

ATTACHMENT ~~F~~ D
RCRA CONTINGENCY PLAN

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ATTACHMENT-~~F~~ D
RCRA CONTINGENCY PLAN

TABLE OF CONTENTS

Introduction 1

D-1 General Information 1

 D-1a Disposal Phase Overview..... 3

 D-1b Waste Description 4

 D-1c Containers 5

 D-1d Description of Containers 5

 D-1e Description of Surface Hazardous Waste Management Units 5

 D-1e(1) CH Bay Operations..... 6

 D-1e(2) RH Complex Operations..... 6

 D-1e(3) Parking Area Container Storage Unit (Parking Area Unit) 7

 D-1f Off-Normal Events 7

 D-1g Containment 7

D-2 Response Personnel..... 8

D-3 Implementation..... 10

D-4 Emergency Response Method 12

 D-4a Notification..... 12

 D-4a(1) Initial Emergency Response and Alerting the RCRA Emergency
 Coordinator 13

 D-4a(2) Communication of Emergency Conditions to Facility Employees..... 14

 D-4a(3) Notification of Local, State, and Federal Authorities 15

 D-4a(4) Notification of the General Public 17

 D-4b Identification of Hazardous Materials 17

 D-4c Assessment of the Nature and Extent of the Emergency 18

 D-4d Control, Containment, and Correction of the Emergency 19

 D-4d(1) All Emergencies 19

 D-4d(2) Fire..... 21

 D-4d(3) Explosion 23

 D-4d(4) Spills 24

 D-4d(5) Decontamination of Personnel..... 25

 D-4d(6) Control of Spills or Leaking or Punctured Containers of CH and
 RH TRU Mixed Waste 25

 D-4d(7) Natural Emergencies 28

 D-4d(8) Roof Fall 29

 D-4d(9) Structural Integrity Emergencies..... 32

 D-4d(10) Emergency Termination Procedures 32

 D-4e Prevention of Recurrence or Spread of Fires, Explosions, or Releases 34

 D-4f Management and Containment of Released Material and Waste 35

 D-4g Incompatible Waste 37

 D-4h Post-Emergency Facility and Equipment Maintenance and Reporting 37

 D-4i Container Spills and Leakage..... 38

 D-4j Tank Spills and Leakage 38

D-4k	Surface Impoundment Spills and Leakage.....	38
D-5	Emergency Equipment.....	38
D-6	Coordination Agreements	38
D-7	Evacuation Plan	40
D-7a	Surface Evacuation On-site and Off-site Staging Areas.....	40
D-7b	Underground Assembly Areas and Egress Hoist Stations	41
D-7c	Plan for Surface Evacuation	42
D-7d	Plan for Underground Evacuation	42
D-7e	Further Site Evacuation	42
D-8	Required Reports	43
D-9	Location of the Contingency Plan and Plan Revision	43
	References.....	45

LIST OF TABLES

Table	Title
Table D-1	Hazardous Substances in Large Enough Quantities to Constitute a Level II Incident
Table D-2	Resource Conservation and Recovery Act Emergency Coordinators
Table D-3	Planning Guide for Determining Incident Levels and Response
Table D-4	Physical Methods of Mitigation
Table D-5	Chemical Methods of Mitigation
Table D-6	Emergency Equipment Maintained at the Waste Isolation Pilot Plant
Table D-7	Types of Fire Suppression Systems by Location
Table D-8	Hazardous Release Reporting, Federal
Table D-9	Hazardous Release Reporting, State of New Mexico

LIST OF FIGURES

Figure	Title
Figure D-1	WIPP Surface Structures
Figure D-1a	Legend to Figure D-1
Figure D-2	Spatial View of the WIPP Facility
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-7	Underground Diesel Fuel-Station Area Fire-Protection System
Figure D-8	WIPP On-Site Assembly Areas and WIPP Staging Areas
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)
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)
Figure D-11a	Waste Handling Building Pre-Fire Survey (Second Floor - Fire Hydrant/Post Indicator Location)
Figure D-12	WIPP Hazardous Materials Incident Report, Page 1 of 3

LIST OF DRAWINGS

Drawing	Title
41-F-087-014	Waste Handling Building 411 Fire Water Collection System Flow Diagram

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ATTACHMENT-~~F~~ D

RCRA CONTINGENCY PLAN

Introduction

The WIPP facility is owned and co-operated by the U.S. Department of Energy (**DOE**) and co-operated by its designated Management and Operating Contractor (**MOC**) (Permit-~~Condition~~ Section-~~I.D-3~~ 1.5.3).

This Contingency Plan was prepared in accordance with the Resource Conservation and Recovery Act (**RCRA**) requirements codified in Title 20 of the New Mexico Administrative Code, Chapter 4.1.500 (20.4.1.500 NMAC, incorporating 40 CFR §264.50 to §264.56), “Contingency Plan and Emergency Procedures,” and submitted in compliance with 20.4.1.900 NMAC (incorporating 40 CFR §270.14(b)(7)). The purpose of this document is to define responsibilities, to describe coordination of activities, and to minimize hazards to human health and the environment from fires, explosions, or any sudden or nonsudden release of hazardous waste, or hazardous waste constituents to air, soil, or surface water (20.4.1.500 NMAC (incorporating 40 CFR §264.51 [a])). This plan consists of descriptions of processes and emergency responses specific to hazardous substances, contact-handled (**CH**) and remote-handled (**RH**) transuranic (**TRU**) mixed waste and other hazardous waste handled at the WIPP facility.

FD-1 General Information

The WIPP facility is located 26 miles (mi) (42 kilometers [km]) east of Carlsbad, in Eddy County in southeastern New Mexico, and includes an area of 10,240 acres (ac) (4,144 hectares [ha]). The facility is located in an area of low-population density, with fewer than 30 permanent residents living within a 10 mi (16 km) radius of the facility. The area surrounding the facility is used primarily for grazing, potash mining, and mineral exploration. Resource development that would affect WIPP facility operations or the long-term integrity of the facility is not allowed within the 10,240 ac (4,144 ha) that have been set aside for the WIPP Project.

The WIPP facility is designed to receive containers of TRU waste, which will be transported to the WIPP facility from the ten major and other minor DOE TRU mixed waste generator and/or storage sites. The waste will be emplaced in the bedded salt of the Salado Formation, 2,150 feet (ft) (655 meters [m]) below ground surface.

As a geologic facility for the management of TRU mixed waste, the WIPP repository is regulated as a “miscellaneous unit,” as defined under 20.4.1.500 NMAC (incorporating 40 CFR §264.601 to §264.603). The areas at the WIPP facility subject to this permit include the surface container storage areas in the Waste Handling Building (**WHB**) Container Storage Unit (**WHB Unit**) and the Parking Area Container Storage Unit (**Parking Area Unit**), located south of the WHB, and the areas below ground in which waste will be emplaced.

The WIPP facility includes other surface structures, shafts, and underground areas (Figures-~~F~~ D-1, ~~F~~ D-2, and ~~F~~ D-3). Surface structures other than the WHB, that support TRU mixed waste management include:

Exhaust Filter Building - houses the filter banks to which the underground ventilation can be diverted in the unlikely event of an underground release of radionuclides.

1 Guard and Security Building - houses the facility security personnel and communications
2 equipment necessary for them to perform their duties. Section ~~F.D~~-4a specifies the duties
3 of 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 ~~F.D~~-6 describes
9 emergency equipment and associated locations.

10 Support Building - houses the Central Monitoring Room (see section ~~F.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 ~~F.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 ~~F.D~~-3) is
39 provided in Table ~~F.D~~-1. In addition to TRU mixed waste, these are the only hazardous
40 substances currently on site which, if spilled, may be of sufficient impact to cause this
41 Contingency Plan to be implemented. Magnesium Oxide (**MgO**) is stored on-site in large
42 quantities. It is used as backfill in the waste emplacement rooms as a pH buffer. The pH buffer
43 will limit the solubility of radionuclides after the underground rooms are filled and closed. MgO is
44 not a hazardous substance, a release of MgO will not create hazardous waste and poses no

1 threat to human health or the environment, and is therefore not addressed in the Contingency
2 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 FD-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 FD-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,¹ 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 FD-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 ~~B,C~~, Section ~~B,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 FD-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 (324-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 ft³ (1.88 m³) 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 FD-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 (ft²) (7,804 square meters [m²]) of which

¹ 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.

43,554 ft² (4,047 m²) are designated as the WHB Unit for TRU mixed waste management. Within the WHB Unit, 26,151 ft² (2,430 m²) are designated for the waste handling and container storage of CH TRU mixed waste and 17,403 ft² (1,617 m²) are designated for the handling and storage of RH TRU mixed waste. These areas are being permitted as container storage units. The concrete floors within the WHB Unit are sealed with an impermeable coating that has excellent resistance to the chemicals in TRU mixed waste and, consequently, provide secondary containment for TRU mixed waste. In addition, a Parking Area Unit south of the WHB will be used for storage of waste in sealed shipping containers awaiting unloading. This area is also being permitted as a container storage unit. The sealed shipping containers provide secondary containment in this hazardous waste management unit (**HWMU**).

FD-1e(1) CH Bay Operations

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

In addition, four Contact-Handled Packages, containing up to 640 ft³ of CH TRU waste in containers, may occupy positions at the TRUPACT-II Unloading Docks (**TRUDOCK**).

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

FD-1e(2) RH Complex Operations

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

Single RH TRU mixed waste canisters are unloaded from the RH-TRU 72-B casks in the Transfer Cell of the RH Complex where they are transferred to facility casks. Drums of RH TRU mixed waste will be transferred remotely from the CNS 10-160B cask, into the Hot Cell, and loaded into a canister. Storage in the Hot Cell occurs in either drums or canisters. A maximum of 12 55-gallon drums of RH TRU mixed waste and one 55-gallon drum of derived waste (94.9 ft³ (2.7 m³)) may be stored in the Hot Cell. Except for the derived waste drum, individual 55-gallon drums may not be stored in the Hot Cell for more than 25 days. The Transfer Cell houses 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 ft³ (0.89 m³)) 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 ft³ (0.89 m³)) 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 FD-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 ~~MA~~ A1-2 is defined as the Parking Area Container Storage Unit. This area
15 provides storage for up to 6,734 ft³ (191 m³) of CH and/or RH TRU mixed waste contained in up
16 to 40 loaded Contact-Handled Packages and 8 Remote-Handled Packages. Secondary
17 containment 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 ~~Condition Section~~ III.A.2.c.3.1.2.3 and III.A.2.d.3.1.2.4 are met. No
21 more than 50 Contact-Handled and 12 Remote-Handled Packages may be stored in the Parking
22 Area Storage Unit.

