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CHAPTER F

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RCRA CONTINGENCY PLAN

1 **CHAPTER F**

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3 **TABLE OF CONTENTS**

4 List of Tables F-iii

5 List of Figures F-iii

6 List of Drawings F-iii

7 Introduction F-1

8 F-1 General Information F-1

9 F-1a Disposal Phase Overview F-4

10 F-1b Waste Description F-4

11 F-1c Containers F-5

12 F-1d Description of Containers F-6

13 F-1e Description of Surface Hazardous Waste Management Units F-6

14 F-1e(1) CH Bay Operations F-6

15 F-1e(2) RH Complex Operations F-7

16 F-1e(3) Parking Area Container Storage Unit (Parking Area Unit) F-8

17 F-1f Off-Normal Events F-8

18 F-1g Containment F-8

19 F-2 Response Personnel F-9

20 F-3 Implementation F-11

21 F-4 Emergency Response Method F-13

22 F-4a Notification F-13

23 F-4a(1) Initial Emergency Response and Alerting the RCRA Emergency

24 Coordinator F-14

25 F-4a(2) Communication of Emergency Conditions to Facility Employees F-16

26 F-4a(3) Notification of Local, State, and Federal Authorities F-17

27 F-4a(4) Notification of the General Public F-18

28 F-4b Identification of Hazardous Materials F-19

29 F-4c Assessment of the Nature and Extent of the Emergency F-20

30 F-4d Control, Containment, and Correction of the Emergency F-21

31 F-4d(1) All Emergencies F-21

32 F-4d(2) Fire F-23

33 F-4d(3) Explosion F-25

34 F-4d(4) Spills F-26

35 F-4d(5) Decontamination of Personnel F-27

1		F-4d(6) <u>Control of Spills or Leaking or Punctured Containers of CH and</u>	
2		<u>RH TRU Mixed Waste</u>	F-27
3		<u>CH TRU Mixed Waste</u>	
4		<u>RH TRU Mixed Waste</u>	
5		F-4d(7) <u>Natural Emergencies</u>	F-31
6		F-4d(8) <u>Roof Fall</u>	F-31
7		<u>Spalling-of-Ground Scenario</u>	
8		<u>Fall-of-Ground Scenario</u>	
9		<u>Spalling-of-Ground Actions</u>	
10		<u>Fall-of-Ground Actions</u>	
11		F-4d(9) <u>Structural Integrity Emergencies</u>	F-35
12		F-4d(10) <u>Emergency Termination Procedures</u>	F-35
13	F-4e	<u>Prevention of Recurrence or Spread of Fires, Explosions, or Releases</u>	F-37
14	F-4f	<u>Management and Containment of Released Material and Waste</u>	F-38
15	F-4g	<u>Incompatible Waste</u>	F-40
16	F-4h	<u>Post-Emergency Facility and Equipment Maintenance and Reporting</u>	F-40
17	F-4i	<u>Container Spills and Leakage</u>	F-41
18	F-4j	<u>Tank Spills and Leakage</u>	F-41
19	F-4k	<u>Surface Impoundment Spills and Leakage</u>	F-42
20	F-5	<u>Emergency Equipment</u>	F-42
21	F-6	<u>Coordination Agreements</u>	F-42
22	F-7	<u>Evacuation Plan</u>	F-44
23	F-7a	<u>Surface Evacuation On-site and Off-site Staging Areas</u>	F-44
24	F-7b	<u>Underground Assembly Areas and Egress Hoist Stations</u>	F-45
25	F-7c	<u>Plan for Surface Evacuation</u>	F-45
26	F-7d	<u>Plan for Underground Evacuation</u>	F-46
27	F-7e	<u>Further Site Evacuation</u>	F-46
28	F-8	<u>Required Reports</u>	F-46
29	F-9	<u>Location of the Contingency Plan and Plan Revision</u>	F-47
30		References.....	F-49

1 **List of Tables**

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

12 **List of Figures**

13 Figure	Title
14 F-1	WIPP Surface Structures
15 F-1a	Legend to Figure F-1
16 F-2	Spatial View of the WIPP Facility
17 F-3	WIPP Underground Facilities
18 F-4	Direction and Control Under Emergency Conditions in Which the Plan Has Been
19	Implemented
20 F-4a	WIPP Facility Emergency Notifications
21 F-5	Underground Emergency Equipment Locations and Underground Evacuation Routes
22 F-6	Fire-Water Distribution System
23 F-7	Underground Diesel Fuel-Station Area Fire-Protection System
24 F-8	WIPP On-Site Assembly Areas and WIPP Staging Areas
25 F-8a	RH Bay Evacuation Routes
26 F-8b	RH Bay Hot Cell Evacuation Route
27 F-8c	Evacuation Routes in the Waste Handling Building
28 F-9	Designated Underground Assembly Areas
29 F-10	Waste Handling Building Pre-Fire Survey (First Floor)
30 F-10a	Waste Handling Building Pre-Fire Survey (First Floor - Fire Hydrant/Post Indicator
31	Location)
32 F-11	Waste Handling Building Pre-Fire Survey (Second Floor)
33 F-11a	Waste Handling Building Pre-Fire Survey (Second Floor - Fire Hydrant/Post
34	Indicator Location)
35 F-12	WIPP Hazardous Materials Incident Report

36 **List of Drawings**

37 Drawing	Title
38 41-F-087-014	Waste Handling Building 411 Fire Water Collection System Flow Diagram

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

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

6 Guard and Security Building - houses the facility security personnel and communications
7 equipment necessary for them to perform their duties. Section F-4a specifies the duties of the
8 security officers relative to contingency actions.

