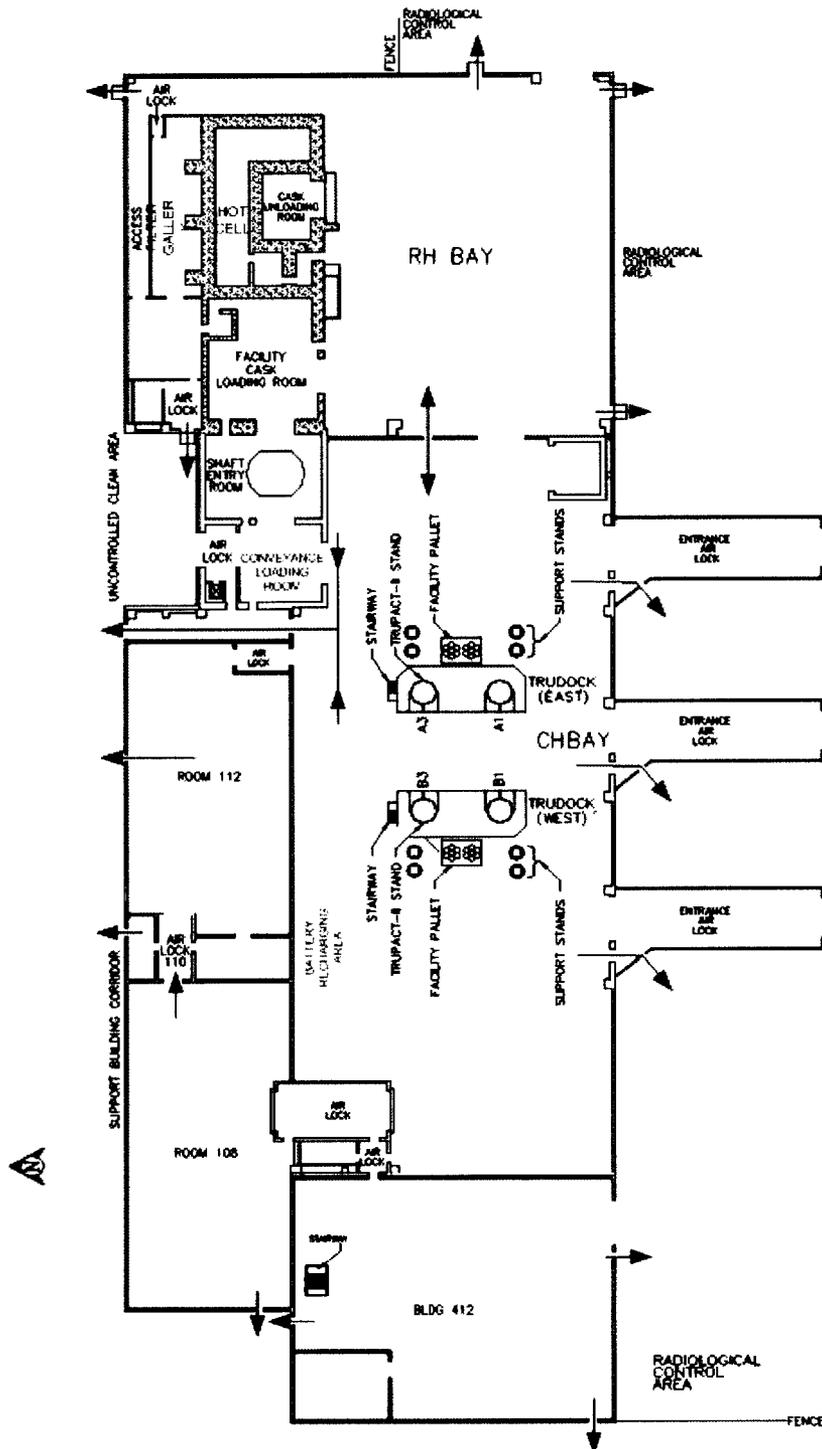