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

32 FD-1f Off-Normal Events

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

36 FD-1g Containment

37 The WHB Unit has concrete floors, which are sealed with a coating designed to resist all but the
38 strongest oxidizing agents. Such oxidizing agents do not meet the TSDF-WAC and will not be
39 accepted in TRU mixed waste at the WIPP facility. Therefore, TRU mixed wastes pose no
40 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 FD-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 FD-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 FD-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 ~~F 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 FD-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 ~~F 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 ~~F~~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 ~~F~~
14 D-1 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 ~~F~~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.

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

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

FD-4 Emergency Response Method

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

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

FD-4a Notification

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

1 FD-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 ~~FD~~-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 ~~F~~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 ~~F~~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 ~~F~~
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 ~~F~~D-6), as well as the use of specialized response teams available through various
26 | State 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 | ~~F~~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.

- 40 | • Surface Evacuation Signal

1 The evacuation signal is a yelp² tone and is manually activated by the CMRO when
2 needed. The CMRO shall follow the evacuation signal with verbal instructions and
3 ensure the Site Notification System (i.e., the plectron) has been activated.

4 • Underground Evacuation Warning System

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

13 • Contingency Evacuation Notification

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

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

24 ~~FD~~-4a(3) Notification of Local, State, and Federal Authorities

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

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

² 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 FD-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 **Carlsbad Field Office (DOE/CBFO)** Management representative is
16 always on-call. This person is 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 **/CBFO** office, where formal press conferences
23 are conducted.

24 FD-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 ~~F 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 ~~F 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 ~~F 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 ~~F 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 FD-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 FD-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 FD-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 ~~F D~~-4, ~~F 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 FD-4d(2) Fire

30 The incident level emergency response identified in Section ~~F 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 F D-10 and F 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 F 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.

- Airborne radioactivity samples may be obtained during a fire involving radioactive materials, using portable and fixed air samplers. Response personnel will be adequately protected from airborne radioactivity by their PPE required for fire response.

9. Only materials compatible with the waste may be used for fire response.

10. When cleanup has proceeded to the point of finding no radionuclide activity, then the “swipe” can be sent for analysis for hazardous constituents. The use of these confirmation analyses is as follows:

- For waste containers, once radiologically clean and free of any visible evidence of hazardous waste spills on the container, it will be placed in the underground without further action.
- For area contamination, once the area is cleaned up and is shown to be radiologically clean, it will be sampled for the presence of hazardous waste residues (for further information see Section ~~F D~~-4d, Emergency Termination Procedures).

11. Fire suppression materials used in response to incidents will be retained on-scene, where an evaluation will be performed to determine appropriate recovery and disposal methods.

~~F D~~-4d(3) Explosion

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

1. The area will be evacuated immediately.
2. The CMRO will immediately notify the appropriate emergency response personnel and the RCRA Emergency Coordinator about the explosion.
3. Injured personnel will be treated and transported as necessary.
4. The RCRA Emergency Coordinator will remain in contact with responding personnel to advise them of the known hazards involved and the degree and location of the explosion and associated fires.
5. The RCRA Emergency Coordinator will be in command and may accept and evaluate the advice of WIPP facility personnel and emergency response organization members, but retains the overall responsibility. Selections of methods and tactics of response are the responsibility of the Incident Commander.
6. The RCRA Emergency Coordinator will be in overall control of WIPP facility emergency response efforts until the emergency is terminated.
7. When cleanup has proceeded to the point of finding no radionuclide activity, then 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 FD-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 FD-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 FD-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[®], Simple Green[®], Windex[®], citric acid, Bartlett Strip Coat[®], and high pressure CO₂
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 cm² for alpha radioactivity and < 200 dpm/100 cm² 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[®], Simple Green[®], Windex[®], citric acid, Bartlett Strip Coat[®], and high pressure CO₂
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 cm² for alpha radioactivity and < 200 dpm/100
17 cm² 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 ~~FD~~-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 FD-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 FD-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 FD-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 FD-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 FD-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 ~~F~~D-4g, Incompatible Waste, and ~~F~~
3 D-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 FD-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
28 so small, it is not likely to trigger an Incident Level II or III.) When necessary samples of the
29 waste will be collected and analyzed to determine the presence of any hazardous
30 characteristics and/or hazardous waste constituents; this information is needed to evaluate
31 disposal options. EPA-approved sampling and analytical methods will be utilized. Hazardous
32 wastes will be transferred to the Hazardous Waste Staging Area. The staging area is used to
33 store hazardous waste awaiting transfer to an off-site treatment or disposal facility in
34 accordance with applicable regulations (e.g., 20.4.1 NMAC and DOT regulations). The
35 Hazardous Waste Staging Area for nonradioactive hazardous waste is Buildings 474A and
36 474B, as shown in Figure ~~F~~D-1. Nonradioactive hazardous wastes will be shipped off-site for
37 disposal at a RCRA permitted 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 ~~M, M1, and M2~~ A1 and A2 describe the HWMUs in detail,
13 including the facility description, support structures and equipment, security, waste handling
14 areas, ventilation, and 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 ~~FD~~-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 ~~F~~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 ~~FD~~-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.

FD-4i Container Spills and Leakage

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

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

FD-4j Tank Spills and Leakage

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

FD-4k Surface Impoundment Spills and Leakage

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

FD-5 Emergency Equipment

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

FD-6 Coordination Agreements

The Permittees have established MOUs with off-site emergency response agencies for 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 FD-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 FD-7a Surface Evacuation On-site and Off-site Staging Areas

42 Figure FD-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 ~~F 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 ~~F 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 ~~F D~~-8. These are used for building or area
24 evacuations as determined by the RCRA Emergency Coordinator.

25 ~~FD~~-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 ~~F 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 | FD-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 | FD-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 FD-
15 | 5). Brass tags will be collected from personnel at the hoist collar on the surface, and taken to
16 | the Underground Controller, who functions as an Office Warden. When all brass tags are
17 | accounted 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 | FD-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 FD-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 FD-8 and FD-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 FD-4e, FD-4f, FD-4g, and FD-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 FD-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 FD-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 FD-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.

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

Chemical Description	Building Location	Hazard Category
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 Condition III.C.1 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 F D-2
Resource Conservation and Recovery Act Emergency Coordinators

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

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

¹ 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.

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

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Table F 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 F 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 F 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 ~~F~~ D-5
Chemical Methods of Mitigation

Method	Chemical		Radiological	
	Liquid	Solid	Liquid	Solid
Neutralization	Yes	Yes ⁽¹⁾	No	No
Solidification	Yes	No	Yes ⁽²⁾	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 F 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,
Spill Response		
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

Equipment	Description and Capabilities	Location
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
Medical Resources		
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)
Fire Detection and Fire Suppression Equipment		
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

Equipment	Description and Capabilities	Location
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
Personal Protection Equipment		
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
Emergency Medical Equipment		
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

Equipment	Description and Capabilities	Location
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
General Plant Emergency Equipment		
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 F 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 F 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 F 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 F 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)
Title 20 of the New Mexico Administrative Code, Chapter 4, Part 1 (20.4.1.500 and 600 NMAC), Subpart V and Subpart VI	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, Subpart V and Subpart VI	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.

1

FIGURES

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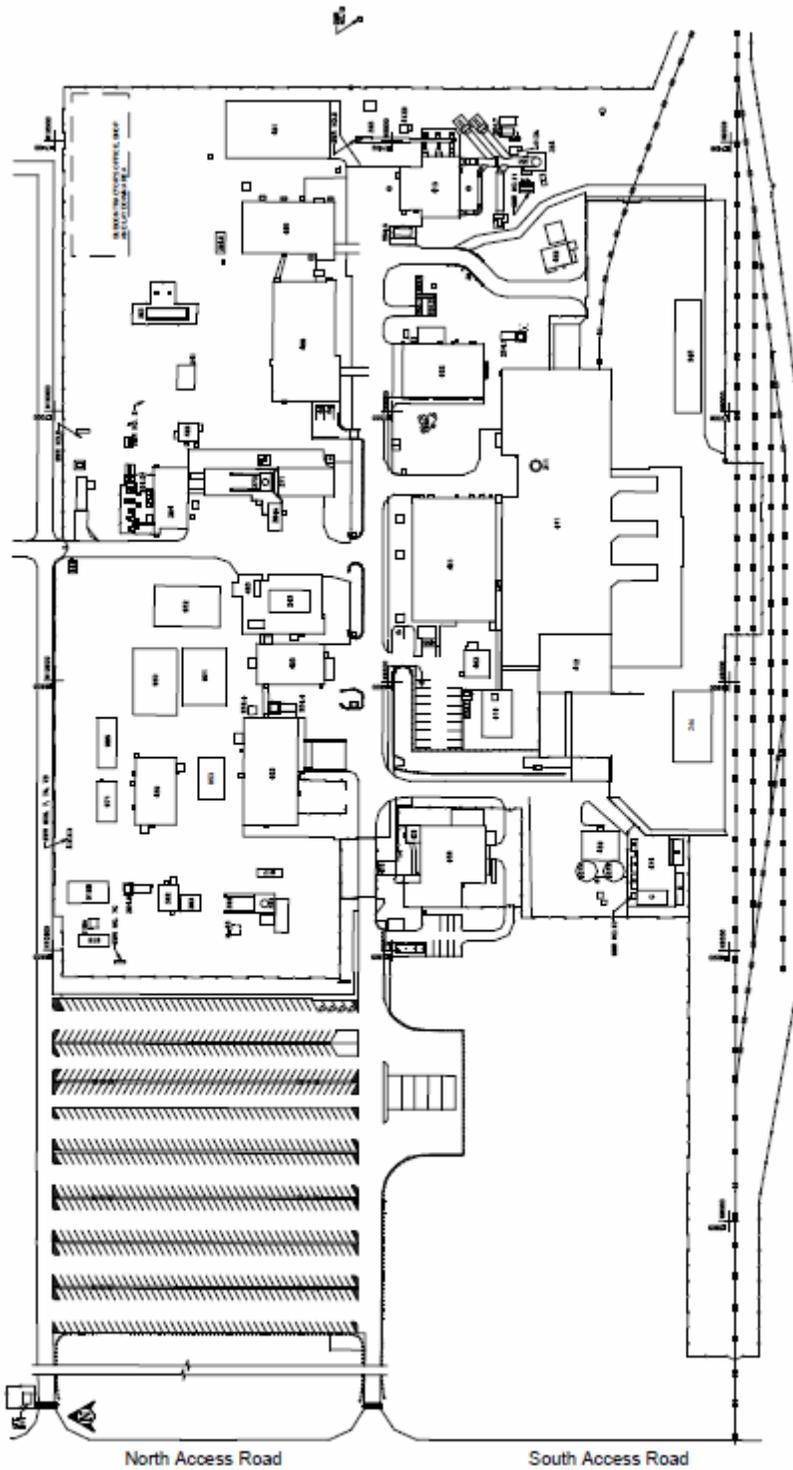