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

15 Support Building - houses the Central Monitoring Room (see section F-4a).

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

18 Surface facilities used for storage of support equipment are identified in Table F-6.

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

24 The RCRA permit addresses TRU mixed waste management activities in the WHB Unit, the
25 Parking Area Unit, and the disposal units. The provisions of this Contingency Plan apply to
26 hazardous waste disposal units (**HWDU**) in the underground waste disposal panels, storage in
27 the WHB Unit and the Parking Area Unit, the Waste Shaft, and supporting TRU mixed waste
28 handling areas. The remainder of the facility will not manage TRU mixed waste. This
29 Contingency Plan has also been designed in accordance with 20.4.1.300 NMAC (incorporating
30 40 CFR § 262.34(a)(4) - Standards for Generators of Hazardous Waste), and will be
31 implemented whenever there is a fire, explosion, or release of hazardous waste which could
32 threaten human health or the environment. Hazardous substances in the remainder of the facility
33 are included as possible triggers of the Contingency Plan but are outside the scope of the
34 regulations promulgated pursuant to RCRA. This allows WIPP to maintain one emergency
35 response plan which is consistent with the National Response Teams Integrated Contingency
36 Plan Guidance (Federal Register, Vol. 61, No. 109, June 5, 1996). Inclusion is based on their
37 National Fire Protection Association (**NFPA**) ratings in addition to their storage quantities. The

1 majority of hazardous substances on-site are not expected to trigger the Contingency Plan
2 because they are present in the same form and concentration as the product packaged for
3 distribution and use by the general public or are used in a laboratory under the direct supervision
4 of a technically qualified individual. Superfund Amendments and Reauthorization Act (**SARA**)
5 Title III excludes these from emergency planning reporting. The list of hazardous substances in
6 large enough quantities to constitute a Level II incident (Section F-3) is provided in Table F-1. In
7 addition to TRU mixed waste, these are the only hazardous substances currently on site which, if
8 spilled, may be of sufficient impact to cause this Contingency Plan to be implemented.
9 Magnesium Oxide (**MgO**) is stored on-site in large quantities. It is used as backfill in the waste
10 emplacement rooms as a pH buffer. The pH buffer will limit the solubility of radionuclides after
11 the underground rooms are filled and closed. MgO is not a hazardous substance, a release of
12 MgO will not create hazardous waste and poses no threat to human health or the environment,
13 and is therefore not addressed in the Contingency Plan.

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

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

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

34 This chapter of the permit application describes the HWDUs, the TRU mixed waste management
35 facilities and operations, compliance with the environmental performance standards, and with the
36 applicable technical requirements of 20.4.1.500 NMAC (incorporating 40 CFR §264.170 to
37 §264.178 and §264.601, respectively). The configuration of the WIPP facility consists of
38 completed structures; including all buildings and systems for the operation of the facility.

1 F-1a Disposal Phase Overview

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

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

13 F-1b Waste Description

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

18 These Waste Summary Categories are:

19 S3000—Homogeneous Solids

20 Solid process residues defined as solid materials, excluding soil, that do not meet the
21 applicable regulatory criteria for classification as debris (20.4.1.800 NMAC (incorporating
22 40 CFR §268.2[g] and [h])). Included in solid process residues are inorganic process
23 residues, inorganic sludges, salt waste, and pyrochemical salt waste. Other waste streams are
24 included in this Waste Summary Category based on the specific waste stream types and final
25 waste form. This category includes wastes that are at least 50 percent by volume solid
26 process residues.

27 S4000—Soils/Gravel

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

30 S5000—Debris Wastes

31 This waste summary category includes waste that is at least 50 percent by volume materials
32 that meet the criteria for classification as debris (20.4.1.800 NMAC (incorporating 40 CFR
33 §268.2)). Debris is a material for which a specific treatment is not provided by 20.4.1.800
34 NMAC (incorporating 40 CFR §268 Subpart D), including process residuals such as smelter
35 slag from the treatment of wastewater, sludges or emission residues.

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

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

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

14 Wastes may be generated at the WIPP facility as a direct result of managing the TRU and TRU
15 mixed wastes received from the off-site generators. Such generated waste may occur in either the
16 WHB Unit or the Underground. For example, when TRU mixed wastes are received at the WHB
17 Unit, the CH or RH Package shipping containers and the TRU mixed waste containers are
18 checked for surface contamination. Under some circumstances,¹ if contamination is detected, the
19 shipping container and/or the TRU mixed waste containers will be decontaminated. In the
20 underground, waste may be generated as a result of radiation control procedures used during
21 monitoring activities. The waste generated from radiation control procedures will be assumed to
22 be TRU and/or TRU mixed waste. Throughout the remainder of this plan, this waste is referred
23 to as “derived waste.” All such derived waste will be placed in the rooms in HWDUs along with
24 the TRU mixed waste for disposal.

25 F-1c Containers

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

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

31 Liquid waste, including “derived waste” containing liquids, will not be emplaced in the WIPP.
32 TRU mixed waste for emplacement in the WIPP shall contain as little residual liquid as is
33 reasonably achievable. All internal containers (e.g., bottles, cans, etc.) will be well-drained, but

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.

1 may contain residual liquids. As a guideline, residual liquids in well-drained containers will be
2 restricted to approximately one percent of the volume of the internal container. In no case shall
3 the total liquid equal or exceed one volume percent of the waste container (i.e., drum, standard
4 waste box [**SWB**], ten-drum overpack, or canister).

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

9 F-1d Description of Containers

10 CH TRU mixed waste containers will be either 55-gallon (gal) (208-liter (L)) drums singly or
11 arranged into seven (7)-packs, 85-gal (321-L) drums (used as singly or arranged into four (4)-
12 packs, 100-gal (379 L) drums singly or arranged into three (3)-packs, ten-drum overpacks
13 (**TDOP**), or 66.3 ft³ (1.88 m³) **SWBs**.

14 RH TRU mixed waste containers are either canisters or drums. Canisters will be loaded singly in
15 an RH-TRU 72-B cask and drums will be loaded in a CNS 10-160B cask. Drums in the CNS 10-
16 160B cask will be arranged singly or in drum carriage units containing up to five drums each.
17 Canisters and drums are described in Permit Attachment M1.