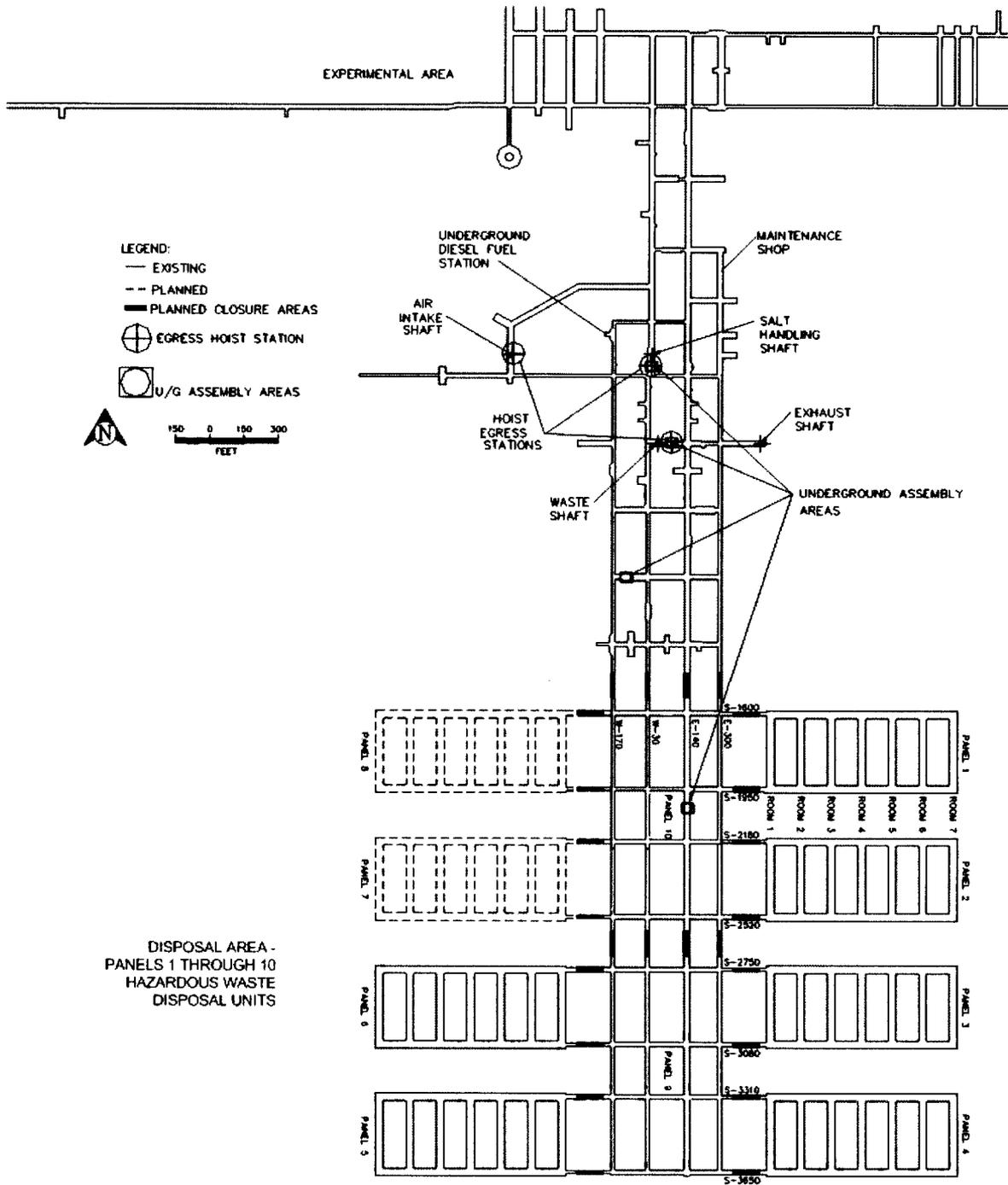