Figure **F.D-1**
WIPP Surface Structures

Waste Isolation Pilot Plant
 Draft Hazardous Waste Permit
 April 27/June 29, 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	#486	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 SAFETY & EMERGENCY SERVICES FACILITY	#917	AIS MONITORING
#254.4	AREA SUBSTATION NO. 4 25P-SW15.4	#452	WAREHOUSE/SHOPS BUILDING	#918	VOC TRAILER
#254.5	AREA SUBSTATION NO. 5 25P-SW15.5	#453	AUXILIARY WAREHOUSE BUILDING	#918A	VOC AIR MONITORING STATION
#254.6	AREA SUBSTATION NO. 6 25P-SW15.6	#455	WATER PUMPHOUSE	#918B	VOC LAB TRAILER
#254.7	AREA SUBSTATION NO. 7 25P-SW15.7	#456	WATER TANK 25-D-001B	#950	WORK CONTROL TRAILER
#254.8	AREA SUBSTATION NO. 8 25P-SW15.8	#457N	WATER TANK 25-D-001A	#951	PROCUREMENT/PURCHASING TRAILER
#254.9	480V SWITCHGEAR (25P-SWGO4/9)	#457S	GUARD AND SECURITY BUILDING	#952	MODULAR OFFICE COMPLEX
#255.1	BACK-UP DIESEL GENERATOR #1 25-PE 503	#458	CORE STORAGE BUILDING	#953	HUMAN RESOURCES TRAILER
#255.2	BACK-UP DIESEL GENERATOR #2 25-PE 504	#459	COMPRESSOR BUILDING	#971	PUBLICATIONS & PROCEDURES TRAILER
#256.4	SWITCHBOARD #4 (25P-SBD04/4)	#463		#986	
#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/MINCH 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 F D-1a
 Legend to Figure F D-1