18 F-1e Description of Surface Hazardous Waste Management Units

19 The WHB is the surface facility where waste handling activities will take place. The WHB has a
20 total area of approximately 84,000 square feet (ft²) (7,804 square meters [m²]) of which
21 43,554 ft² (4,047 m²) are designated as the WHB Unit for TRU mixed waste management.
22 Within the WHB Unit, 26,151 ft² (2,430 m²) are designated for the waste handling and container
23 storage of CH TRU mixed waste and 17,403 ft² (1,617 m²) are designated for the handling and
24 storage of RH TRU mixed waste. These areas are being permitted as container storage units. The
25 concrete floors within the WHB Unit are sealed with an impermeable coating that has excellent
26 resistance to the chemicals in TRU mixed waste and, consequently, provide secondary
27 containment for TRU mixed waste. In addition, a Parking Area Unit south of the WHB will be
28 used for storage of waste in sealed shipping containers awaiting unloading. This area is also
29 being permitted as a container storage unit. The sealed shipping containers provide secondary
30 containment in this hazardous waste management unit (**HWMU**).

31 F-1e(1) CH Bay Operations

32 Once unloaded from the Contact-Handled Package, CH TRU mixed waste containers (7-packs of
33 55-gal drums, 3-packs of 100-gal drums, 4-packs of 85-gal drums, **SWBs**, or **TDOPs**) are placed
34 in one of two positions on the facility pallet. The waste containers are stacked on the facility
35 pallets (one- or two-high, depending on weight considerations). The use of facility pallets will
36 elevate the waste at least 6 inches (in.) (15 centimeters [cm]) from the floor surface. Pallets of
37 waste will then be stored in the CH bay. This storage area will be clearly marked to indicate the

1 lateral limits of the storage area. This storage area will have a maximum capacity of thirteen
2 facility pallets of waste during normal operations. These pallets will typically be in the CH Bay
3 storage area for a period of up to five days.

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

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

11 F-1e(2) RH Complex Operations

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

19 Single RH TRU mixed waste canisters are unloaded from the RH-TRU 72-B casks in the
20 Transfer Cell of the RH Complex where they are transferred to facility casks. Drums of RH TRU
21 mixed waste will be transferred remotely from the CNS 10-160B cask, into the Hot Cell, and
22 loaded into a canister. Storage in the Hot Cell occurs in either drums or canisters. A maximum of
23 12 55-gallon drums of RH TRU mixed waste and one 55-gallon drum of derived waste (94.9 ft³
24 (2.7 m³)) may be stored in the Hot Cell. Except for the derived waste drum, individual 55-gallon
25 drums may not be stored in the Hot Cell for more than 25 days. The Transfer Cell houses the
26 Transfer Cell Shuttle Car, which is used to facilitate transferring the canister to the facility cask.
27 Storage in this area typically occurs at the end of a shift or in an off-normal event that results in
28 the suspension of waste handling. A maximum of one canister (31.4 ft³ (0.89 m³)) may be stored
29 in the Transfer Cell in a shielded insert in the Transfer Cell Shuttle Car or in a RH-TRU 72-B
30 cask.

31 The Facility Cask Loading Room provides for transfer of a canister to the facility cask for
32 subsequent transfer to the waste shaft conveyance and to the Underground Hazardous Waste
33 Disposal Unit. The Facility Cask Loading Room also functions as an air lock between the waste
34 shaft and the Transfer Cell. Storage in this area typically occurs at the end of a shift or in an off-
35 normal event that results in the suspension of waste handling. A maximum of one canister
36 (31.4 ft³ (0.89 m³)) may be stored in the Facility Cask in the Facility Cask Loading Room.

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

1 F-1e(3) Parking Area Container Storage Unit (Parking Area Unit)

2 The area extending south from the WHB within the fenced enclosure identified as the Controlled
3 Area on Figure M1-2 is defined as the Parking Area Container Storage Unit. This area provides
4 storage for up to 6,734 ft³ (191 m³) of CH and/or RH TRU mixed waste contained in up to 40
5 loaded Contact-Handled Packages and 8 Remote-Handled Packages. Secondary containment and
6 protection of the waste containers from standing rainwater are provided by the transportation
7 containers. Up to 12 additional Contact-Handled Packages and four additional Remote-Handled
8 Packages may be stored in the Parking Area Surge Area so long as the requirements of Permit
9 Conditions III.A.2.c and III.A.2.d are met. No more than 50 Contact-Handled and 12 Remote-
10 Handled Packages may be stored in the Parking Area Storage Unit.

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

20 F-1f Off-Normal Events

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

24 F-1g Containment

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

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

36 Floor areas of the WHB used during off-normal events will be inspected prior to use and weekly
37 while in use. Containers located in the permitted storage areas shall be elevated from the surface

1 of the floor. Facility pallets provide at least 6 in (15 centimeters [cm]) of elevation from the
2 surface of the floor. TRU mixed waste containers that have been removed from Contact-Handled
3 or Remote-Handled Packages shall be stored at a designated storage area inside the WHB so as
4 to preclude exposure to the elements.

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

18 F-2 Response Personnel

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

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

27 Persons qualified to act as the RCRA Emergency Coordinator are thoroughly familiar with this
28 Contingency Plan, the TRU mixed waste and hazardous waste operations and activities at the
29 WIPP facility, the locations of TRU mixed waste and hazardous waste activities, the locations on
30 the site where hazardous materials are stored and used, and the locations of waste staging and
31 accumulation areas. They are familiar with the characteristics of hazardous substances, TRU
32 mixed waste and hazardous waste handled at the WIPP facility, the location of TRU mixed waste
33 and hazardous waste records within the WIPP facility, and the facility layout. In addition,
34 persons qualified to act as the RCRA Emergency Coordinator have the authority to commit the
35 necessary resources to implement this Contingency Plan. Figure F-4 outlines the RCRA
36 Emergency Coordinator's position relative to other organizations that provide support.