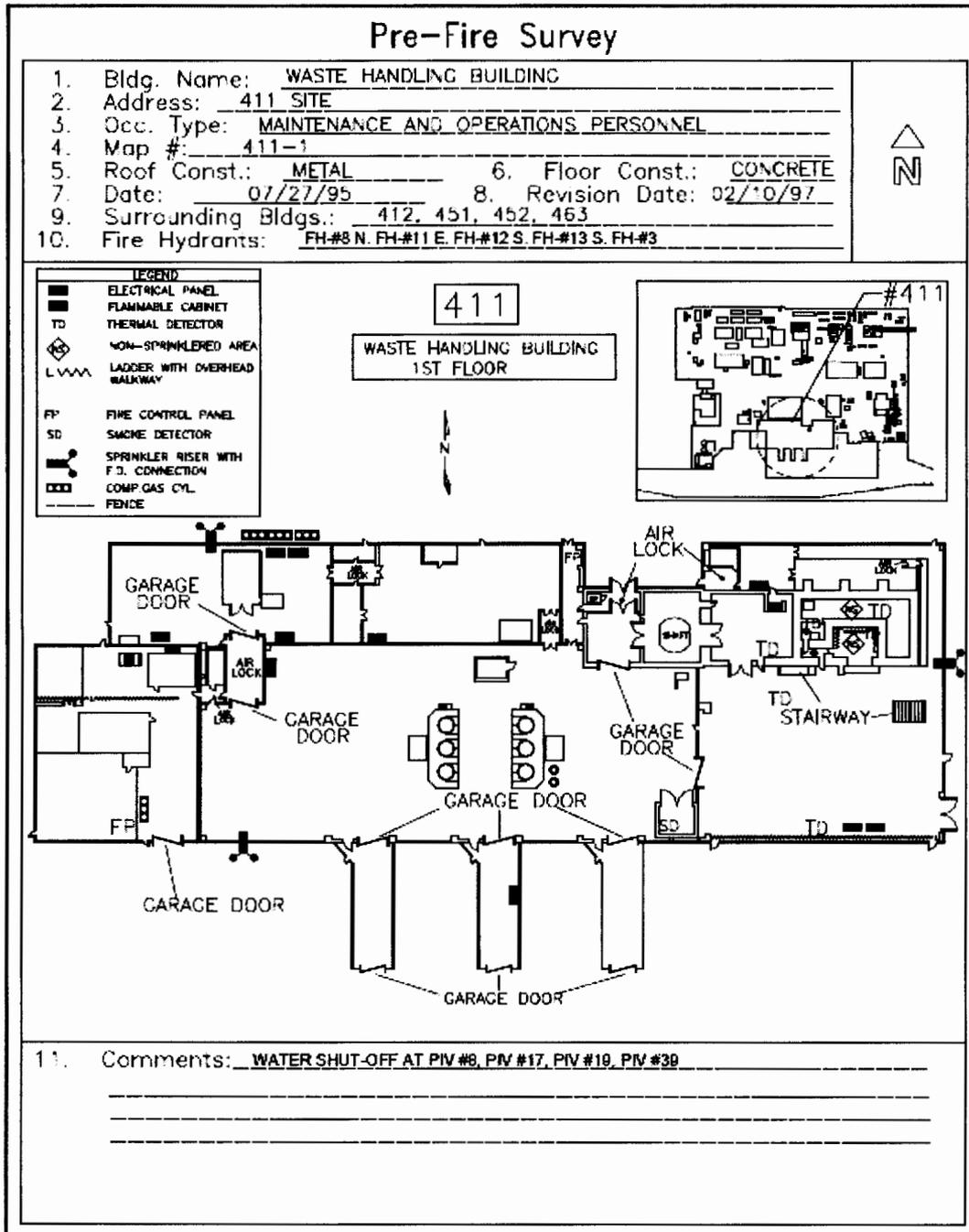