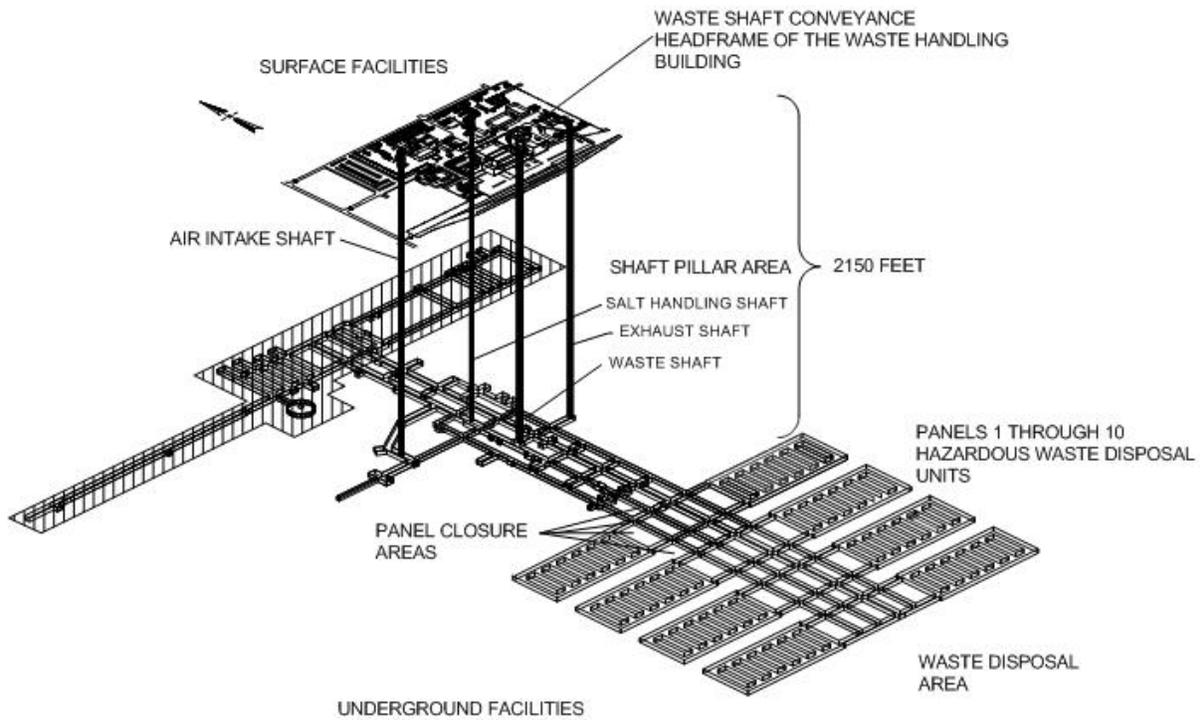


Figure F D-2
Spatial View of the WIPP Facility

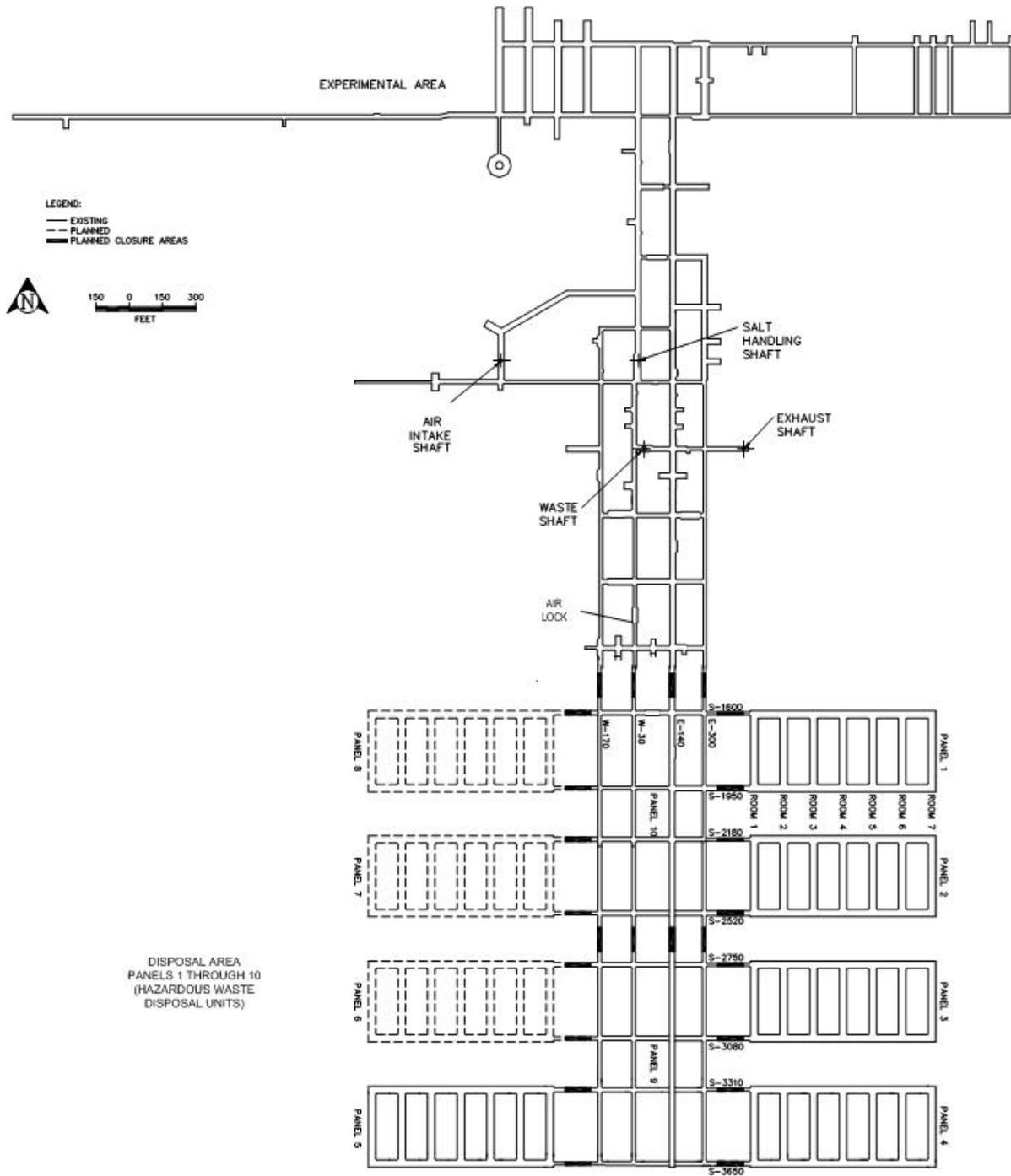


Figure F D-3
WIPP Underground Facilities

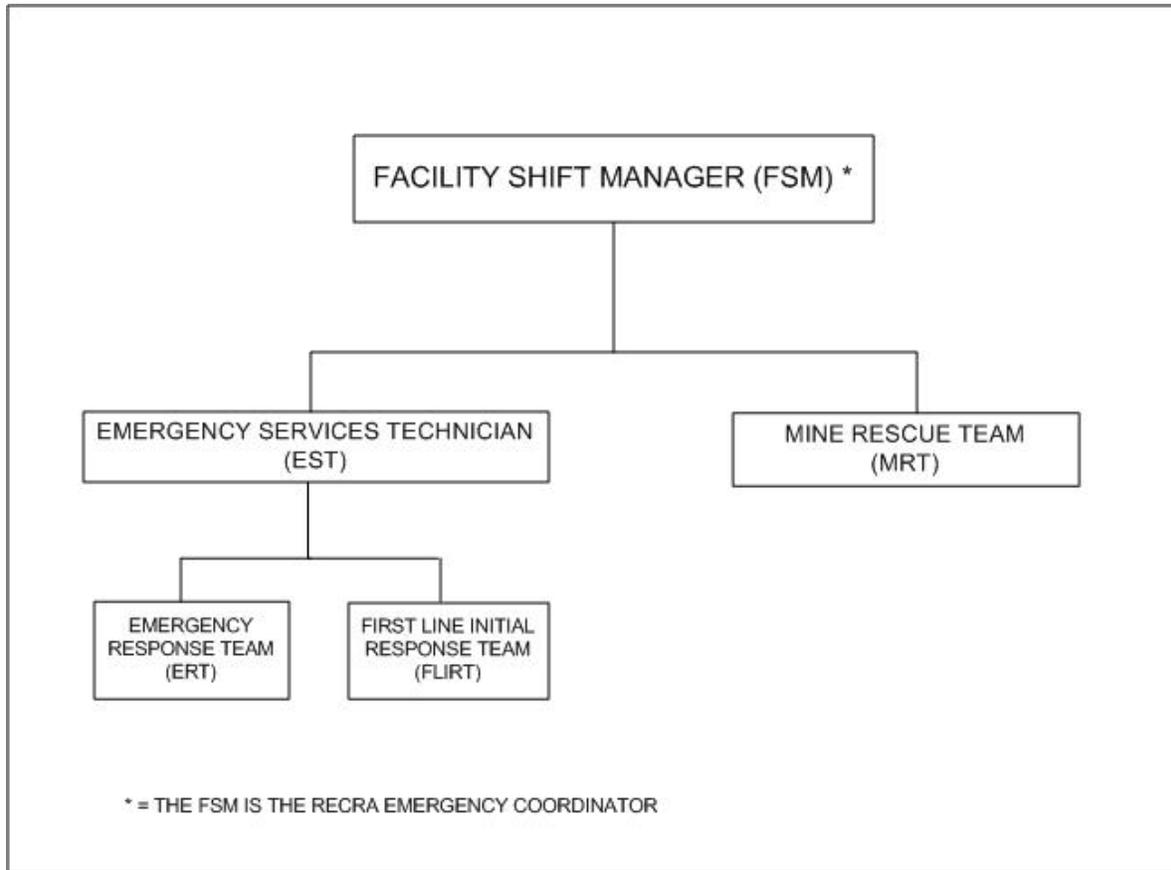


Figure F D-4
Direction and Control Under Emergency Conditions in Which the Plan Has Been Implemented

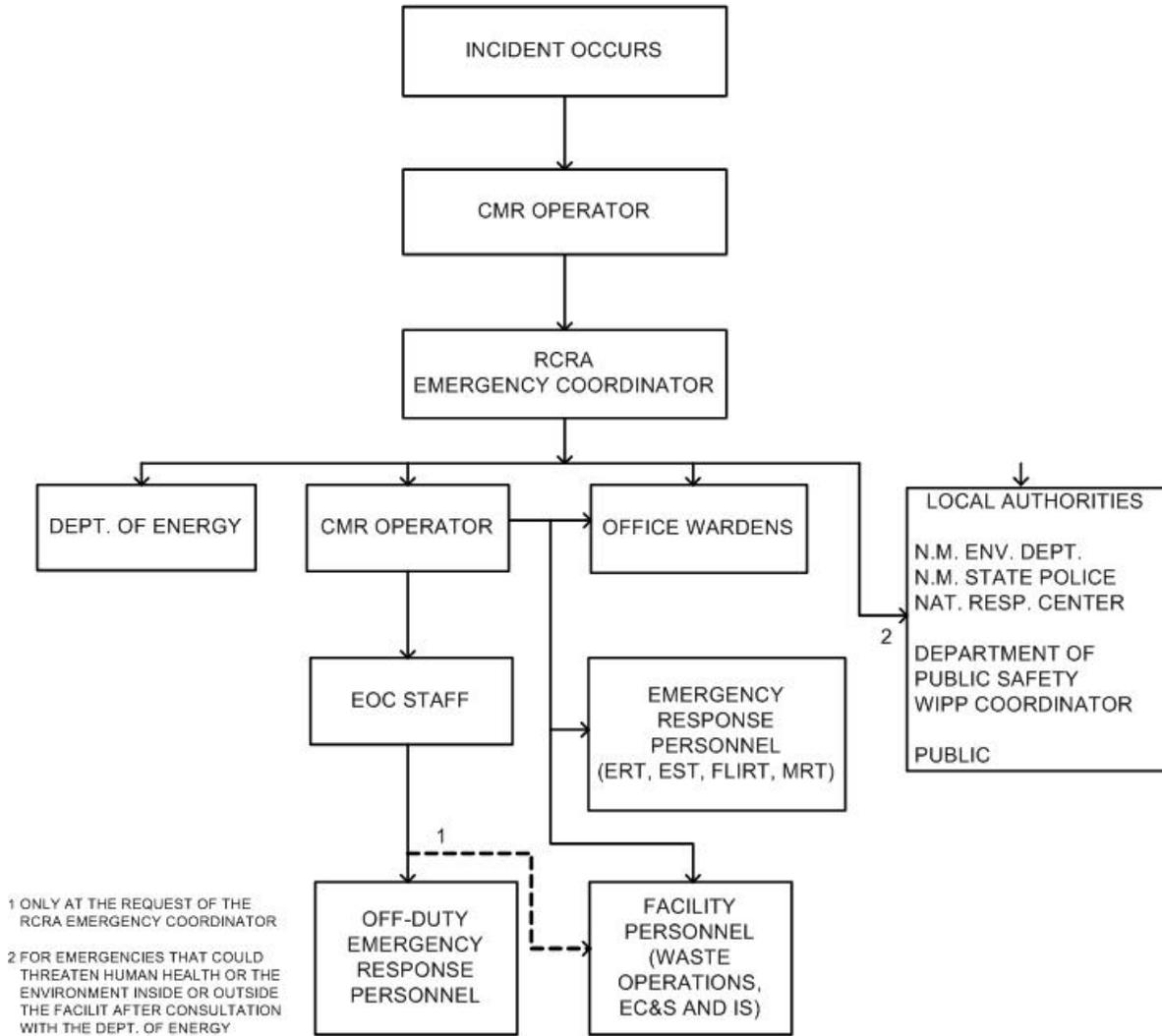


Figure F D-4a
WIPP Facility Emergency Notifications

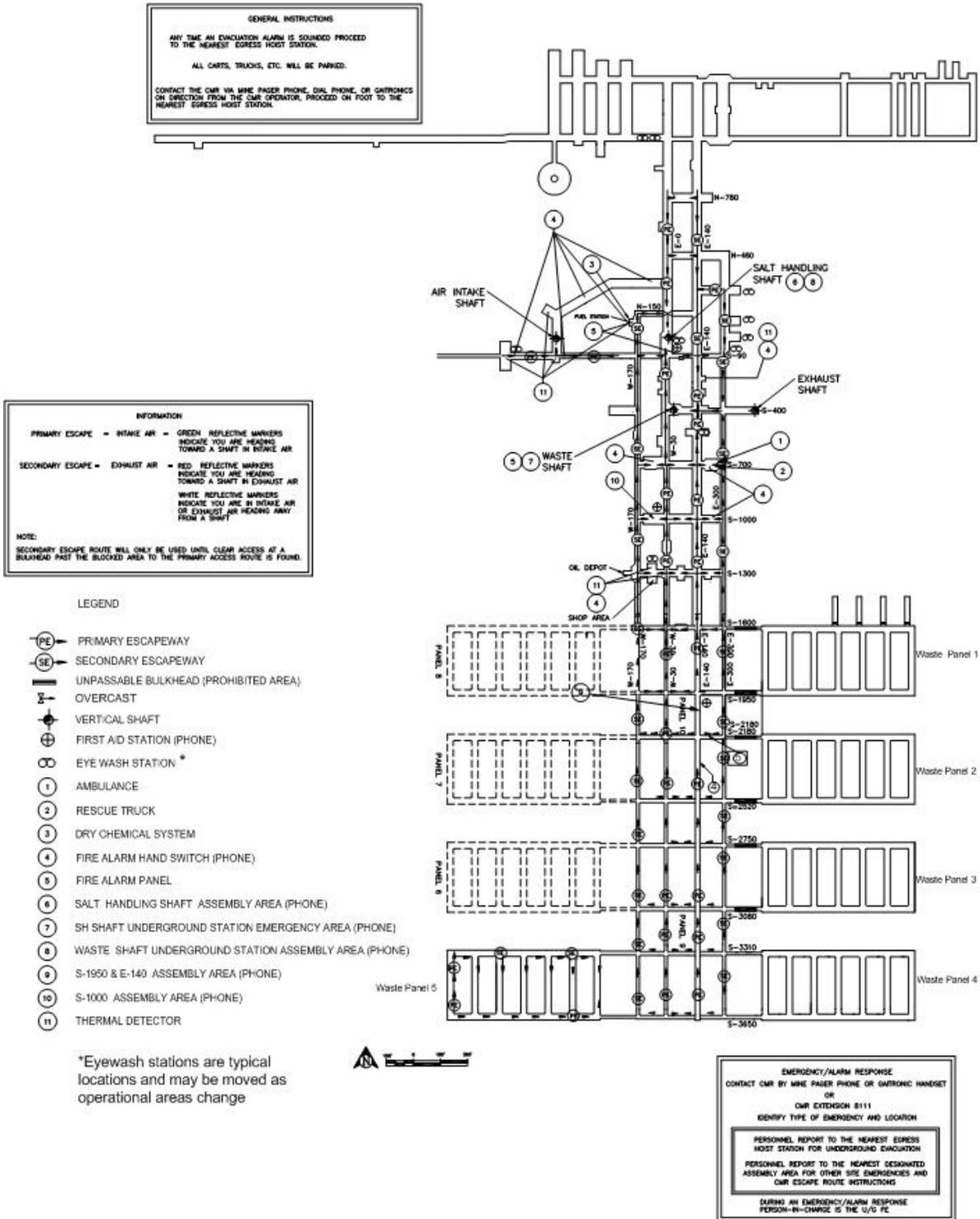


Figure F D-5
Underground Emergency Equipment Locations and Underground Evacuation Routes