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

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

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

- 1 a. The product does not require a U.S. Department of Transportation (**DOT**) placard, is
2 a NFPA listed 0 or 1 for all categories, or is Other Regulated Materials A, B, C, or D.
3 b. The fire is under control and the reactivity rating of the material is less than a rating 2,
4 indicating a low potential for subsequent explosion as the hazardous material can be
5 considered normally stable.
6 c. There was no release or the release can be confined with readily available resources.
7 d. There is no life-threatening situation.
8 e. There is no potential environmental impact.
- 9 4. Incident Level II: According to NFPA 471, Responding to Hazardous Materials
10 Incidents, (See Table F-3). If the product(s) involved in the fire, explosion, spill or
11 leakage meets the following criteria, it will be classified as a Level II incident and the
12 Contingency Plan will be implemented by the RCRA Emergency Coordinator.
- 13 a. The product requires a DOT placard, is an NFPA 2 for any categories, or is
14 Environmental Protection Agency (**EPA**) regulated waste (Site-specific: Table F-1
15 and TRU mixed waste) AND
16 b. The incident involves multiple packages.
17 c. There is potential for the fire to spread since the hazardous material's flammability
18 level (rating 2) is below 200 degrees Fahrenheit, or the reactivity (rating 2) indicates
19 that violent chemical changes are possible and thus may be explosive.
20 d. The release may not be controllable without special resources.
21 e. The incident requires evacuation of a limited area for life safety.
22 f. The potential for environmental impact is limited to soil and air within incident
23 boundaries.
24 g. The container is damaged but able to contain the contents to allow handling or
25 transfer of product.
- 26 5. Incident Level III: According to NFPA 471, Responding to Hazardous Materials
27 Incidents. (See Table F-3) If the product(s) involved in the fire, explosion, spill or
28 leakage meet the following criteria, it will be classified as a Level III incident and the
29 Contingency Plan will be implemented by the RCRA Emergency Coordinator.
- 30 a. The product is a poison A (gas), an explosive A/B, organic peroxide, flammable
31 solid, material that is dangerous when wet, chlorine, fluorine, anhydrous ammonia,
32 NFPA 3 and 4 for any categories including special hazards, EPA extremely hazardous
33 substances, and cryogenics.
34 b. The site-specific container size for this incident level will be a tank truck.
35 c. There is potential for the fire to spread since the hazardous material's flammability
36 level (rating 3 or 4) is below 100 degrees Fahrenheit, or the reactivity (rating 3 or 4)
37 indicates that the material may explode.
38 d. The release may not be controlled even with special resources.
39 e. The incident requires mass evacuation of a large area for life safety.

- 1 f. Even though the NFPA guidelines for this incident level indicate that the potential for
2 environmental impact is severe, due to the site engineering controls, the impact is
3 contained within the HWMUs.
4 g. The container is damaged to such an extent that catastrophic rupture is possible.

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

12 F-4 Emergency Response Method

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

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

26 F-4a Notification

27 Notification requirements in the event of an emergency at a RCRA hazardous waste management
28 facility are defined by 20.4.1.500 NMAC (incorporating 40 CFR §§264.56(a) and (d)).

29 Necessary notifications in case of an emergency at the WIPP facility are described in this section
30 (Figure F-4a). Personnel at the WIPP facility are trained to respond to emergency notifications.

1 F-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 F-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 initiates
18 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 the
31 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.

1 The response to an unplanned event will be performed in accordance with procedures based on
2 the applicable Federal, State, or local regulations and/or guidelines for that response. These
3 include the U.S. Mine Safety and Health Administration (**MSHA**); NMAC; CERCLA;
4 Chapter 74, Article 4B, New Mexico Statutes Annotated 1978, New Mexico Emergency
5 Management Act; and agreements between the Permittees and local authorities (Section F-6) for
6 emergencies throughout the WIPP facility.

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

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

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

1 F-4a(2) Communication of Emergency Conditions to Facility Employees

2 Procedures for notifying facility personnel of emergencies depend upon the type of emergency.

3 Methods of notification are:

4 • Local Fire Alarms

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

7 • Surface Evacuation Signal

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

11 • Underground Evacuation Warning System

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

19 • Contingency Evacuation Notification

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

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

² The yelp tone increases from 500 to 1,000 hertz and drops to 500 hertz.

1 F-4a(3) Notification of Local, State, and Federal Authorities

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

- 10 • Carlsbad Police Department (telephone number: [505] 885-2111) (or 911)
- 11 • Carlsbad Fire Department (telephone number: [505] 885-2111) (or 911)
- 12 • Eddy County Sheriff (telephone number: [505] 887-7551)
- 13 • Hobbs Fire Department (telephone number: [505] 397-9265)

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

- 16 • New Mexico Environment Department (**NMED**)
17 Department of Public Safety
18 24-Hour Emergency Reporting Telephone Number: (505) 827-9329
19 FAX number: (505) 827-9368
- 20 • Department of Public Safety WIPP Coordinator
21 Telephone Number: (505) 827-9221
22 FAX number: (505) 829-3434
- 23 • Hazardous Materials Emergency Response, Chemical Safety Office, Department of
24 Public Safety, State Emergency Response Commission
25 Telephone number: (505) 476-9681
26 FAX number: (505) 476-9695
- 27 • National Response Center
28 Telephone number: 1-800-424-8802
29 FAX number: (202) 479-7181
- 30 • Local Emergency Planning Committee
31 Telephone number: (505) 885-3581
32 Fax number: (505) 628-3973

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

- 1 • The name and address of the facility and the name and phone number of the reporter
- 2 • The type of incident (fire, explosion, or release)
- 3 • The date and time of the incident
- 4 • The type and quantity of material(s) involved, to the extent known
- 5 • The exact location of the incident
- 6 • The source of the incident
- 7 • The extent of injuries, if any
- 8 • Possible hazards to human health and the environment (air, soil, water, wildlife, etc.)
- 9 outside the facility
- 10 • The name, address, and telephone number of the party in charge of or responsible for the
- 11 facility or activity associated with the incident
- 12 • The name and the phone number of the RCRA Emergency Coordinator
- 13 • The identity of any surface and/or groundwater involved or threatened and the extent of
- 14 actual and potential water pollution
- 15 • The steps being taken or proposed to contain and clean up the material involved in the
- 16 incident

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

19 F-4a(4) Notification of the General Public

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

29 A Hazards Assessment was conducted, which indicated no need for protective actions or
30 emergency action levels, as defined by the Permittees, for the facility. Therefore, no procedures

1 are in place for evacuation of the public. Procedures are in place for notification of the public by
2 radio, television, and newspapers for news items which might include notification of on-site
3 emergency situations. These procedures include a Public Affairs Coordinator in the EOC who
4 writes and transmits press releases to the DOE/CBFO office, where formal press conferences are
5 conducted.