Figure D-8c  
Evacuation Routes in the Waste Handling Building



**Figure D-9**  
**Designated Underground Assembly Areas**



**Figure D-10**  
**Waste Handling Building Pre-Fire Survey (First Floor)**

Pre-Fire Survey Cont.

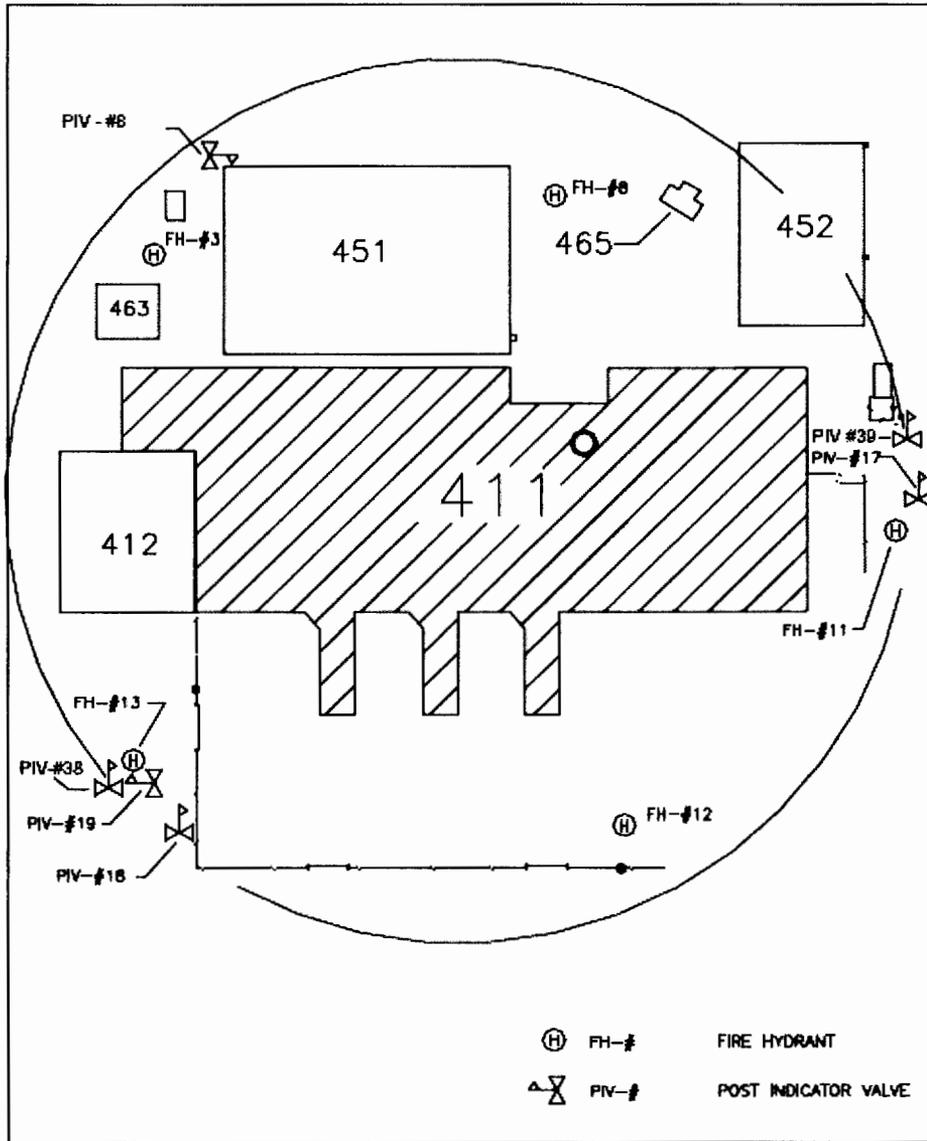
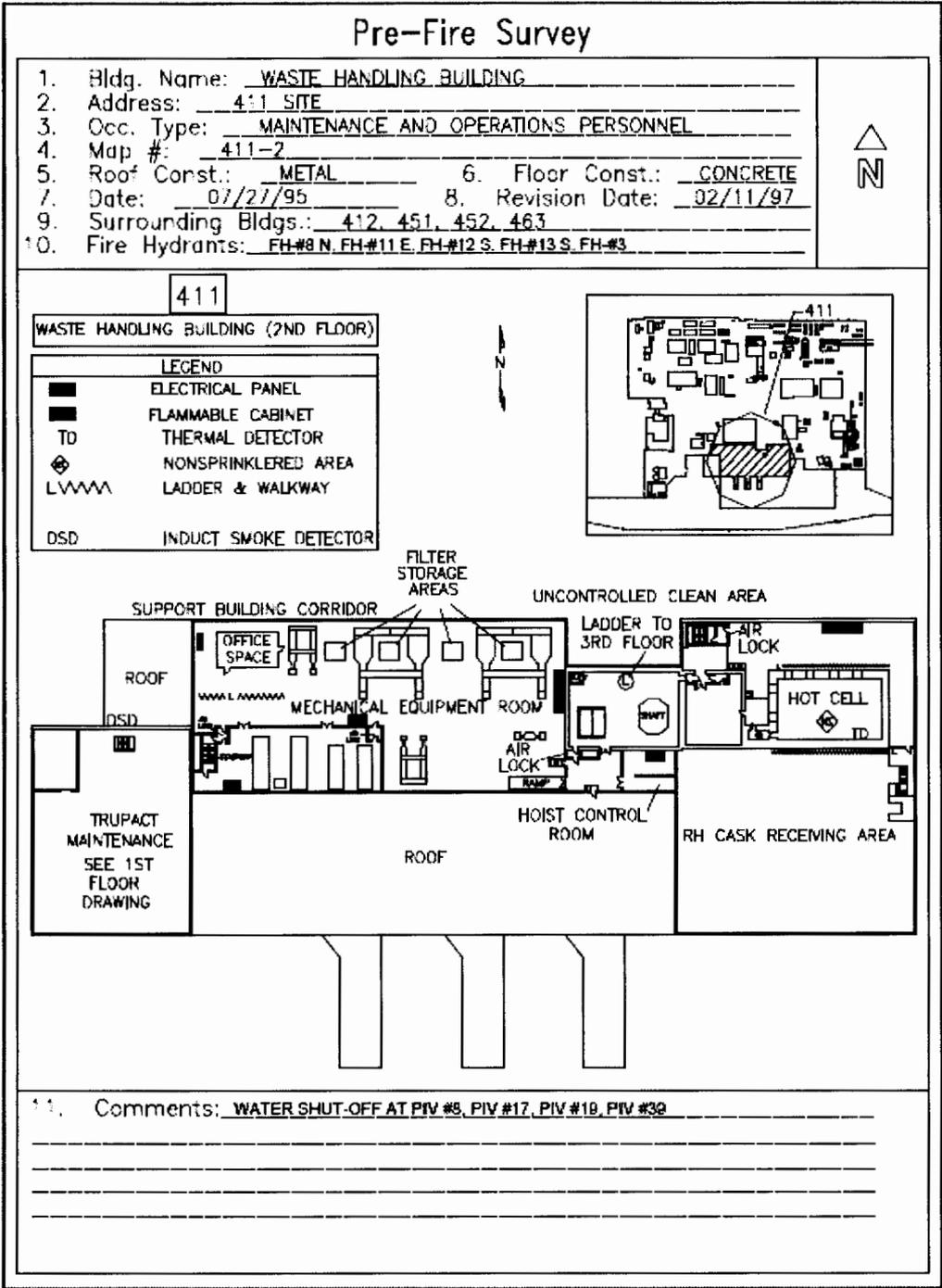
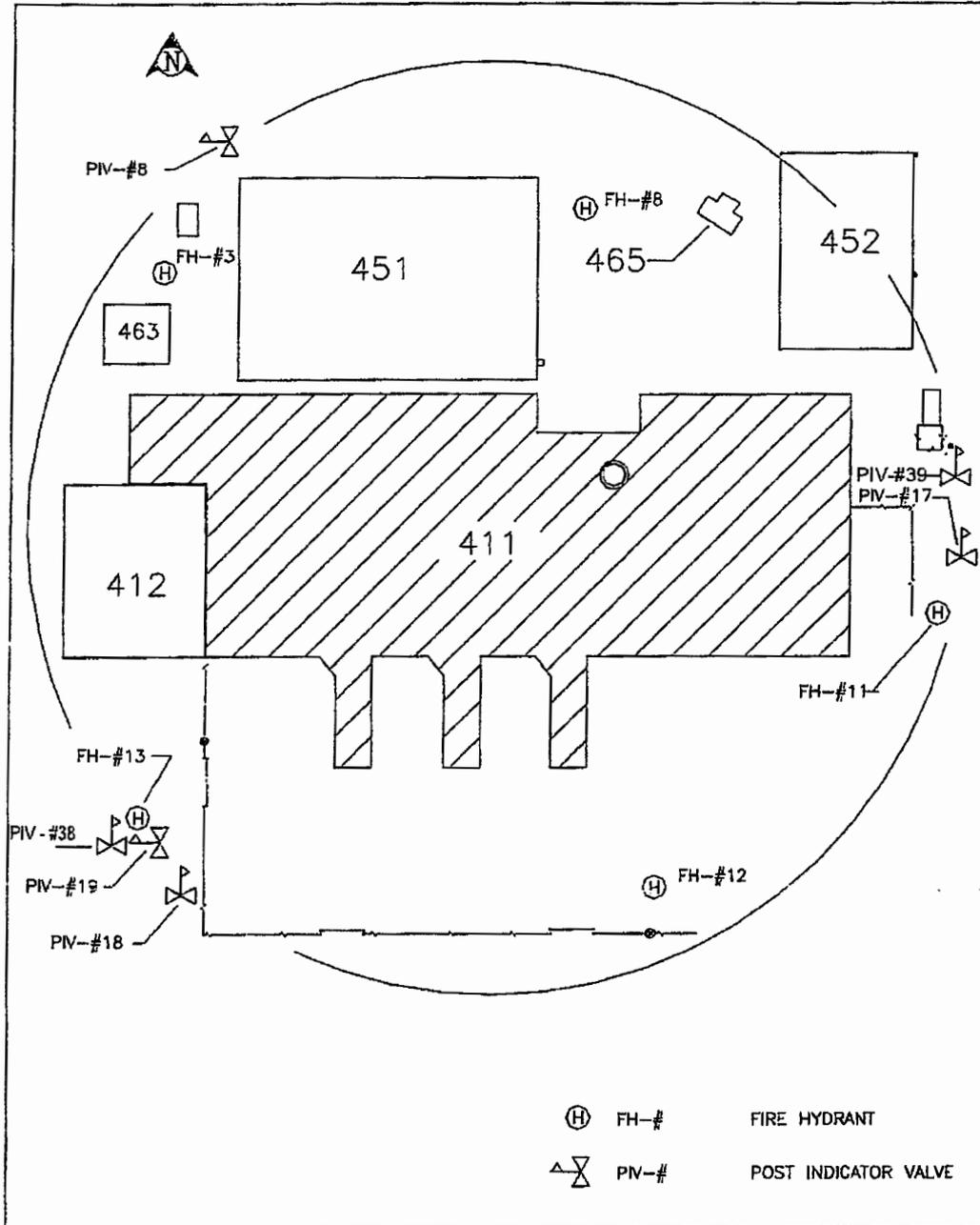