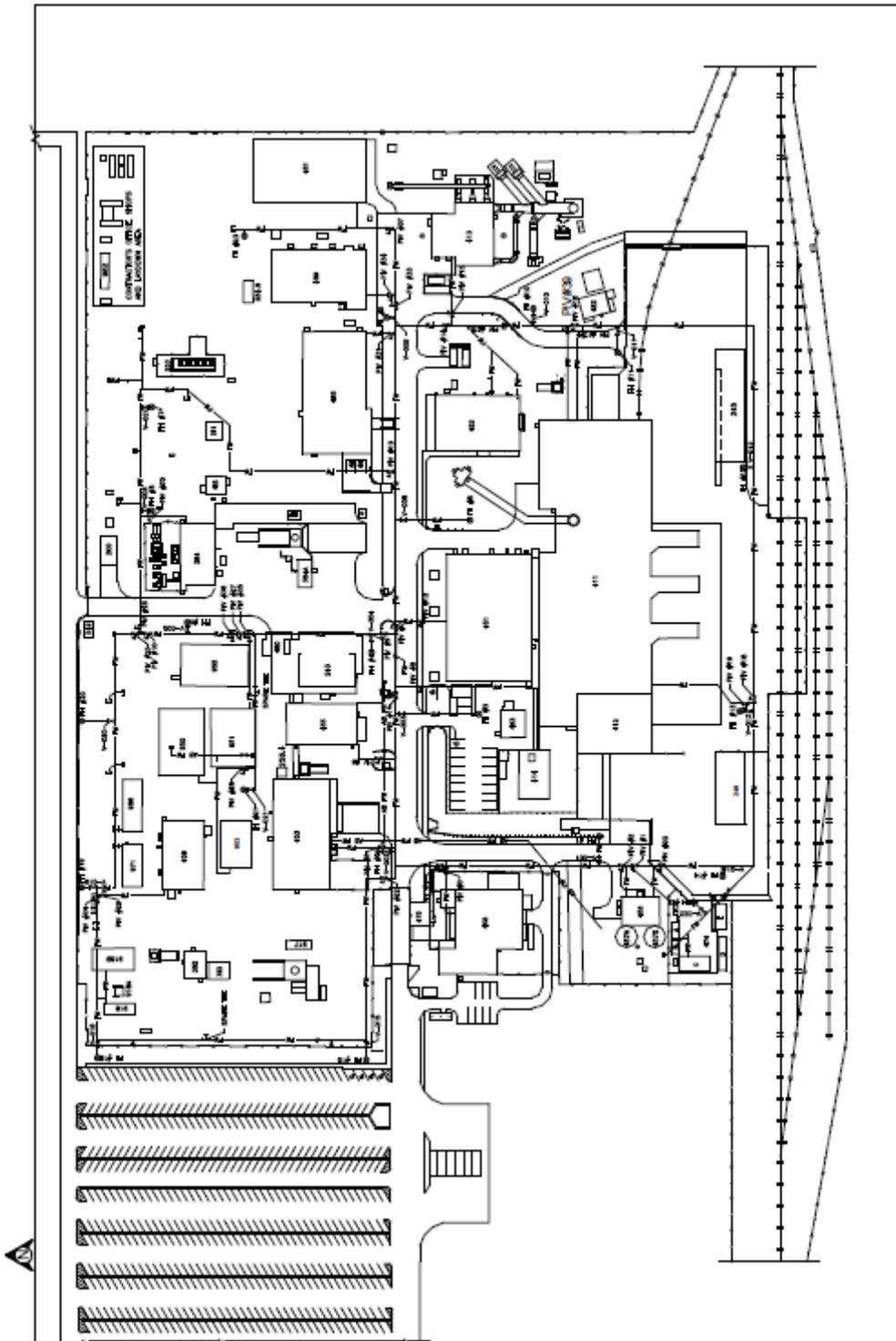


Figure **F D-6**
Fire-Water Distribution System

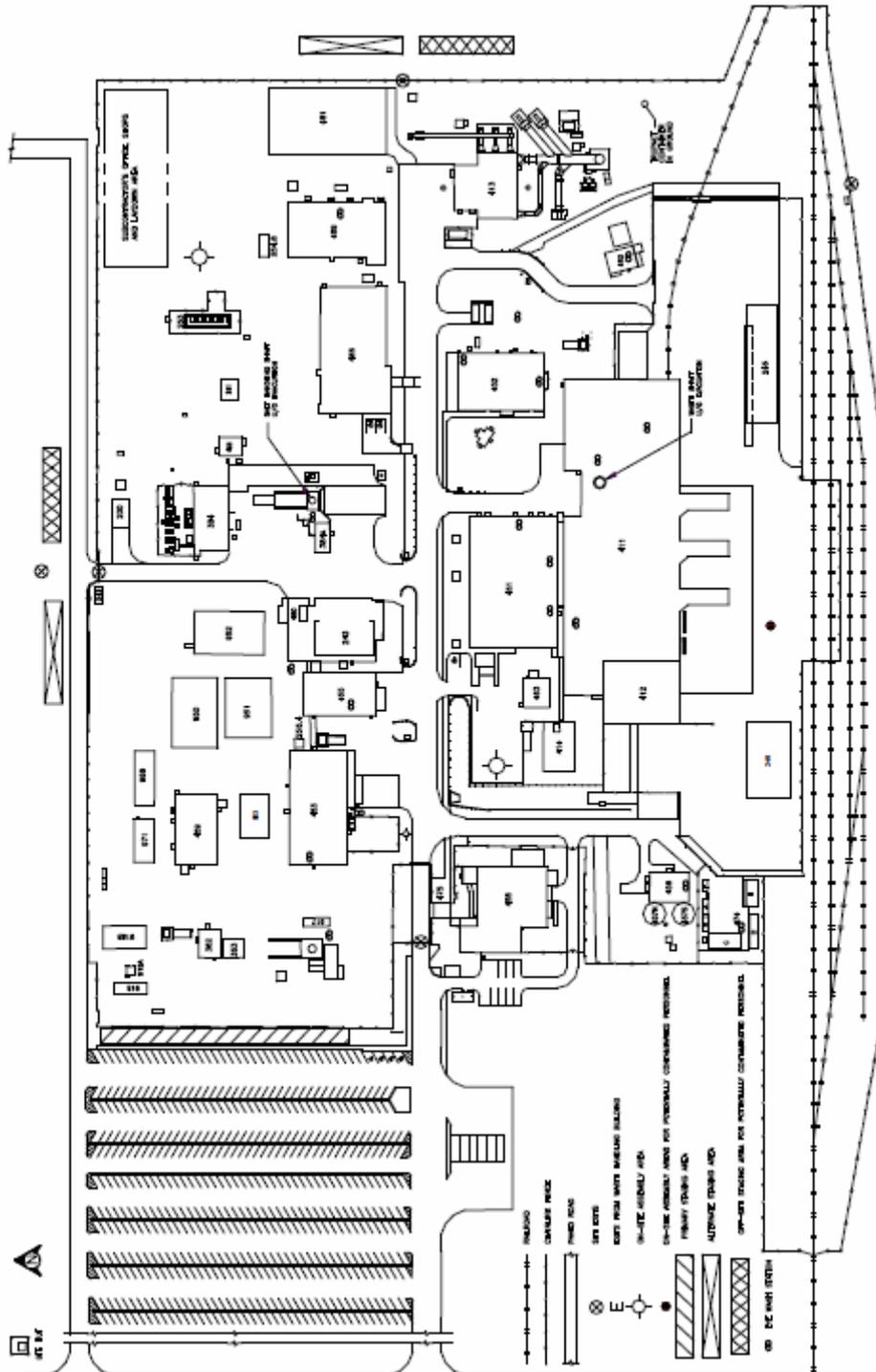
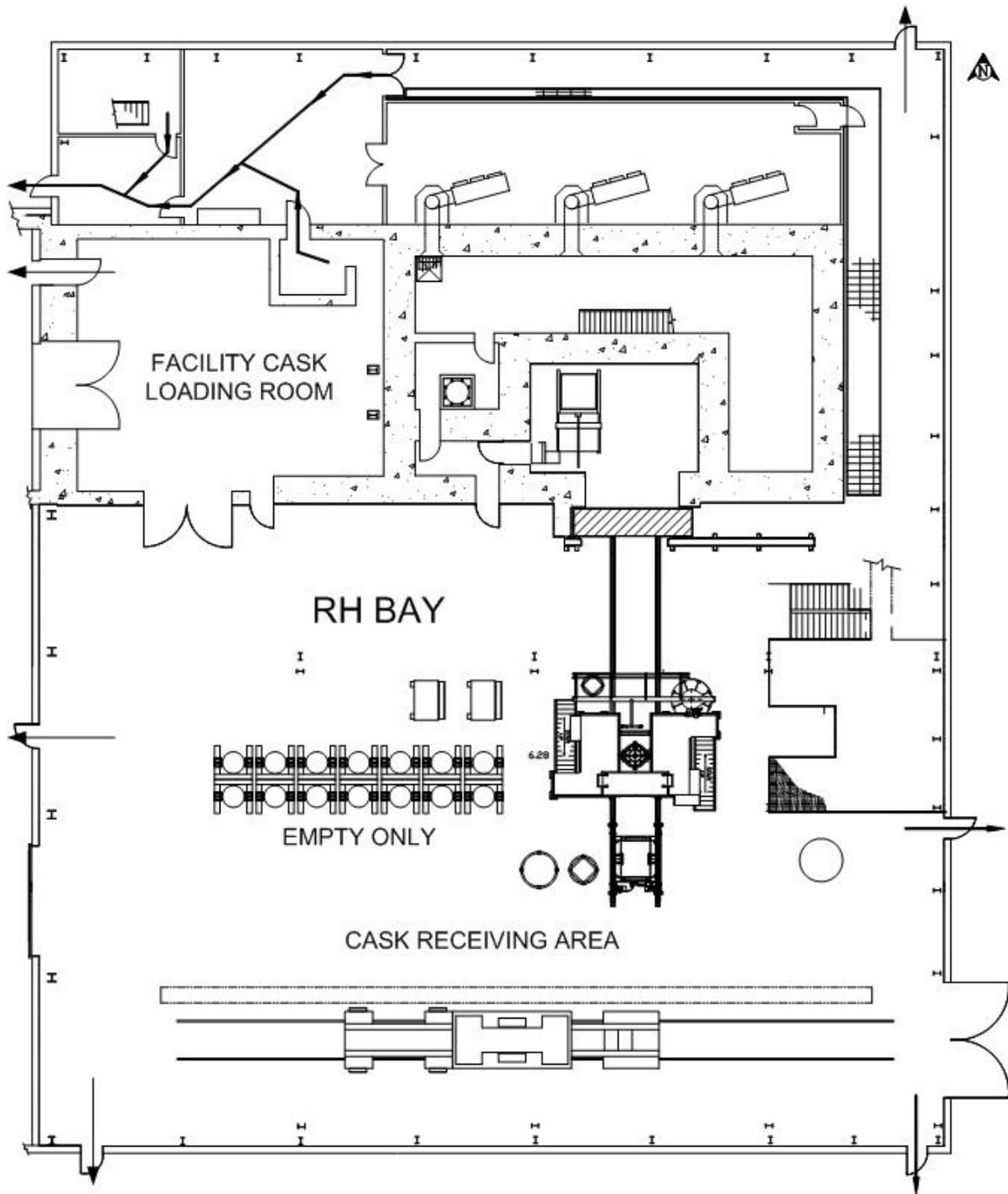