6 F-4b Identification of Hazardous Materials

7 The identification of hazardous wastes, hazardous waste constituents, or hazardous materials
8 involved in a fire, an explosion, or a release to the environment is a necessary part of the
9 assessment of an incident, as described in 20.4.1.500 NMAC (incorporating 40 CFR §264.56(b)).
10 RCRA hazardous waste and hazardous substances and materials listed in 40 CFR §302.4 and
11 §302.6 or New Mexico Emergency Management Act, §74-4B-3 and §74-4B-5 and, involved in
12 any release at the WIPP facility will be identified. The identification of likely hazardous
13 materials at any location is enhanced because hazardous materials and hazardous waste are only
14 stored or managed in specified locations throughout the WIPP facility. An attempt will be made
15 to identify products involved by occupancy/location, container shape, markings/color,
16 placards/labels, United Nations/North America/Product Identification Number, on-site technical
17 experts, or field sampling. Further, the ES&H department maintains an updated inventory of
18 hazardous materials/substances that are brought on site, and a master MSDS listing in the Safety
19 and Emergency Services Facility, Building 452.

20 Sources of information available to identify the hazardous wastes, substances, or materials
21 involved in a fire, an explosion, or a release at the WIPP facility include operator/supervisor
22 knowledge of their work areas, materials used, and work activities underway; the WIPP Waste
23 Information System (**WWIS**), which identifies the location within the facility of emplaced TRU
24 mixed waste, including emplaced derived waste; and waste manifests and other waste
25 characterization information in the operating record. The WWIS also includes information on
26 wastes that are in the waste handling process. Also available are MSDSs for hazardous material
27 in the various user areas throughout the facility, waste acceptance records, and materials
28 inventories for buildings and operating groups at the WIPP facility. Information or data from the
29 derived waste accumulation areas, the hazardous waste staging area, satellite staging areas, and
30 nonregulated waste accumulation areas are included.

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

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

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

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

5 F-4c Assessment of the Nature and Extent of the Emergency

6 Once the required notifications have been made, the RCRA Emergency Coordinator will ensure
7 that the identity, exact source, amount, and areal extent of any released materials are determined,
8 as required under 20.4.1.500 NMAC (incorporating 40 CFR §264.56(b)). The RCRA Emergency
9 Coordinator will determine whether the occurrence constitutes an emergency based on
10 knowledge of the area and access to the waste identification/characterization information
11 described in Section F-4b. An emergency will require response by only trained emergency
12 response personnel. The RCRA Emergency Coordinator will be responsible for responding to
13 immediate and potential hazards, using the services of trained personnel to determine: 1) the
14 identity of hazardous wastes, hazardous waste constituents, and other hazardous materials
15 involved in a release, as described in Section F-4b; 2) whether or not a release involved a
16 reportable quantity of a hazardous substance; 3) the areal extent of a release; 4) the exact source
17 of a release; and 5) the potential hazards to human health or to the environment.

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

23 The emergency assessment requires determination of hazards involving evaluation of several
24 criteria, including:

- 25 • Exposure: magnitude of actual or potential exposure to employees, the general public,
26 and the environment; duration of human and environmental exposure; pathways of
27 exposure
- 28 • Toxicity: types of adverse health or environmental effects associated with exposures; the
29 relationship between the magnitude of exposure and adverse effects
- 30 • Reactivity: hazardous materials or hazardous wastes, which are not TRU mixed wastes,
31 involved in an incident will be assessed for reactivity through accessing the MSDSs for
32 the affected material and the recommended method(s) for managing such waste
- 33 • Uncertainties: considerations for undeterminable or future exposures; uncertain or
34 unknown health effects, including future health effects

1 F-4d Control, Containment, and Correction of the Emergency

2 The WIPP facility is required to control an emergency and to minimize the potential for the
3 occurrence, recurrence, or spread of releases due to the emergency situation, as described in
4 20.4.1.500 NMAC (incorporating 40 CFR §264.56 (e)). The WIPP Emergency Response
5 procedures utilize the incident mitigation guidelines in NFPA 471, Responding to Hazardous
6 Materials Incidents, with initial response priority being on control, and those actions necessary to
7 ensure confinement and containment (the first line of defense) in the early, critical stages of a
8 spill or leak. The RCRA Emergency Coordinator is responsible for stopping processes and
9 operations when necessary, and removing or isolating containers. TRU mixed waste will remain
10 within the WHB Unit, the Parking Area Unit, and the underground HWDU.

11 F-4d(1) All Emergencies

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

- 14 1. Isolate the area from unauthorized person by fences, barricades, warning signs, or other
15 security and site control precautions. Isolation and evacuation distances vary, depending
16 upon the chemical/product, fire, and weather situations.
- 17 2. Identify the chemical/product according to Section F-4b.
- 18 3. Drainage controls.
- 19 4. Stabilization of physical controls (such as dikes or impoundment[s]).
- 20 5. Capping of contaminated soils to reduce migration.
- 21 6. Using chemicals and other materials to retard the spread of the release or to mitigate its
22 effects.
- 23 7. Excavation, consolidation, removal, or disposal of contaminated soils.
- 24 8. Removal of drums, barrels, or tanks where it will reduce exposure risk during situations
25 such as fires.