Figure D-10a  
Waste Handling Building Pre-Fire Survey  
(First Floor - Fire Hydrant/Post Indicator Location)



**Figure D-11**  
**Waste Handling Building Pre-Fire Survey (Second Floor)**

Pre-Fire Survey Cont.



**Figure D-11a**  
**Waste Handling Building Pre-Fire Survey**  
**(Second Floor - Fire Hydrant/Post Indicator Location)**

<b>WIPP HAZARDOUS MATERIAL INCIDENT REPORT</b>				
Date: _____		Location: _____		
<b>I. INITIAL INFORMATION</b>				
EST: _____	DATE: _____	TIME: _____	REPORTED LOCATION: _____	
REPORTED BY: _____		DEPT.: _____		
INITIALLY REPORTED TO: _____		DEPT.: _____		
RESPONSIBLE MANAGER: _____		DEPT.: _____		
<b>II. WEATHER CONDITIONS</b>				
WIND DIRECTION _____ WIND SPEED: _____ mph TEMP.: _____ F				
CONDITIONS (i.e., icy, snowing, raining, cloudy, sunny): _____				
<b>III. TYPE OF INCIDENT (SPILL, LEAK, ETC.): _____</b>				
Fire involved: [ ] YES [ ] NO				
(If fire is involved attach a copy of the fire report)				
<u>MATERIALS INVOLVED</u>	<u>UN/NA NO.</u>	<u>QUANTITY</u>	<u>HAZARD CLASS</u>	<u>NFPA CLASS</u>
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
<b>IV. PERSONNEL INVOLVED IN CLEAN-UP ACTIVITIES</b>				
<u>PERSONNEL/DEPT.</u>		<u>DECON METHOD/MEDICAL TREATMENT</u>		
_____	_____	_____		
_____	_____	_____		
_____	_____	_____		
_____	_____	_____		
_____	_____	_____		
_____	_____	_____		
_____	_____	_____		
<b>V. PERSONNEL CONTAMINATED NOT INVOLVED IN THE CLEANUP ACTIVITIES</b>				
<u>PERSONNEL/DEPT.</u>	<u>MATERIAL CONTACTED</u>	<u>DECON/MEDICAL TREATMENT</u>		
_____	_____	_____		
_____	_____	_____		
_____	_____	_____		

**Figure D-12**  
**WIPP Hazardous Materials Incident Report, Page 1 of 3**

<b>WIPP HAZARDOUS MATERIAL INCIDENT REPORT</b>		
Date: _____ Location: _____		
<b>VI. EQUIPMENT USED FOR CLEAN-UP AND CONTROL MEASURES</b>		
<u>EQUIPMENT/MATERIAL/PPE</u>	<u>QUANTITY</u>	<u>DISPOSITION (decon or replacement)</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
<b>VII. DESCRIPTION OF INCIDENT AND RESPONSE (including containment and control)</b>		
_____		
_____		
_____		
_____		
_____		
_____		
_____		
_____		
_____		
_____		
<b>VIII. ENVIRONMENTAL COMPLIANCE</b>		
Date: _____ Time: _____ of evaluation.		
Waste Category _____		
Disposition _____		
<u>ORGANIZATION</u>	<u>DATE</u>	<u>TIME</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____
EC Representative: _____		
Print name	Signature	Date

**Figure D-12 (Continued)**  
**WIPP Hazardous Materials Incident Report, Page 2 of 3**

<b>WIPP HAZARDOUS MATERIAL INCIDENT REPORT</b>			
Date: _____		Location: _____	
<b>IX. INITIAL NOTIFICATION BY CMRO</b>			
<u>DEPARTMENT</u>	<u>PERSON CONTACTED</u>	<u>TIME</u>	<u>NOTIFIED BY</u>
Facility Ops (FSM)	_____	_____	_____
Emerg. Mgmt (EST)	_____	_____	_____
EC	_____	_____	_____
Industrial Safety	_____	_____	_____
Facility Ops. (FM/FMD)	_____	_____	_____
_____	_____	_____	_____
CMRO: _____			
Print name	Signature	Date	
FSM: _____			
Print name	Signature	Date	
<b>X. CONTINGENCY PLAN IMPLEMENTATION</b>			
Contingency Plan implemented [ ]YES [ ]NO			
FSM: _____			
Print name	Signature	Date	
<b>XI. REVIEWS</b>			
Report submitted by: _____			
Print name	Signature	Date	
Emergency Management Manger: _____			
Print name	Signature	Date	
EC Manager: _____			
Print name	Signature	Date	
COMMENTS: _____			
_____			
_____			
_____			

**Figure D-12 (Continued)**  
**WIPP Hazardous Materials Incident Report, Page 3 of 3**

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**DRAWINGS**

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