Figure F D-8
 WIPP On-Site Assembly Areas and WIPP Staging Areas



This illustration for
Information Purposes Only.

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

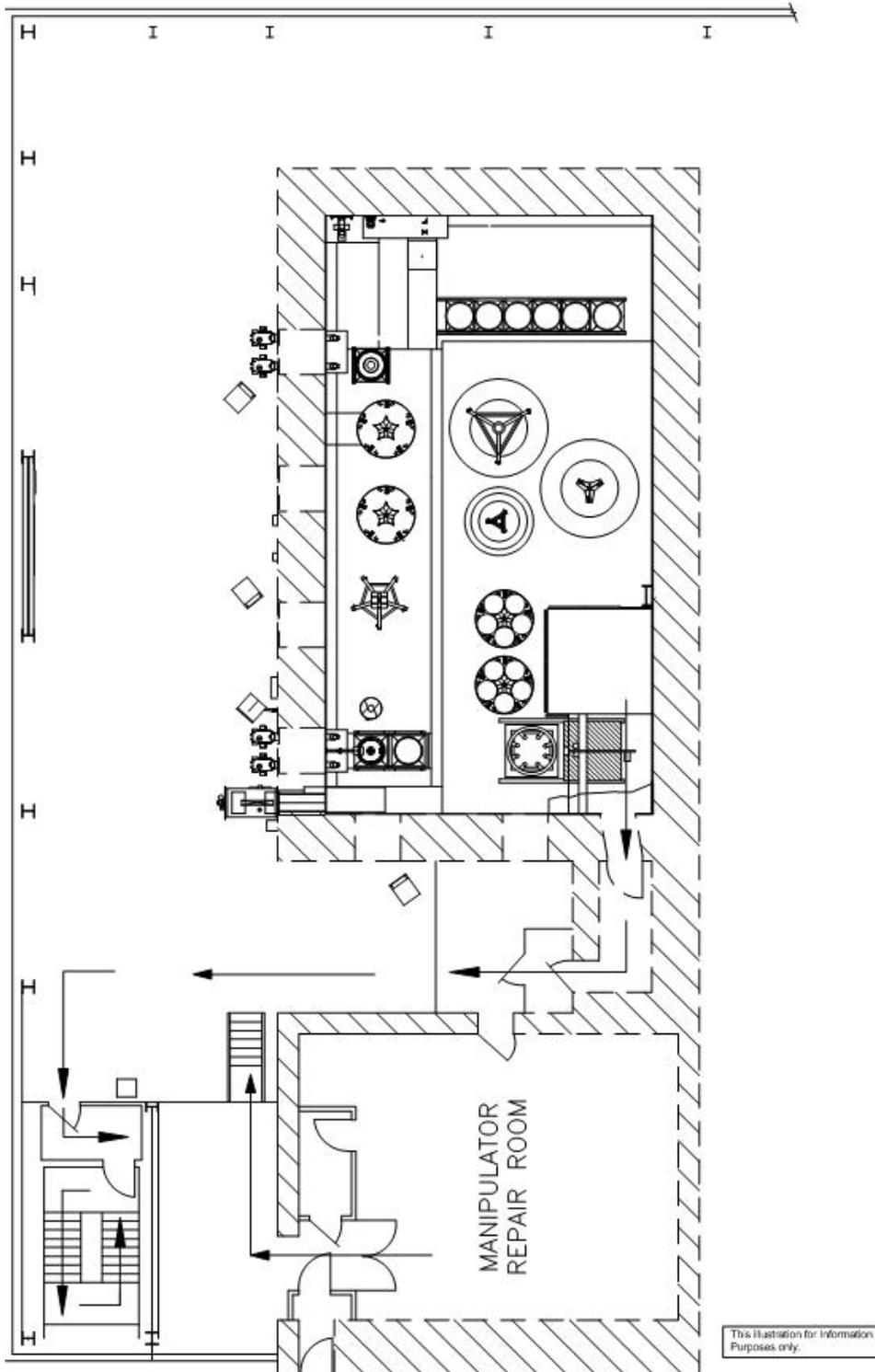


Figure ~~F~~~~D~~-8b
RH Bay Hot Cell Evacuation Route

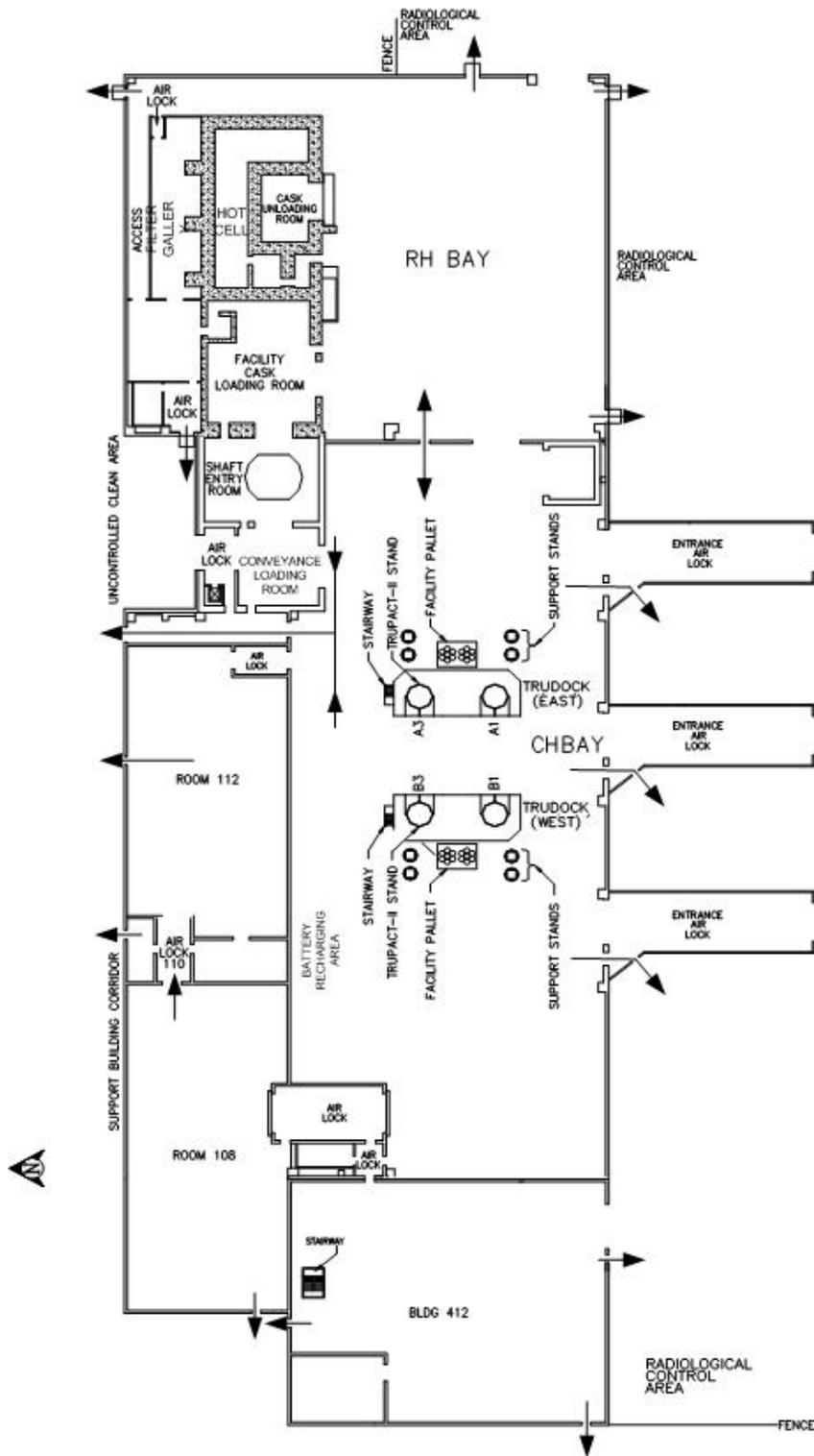


Figure F D-8c
Evacuation Routes in the Waste Handling Building

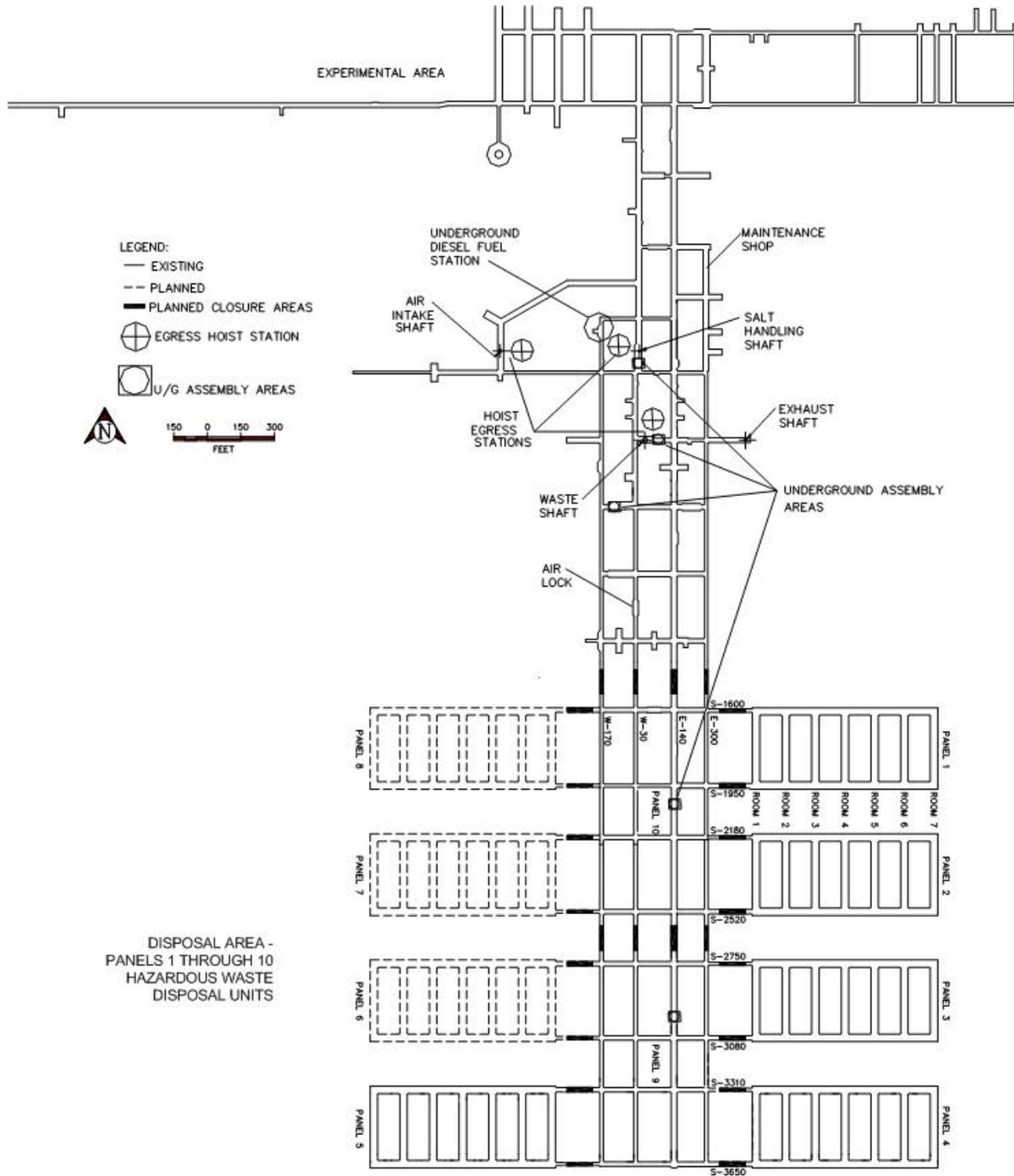