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

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

- 1 1. Physical methods of control involve any of several processes to reduce the area of the
2 spill/leak, or other release mechanism (such as fire suppression).
- 3 A. Absorption is the process in which materials hold liquids through the process of
4 wetting. Absorption is accompanied by an increase in the volume of the
5 sorbate/sorbent system through the process of swelling. Some of the materials utilized
6 in response to Level I incidents or Level II incidents involving liquids will be
7 absorbent sheets of polyolefin-type fibers, spill control bucket materials (specifically
8 for solvents, neutralization, or for acids/caustics), and absorbent socks for general
9 liquids or oils.
- 10 B. Covering refers to a temporary form of mitigation for radioactive incidents that will
11 be utilized in response to Level II or Level III incidents involving CH TRU mixed
12 waste. These could include absorbent sheets, plastic, or actual ambulance blankets.
- 13 C. Dikes or Diversions refer to the use of physical barriers to prevent or reduce the
14 quantity of liquid flowing into the environment. Dikes may be soil or other barriers
15 temporarily utilized to hold back the spill or leak. Diversion refers to the methods
16 used to physically change the direction of the flow of the liquid. Absorbent socks or
17 earth may be utilized as dikes or diversions for all levels of incidents.
- 18 D. Overpacking is accomplished by the use of an oversized container. Overpack
19 containers will be compatible with the hazards of the materials involved.
- 20 E. Plug and Patch refers to the use of compatible plugs and patches to reduce or
21 temporarily stop the flow of materials from small holes, rips, tears, or gashes in
22 containers. A Series "A" hazardous response kit containing nonsparking equipment to
23 control and plug leaks may be utilized for response to all levels of incidents.
- 24 F. Transfer refers to the process of moving a liquid, gas, or some forms of solids, either
25 manually or by pump, from a leaking or damaged container. Scoops, shovels, jugs,
26 and pails as well as drum transfer pumps for chemical and petroleum transfer are
27 utilized as needed in response to all levels of incidents.
- 28 G. Vapor Suppression refers to the reduction or elimination of vapors emanating from a
29 spilled or released material through the most efficient method or application of
30 specially designed agents such as an aqueous foam blanket.
- 31 2. Chemical Methods of Mitigation
- 32 A. Neutralization is the process of applying acids or bases to a spill to form a neutral
33 salt. The application of solids for neutralizing can often result in confinement of the
34 spilled material. This would include using the neutralizing adsorbents.

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

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

- 5 1. Minimize contamination or contact (through PPE, etc.)
- 6 2. Limit migration of contaminants
- 7 3. Properly dispose of contaminated materials

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

19 F-4d(2) Fire

20 The incident level emergency response identified in Section F-3 includes fire/explosion potential.
21 WIPP fire response includes incipient, exterior structure fires, and internal structure fires. The
22 RCRA Emergency Coordinator can implement the Memoranda of Understanding (**MOU**) for
23 additional support.

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

- 28 1. All emergency response personnel at an incident will wear appropriate PPE.
- 29 2. Only fire extinguishing materials that are compatible with the materials involved in the
30 fire will be used to extinguish fires. Compatibility with materials involved in a fire are
31 determined by pre-fire plans, Emergency Response Guide Book (DOT, 1993), DOT
32 labeling, and site-specific knowledge of the emergency response personnel. Water and
33 dry chemical materials have been determined to be compatible with all components of the
34 TRU mixed waste. Pre-fire plans for the WHB are included in Figures F-10 and F-11.

35 Fires in areas of the WHB Unit should not propagate, due to limited amount of
36 combustibles, and the concrete and steel construction of the structures. Administrative

- 1 controls, such as landlord inspections and EST/FPT inspections, help to insure good
2 housekeeping is maintained. Combustible material and TRU mixed waste will be
3 isolated, if possible. Firewater drain trenches collect the water and channel it into a sump.
4 In areas not adjacent to the trenches, portable absorbent dikes (pigs) will be used to retain
5 as much as possible, until it can be transferred to containers or sampled and analyzed for
6 hazardous constituents.
- 7 3. If the fire spreads or increases in intensity, personnel will be directed to evacuate.
- 8 4. The RCRA Emergency Coordinator will remain in contact with responding personnel to
9 advise them of the known hazards.
- 10 5. In order to ensure that storm drains and/or sewers do not receive potentially hazardous
11 runoff, dikes will be built around storm drains to control discharge as needed. Collected
12 waste will be sampled and analyzed for hazardous constituents, before being discharged
13 to evaporation ponds. There are two ponds south of the security fence, opposite the WHB
14 Unit, that will collect drainage from the parking area. The rest of the site, inside the
15 security fence, drains to the large pond to the west. Samples will be taken from these
16 ponds, after the emergency has been abated, to determine any cleanup requirements.
17 NMED will approve any procedures associated with the sampling and analysis of the
18 ponds.
- 19 6. The RCRA Emergency Coordinator maintains overall control of the emergency and may
20 accept and evaluate the advice of WIPP facility personnel and emergency response
21 organization members, but retains overall responsibility.
- 22 7. The RCRA Emergency Coordinator will be in overall control of WIPP facility emergency
23 response efforts until the emergency is terminated.
- 24 8. Materials involved in a fire can be identified in the following ways:
- 25
 - According to Section F-4b.
 - If the contents of the waste container cannot be determined based on its location
26 and the label is destroyed by fire, the material will be treated as an unknown,
27 evaluated for radiological contamination, and analyzed according to methods in
28 the EPA's "Test Methods for Evaluating Solid Waste Physical/Chemical
29 Methods" (SW-846), Third Edition, after the fire has been extinguished.
 - Airborne radioactivity samples may be obtained during a fire involving
30 radioactive materials, using portable and fixed air samplers. Response personnel
31 will be adequately protected from airborne radioactivity by their PPE required
32 for fire response.
33
34
- 35 9. Only materials compatible with the waste may be used for fire response.

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

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

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

13 F-4d(3) Explosion

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

- 16 1. The area will be evacuated immediately.
- 17 2. The CMRO will immediately notify the appropriate emergency response personnel and
18 the RCRA Emergency Coordinator about the explosion.
- 19 3. Injured personnel will be treated and transported as necessary.
- 20 4. The RCRA Emergency Coordinator will remain in contact with responding personnel to
21 advise them of the known hazards involved and the degree and location of the explosion
22 and associated fires.
- 23 5. The RCRA Emergency Coordinator will be in command and may accept and evaluate the
24 advice of WIPP facility personnel and emergency response organization members, but
25 retains the overall responsibility. Selections of methods and tactics of response are the
26 responsibility of the Incident Commander.
- 27 6. The RCRA Emergency Coordinator will be in overall control of WIPP facility emergency
28 response efforts until the emergency is terminated.
- 29 7. When cleanup has proceeded to the point of finding no radionuclide activity, then
30 samples may be taken for chemical analysis if there is visible evidence to suspect
31 additional hazardous waste residues. Chemical residues on floor surfaces resulting from a
32 hazardous waste explosion will be evaluated, sampled, analyzed (if required), isolated,

1 and returned to appropriate containers, and surfaces will be cleaned using appropriate
2 cleaners.

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

7 F-4d(4) Spills

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

11 1. The immediate area will be evacuated.

12 2. The RCRA Emergency Coordinator will review facility records to determine the identity
13 and chemical nature of released material.

14 3. Entry team procedures will be utilized, with special attention to the following:

- 15 • Buddy system
- 16 • Appropriate PPE
- 17 • Backup rescue team
- 18 • Supplemental communication signals (hand signals and hand-light signals)
- 19 • Monitoring equipment
- 20 • Exposure time limitations

21 4. If possible, the source of the release will be secured.

22 5. A dike to contain runoff may be built.

23 6. Emergency responders will ensure that storm drains and/or sewers do not receive
24 potentially hazardous runoff or spilled material. They may build dikes around storm
25 drains to control discharge.

26 7. Released wastes may be collected and contained by stabilizing or neutralizing the spilled
27 material, as appropriate, pouring an absorbent over the spilled material, and sweeping or
28 shoveling the absorbed material into drums or other appropriate containers. The
29 absorbents have been determined to be compatible with all components of the TRU
30 mixed waste.

31 8. No TRU mixed waste that may be incompatible with the released material will be
32 managed in the affected area until cleanup procedures are complete.

1 9. The RCRA Emergency Coordinator will direct spill control, decontamination, and
2 termination procedures described below.

3 F-4d(5) Decontamination of Personnel

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

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

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

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

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

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

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

31 CH TRU Mixed Waste

32 Prior to the re-entry following an event involving containers of CH TRU mixed waste, a
33 Radiological Work Permit (**RWP**) is written for personnel to enter with protective clothing to
34 assess the conditions, take surveys and samples, and mitigate problems that could compound the
35 hazards in the area (cover up spilled material with plastic material sheeting and or any approved

1 fixatives such as polyvinyl alcohol (**PVA**) or paint, place equipment in a safe configuration, etc.).
2 During the re-entry phase, smears and air sample filters are taken and counted. This information
3 is used by cognizant managers, RC personnel, and As Low As Reasonably Achievable
4 (**ALARA**) Committee representatives to determine an appropriate course of action to recover the
5 area. A plan to decontaminate and recover affected areas and equipment will be approved with a
6 separate RWP written to establish the radiological controls required for the recovery.

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

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

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

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

39 The decontamination methods will initially involve wiping down structures, equipment, and
40 other containers in the area with absorbent cloths moistened with tepid water. Surveys of these

1 structures will take place and the need to continue decontamination activities will be established.
2 If further decontamination is required, nonhazardous decontaminating agents, such as
3 Liquinox®, Simple Green®, Windex®, citric acid, Bartlett Strip Coat®, and high pressure CO₂
4 will be used to prevent generating CH TRU mixed waste.

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

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

11 When decontamination is deemed by the recovery team to be complete, RC personnel will
12 conduct one final, intensive radcon survey of the area and components in the area to release it for
13 uncontrolled use. The free release criteria for items, equipment, and areas is < 20 dpm/100 cm²
14 for alpha radioactivity and < 200 dpm/100 cm² for beta-gamma radioactivity. Personnel will then
15 perform hazardous material sampling after decontamination efforts are complete to verify the
16 removal of hazardous waste substances. After cleanup is complete, facility personnel will
17 complete an inspection and include the details of the spill and cleanup in the log.

18 RH TRU Mixed Waste

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

30 During the re-entry phase, an evaluation of the incident, including the nature of the release,
31 amount, location, and other appropriate factors, will be performed. A RWP will be written and
32 approved prior to personnel entering the Hot Cell with the appropriate PPE to further assess the
33 situation, perform surveys and take samples, and, if possible, mitigate problems that could
34 compound the hazards in the area. Based on the results of the evaluation, a determination will be
35 made by the RCRA Emergency Coordinator, with input from the cognizant managers,
36 radiological control personnel, and ALARA Committee representatives whether to implement
37 the Contingency Plan and to determine the appropriate course of action to recover from the
38 event. An action response plan to decontaminate and recover affected areas and equipment,

1 together with an RWP establishing the radiological controls required for the recovery will be
2 developed and approved.

3 Should a breach of a RH TRU mixed waste container occur in the Hot Cell that results in
4 removable contamination exceeding the small area “spot” decontamination levels, the affected
5 container(s) (e.g., breached and contaminated) will be placed into a canister and processed for
6 disposal. The decontamination of equipment, cleanup of spilled material and the overpacking of
7 contaminated/damaged waste containers will be performed in the vicinity of the incident. For
8 example, under normal operations RH TRU mixed waste in 55-gallon drums will be handled
9 only in the Hot Cell. Therefore, it is within this area that decontamination and/or overpacking
10 operations would occur. By eliminating the transport of contaminated equipment to other areas
11 for decontamination or overpacking, the risk of spreading contamination is reduced.
12 Contaminated materials for the cleanup and overpacking of a breached RH TRU mixed waste
13 container may be managed as CH TRU mixed waste, depending on the surface dose rate.

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

17 The decontamination methods may initially involve wiping down structures, equipment, and
18 other containers in the area with absorbent cloths moistened with tepid water. Surveys of these
19 structures will take place and the need to continue decontamination activities will be established.
20 If further decontamination is required, nonhazardous decontaminating agents, such as
21 Liquinox®, Simple Green®, Windex®, citric acid, Bartlett Strip Coat®, and high pressure CO₂
22 will be used to prevent generating CH TRU mixed waste.

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

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

29 When decontamination of the Hot Cell is deemed by the recovery team to be complete, RC
30 personnel will conduct one final, intensive radcon survey of the area and components in the area
31 to release it for continued use. The free release criteria for items and equipment that will be
32 released for uncontrolled use are < 20 dpm/100 cm² for alpha radioactivity and < 200 dpm/100
33 cm² for beta-gamma radioactivity. Personnel will then perform hazardous material sampling after
34 decontamination efforts are complete to confirm the removal of hazardous waste substances.
35 After cleanup is complete, facility personnel will complete an inspection and include the details
36 of the spill and cleanup in the log. The recovery phase must be completed before the affected
37 area and/or equipment are returned to service.