Figure F D-9
Designated Underground Assembly Areas

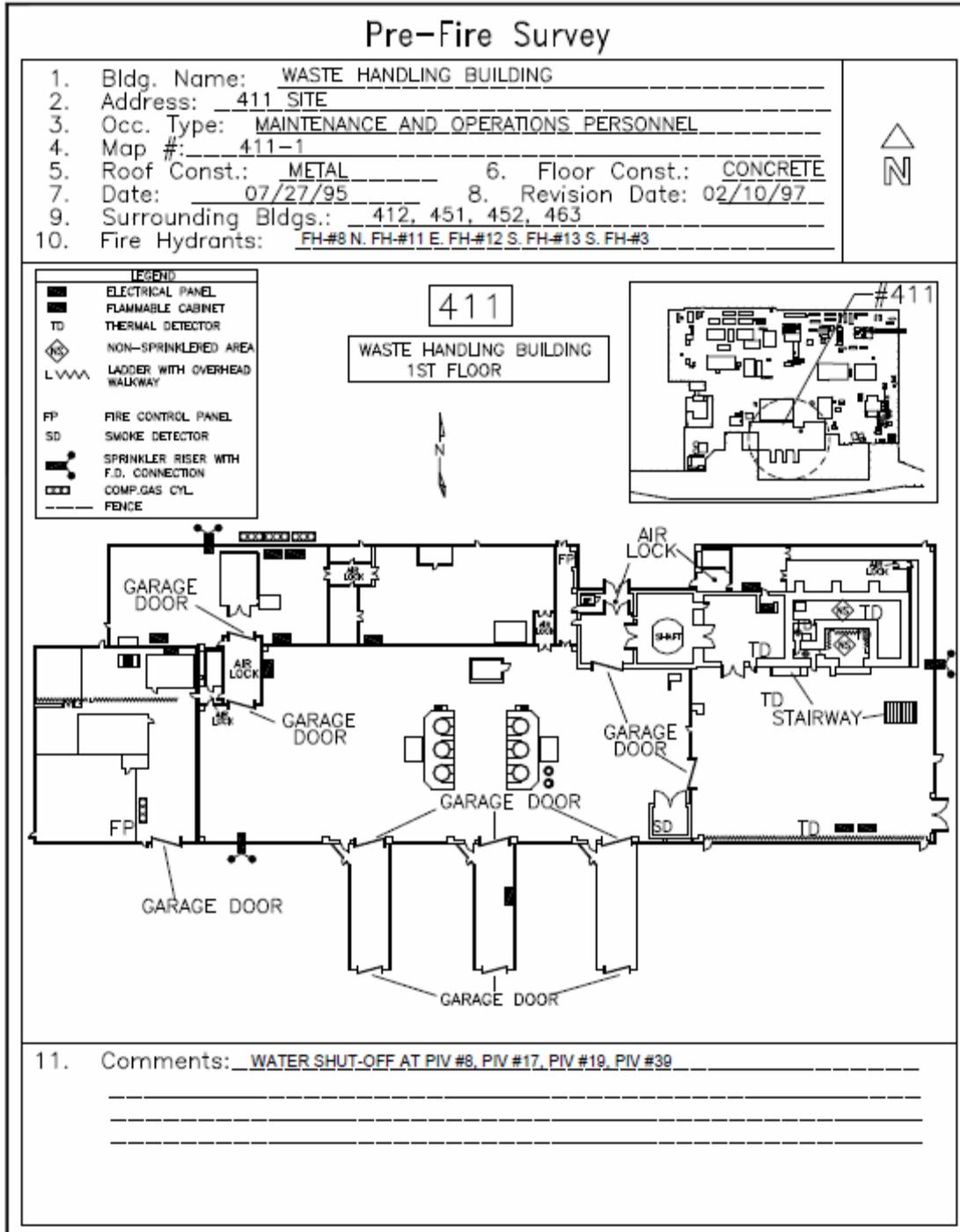


Figure F_D-10
Waste Handling Building Pre-Fire Survey (First Floor)

Pre-Fire Survey Cont.

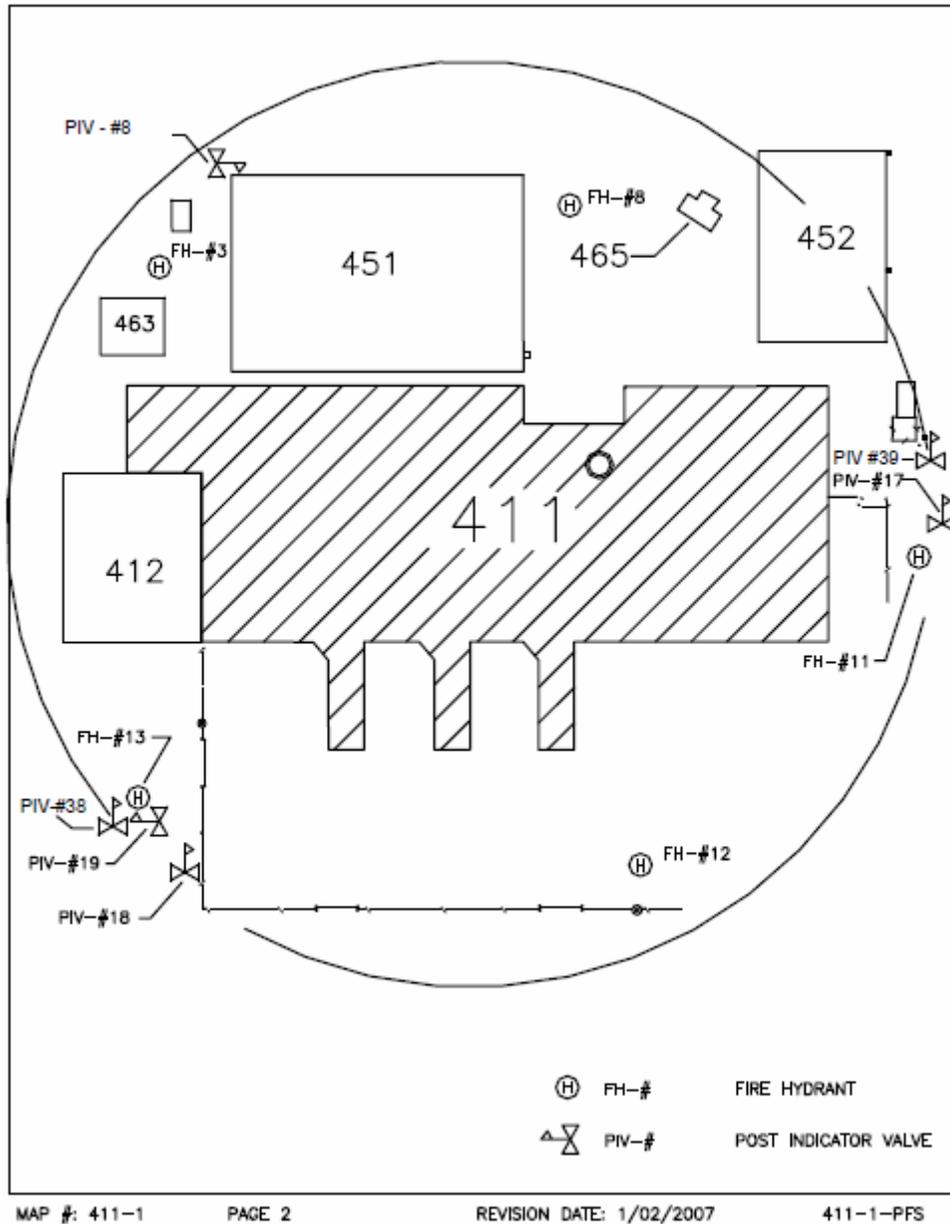


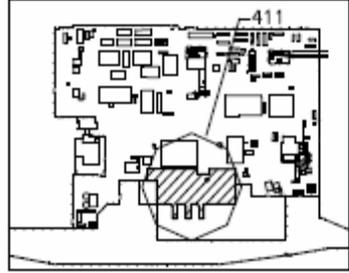
Figure F D-10a
Waste Handling Building Pre-Fire Survey
(First Floor - Fire Hydrant/Post Indicator Location)

Pre-Fire Survey

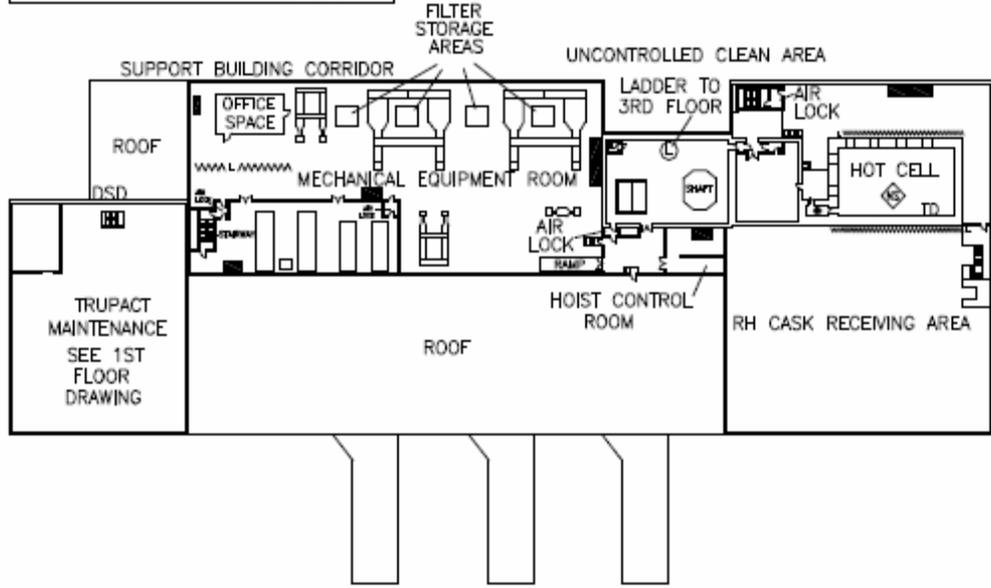
1. Bldg. Name: <u>WASTE HANDLING BUILDING</u> 2. Address: <u>411 SITE</u> 3. Occ. Type: <u>MAINTENANCE AND OPERATIONS PERSONNEL</u> 4. Map #: <u>411-2</u> 5. Roof Const.: <u>METAL</u> 6. Floor Const.: <u>CONCRETE</u> 7. Date: <u>07/27/95</u> 8. Revision Date: <u>02/11/97</u> 9. Surrounding Bldgs.: <u>412, 451, 452, 463</u> 10. Fire Hydrants: <u>FH-#8 N, FH-#11 E, FH-#12 S, FH-#13 S, FH-#3</u>	
--	---

411
 WASTE HANDLING BUILDING (2ND FLOOR)





LEGEND	
■	ELECTRICAL PANEL
■	FLAMMABLE CABINET
TD	THERMAL DETECTOR
◇	NONSPRINKLERED AREA
LW	LADDER & WALKWAY
DSD	INDUCT SMOKE DETECTOR



11. Comments: WATER SHUT-OFF AT PIV #8, PIV #17, PIV #19, PIV #39

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

Pre-Fire Survey Cont.

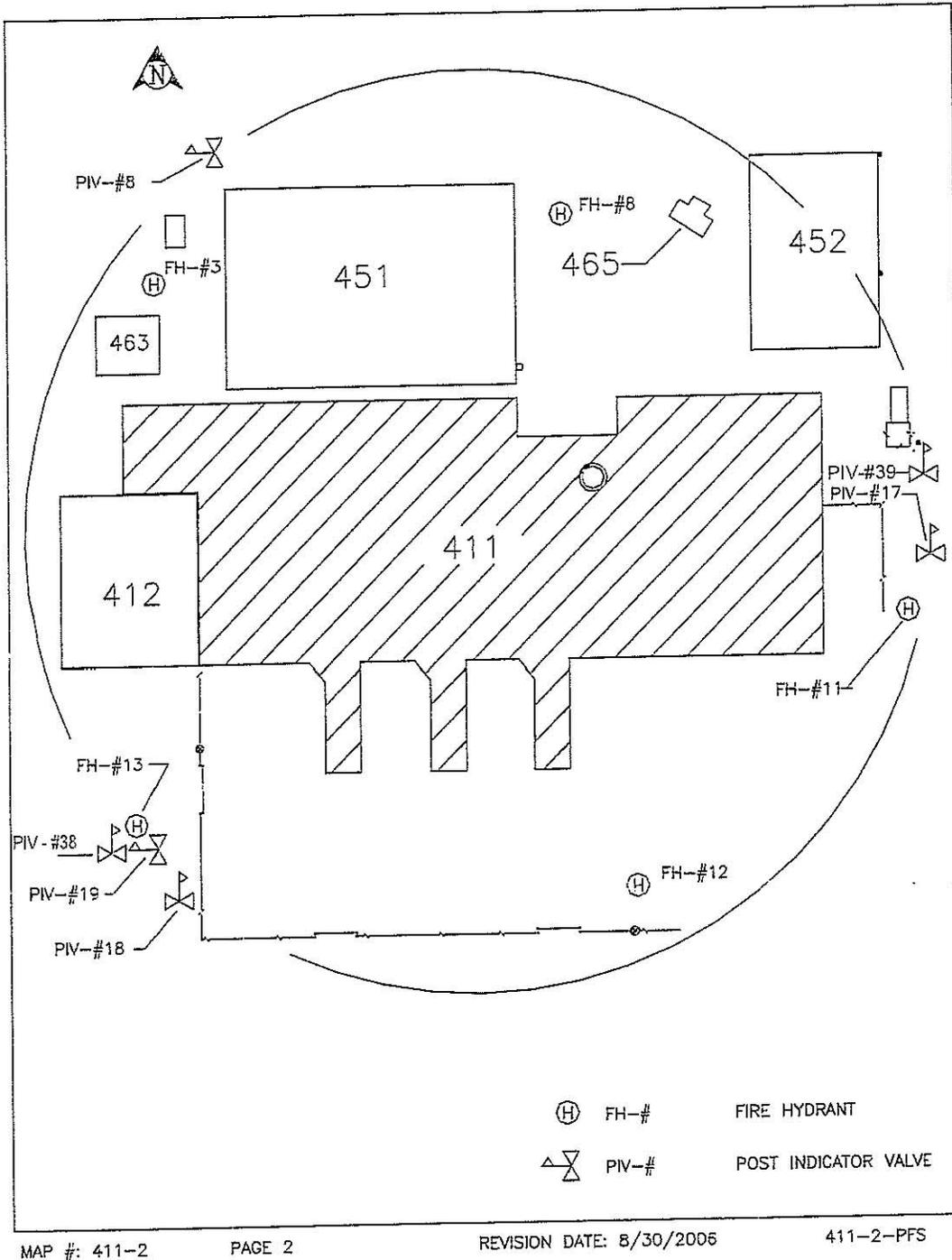


Figure F D-11a
Waste Handling Building Pre-Fire Survey
(Second Floor - Fire Hydrant/Post Indicator Location)

WIPP HAZARDOUS MATERIAL INCIDENT REPORT				
Date: _____		Location: _____		
I. INITIAL INFORMATION DATE: _____ TIME: _____ EST: _____ REPORTED LOCATION: _____ REPORTED BY: _____ DEPT.: _____ INITIALLY REPORTED TO: _____ DEPT.: _____ RESPONSIBLE MANAGER: _____ DEPT.: _____				
II. WEATHER CONDITIONS WIND DIRECTION _____ WIND SPEED: _____ mph TEMP.: _____ F CONDITIONS (i.e., icy, snowing, raining, cloudy, sunny): _____				
III. TYPE OF INCIDENT (SPILL, LEAK, ETC.): _____ 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>
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
IV. PERSONNEL INVOLVED IN CLEAN-UP ACTIVITIES				
<u>PERSONNEL/DEPT</u>		<u>DECON METHOD/MEDICAL TREATMENT</u>		
_____	_____	_____		
_____	_____	_____		
_____	_____	_____		
_____	_____	_____		
_____	_____	_____		
_____	_____	_____		
_____	_____	_____		
_____	_____	_____		
V. PERSONNEL CONTAMINATED NOT INVOLVED IN THE CLEANUP ACTIVITIES				
<u>PERSONNEL/DEPT.</u>	<u>MATERIAL CONTACTED</u>	<u>DECON/MEDICAL TREATMENT</u>		
_____	_____	_____		
_____	_____	_____		
_____	_____	_____		

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

WIPP HAZARDOUS MATERIAL INCIDENT REPORT			
Date: _____		Location: _____	
IX. INITIAL NOTIFICATION BY CMRO			
DEPARTMENT	PERSON CONTACTED	TIME	NOTIFIED BY
Facility Ops (FSM)	_____	_____	_____
Emerg. Mgmt (EST)	_____	_____	_____
EC	_____	_____	_____
Industrial Safety	_____	_____	_____
Facility Ops. (FM/FMD)	_____	_____	_____
_____	_____	_____	_____
CMRO: _____			
Print name	Signature	Date	
FSM: _____			
Print name	Signature	Date	
X. CONTINGENCY PLAN IMPLEMENTATION			
Contingency Plan implemented [] YES [] NO			
FSM: _____			
Print name	Signature	Date	
XI. REVIEWS			
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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1

DRAWINGS

1

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