1 F-4d(7) Natural Emergencies

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

4 1. Inspect containers which have not been disposed and containment for signs of leakage or
5 damage. Inspect areas where containers are stored looking for leaking containers and for
6 deterioration of containers and the containment system.

7 2. Inspect affected equipment or areas associated with hazardous waste management
8 activities for proper operating mode in accordance with site procedures and manually
9 check to ensure automatic and alarmed features on the units are working.

10 3. Inspect affected equipment or areas within the HWMUs in accordance with site
11 procedures for damage.

12 4. Inspect electrical boards and overhead electrical lines for damage.

13 5. Check container areas for signs of leakage or damage to drums and containers.

14 6. Check affected buildings and fencing directly related to hazardous waste management
15 activities for damage.

16 7. Conduct a general survey of the site looking for signs of land movement, etc.

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

19 9. Record inspection results.

20 F-4d(8) Roof Fall

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

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

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

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

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

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

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

29 Spalling-of-Ground Scenario

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

1 Fall-of-Ground Scenario

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

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

7 Spalling-of-Ground Actions

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

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

25 The criteria used to determine whether a waste container is accessible is based on the
26 location of the container, the amount of waste in the room, and the expense of reaching
27 the waste container safely versus the expense of abandonment of the room. For example,
28 if the room is 95% filled and spalling-of-ground punctured a waste container at or near
29 the exit of the room, the decision to isolate the room and move waste emplacement
30 activities to the next room would be prudent.

- 31 2. Restrict access in ventilation flow path downstream of the incident.
- 32 3. Restrict ventilation to the affected room to ensure that there is no spread of contamination
33 that may have been released. Survey for contamination and establish the boundaries.
- 34 4. Inspect accessible and affected containers and containment for signs of leakage or
35 damage.

- 1 5. Cover the spill area with material such as plastic or fabric sheets or PVA, in a way that
2 would safely isolate the area.
- 3 6. Determine if the covered spill area safely allows for continued waste disposal operations
4 or whether further cleanup is required. If further cleanup is required, provide with
5 cleanup methods described below. Note: Cleaning may not be required since this is the
6 permitted disposal area.
- 7 7. Inspect any affected equipment (vehicles, handling equipment, and communication and
8 alarm equipment) for proper function.
- 9 8. Repackage spilled waste and repackage, plug, or patch breached waste containers into 55
10 or 85-gallon drums, SWBs, or TDOPs, depending on volume. Temporarily locate
11 overpack waste containers in an adjacent room. Remove only those intact waste
12 containers necessary to clear the area for decontamination.
- 13 9. At the underground emplacement room, salt contaminated by a spill of TRU mixed waste
14 will be covered with materials such as salt, plastic or fabric sheets or PVA to isolate it
15 from the workers or removed and packaged as site derived waste in accordance with site
16 procedures for decontaminating surfaces.
- 17 10. Manage the radioactive debris as derived waste.
- 18 11. Characterize containers of waste based on the waste containers that were damaged.
- 19 12. Replace the removed and derived waste containers into the waste stack as appropriate and
20 update the WWIS.
- 21 13. Document activities and record results.

22 Fall-of-Ground Actions

- 23 1. Restrict access in ventilation flow path downstream of the incident.
- 24 2. Restrict the room from ventilation flow by closing bulkhead regulators.
- 25 3. Survey for radiological contamination and establish the boundary for a Radiological
26 Buffer Area.
- 27 4. Install barricade devices to remove access.
- 28 5. At the underground emplacement room, salt contaminated by a spill of TRU mixed waste
29 will be covered with materials such as salt, plastic or fabric sheets, or PVA to isolate it
30 from the worker or removed and packaged as site derived waste using damp rags, hand
31 tools, and HEPA filtered vacuums.

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

5 F-4d(9) Structural Integrity Emergencies

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

9 F-4d(10) Emergency Termination Procedures

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

- 11 • Emergency scene will be stable
- 12 • Release of hazardous substance will be stopped
- 13 • Reaction of hazardous substance will be controlled
- 14 • The released hazardous substance will be contained within a localized and manageable
15 area
- 16 • The area of contamination will be adequately secure from unauthorized entry

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

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

- 23 • Absorption
- 24 • Adsorption
- 25 • Chemical degradation
- 26 • Dilution
- 27 • Disposal
- 28 • 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 container at
29 the time of emplacement. These containers will be placed in the underground without further
30 action, once the radiological contamination is removed, unless there is visible evidence of
31 hazardous waste spills or hazardous waste on the container and this contamination is
32 considered likely to be released prior to emplacement in the underground. In no case shall
33 these containers contain a total liquid content equal to, or which exceeds, one volume percent
34 of the container.

35 For area contamination, once the area is cleaned up and is shown to be radiologically clean, it
36 will be sampled for the presence of hazardous waste residues. If the area is large, a sampling
37 plan will be developed. The sampling plan will be approved by the NMED before it is

1 implemented. If the area is small, swipes will be used. If the results of the analysis show that
2 residual contamination remains, a decision will be made whether further cleaning will be
3 beneficial or whether final clean up will be deferred until closure. Appropriate notations will
4 be entered into the operating record to assure proper consideration of formerly contaminated
5 areas at the time of closure. Furthermore, measures such as covering, barricading, and/or
6 placarding will be used as needed to mark areas that remain contaminated.

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

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

13 F-4e Prevention of Recurrence or Spread of Fires, Explosions, or Releases

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

- 18 • Stopping processes and operations.
- 19 • Collecting and containing released wastes and materials.
- 20 • Removing or isolating containers of waste or hazardous substances posing a threat.
- 21 • Ensuring that wastes managed during an emergency are handled, stored, or treated with
22 due consideration for compatibility with other wastes and materials on site and with
23 containers utilized (Section F-4h).
- 24 • Restricting personnel not needed for response activities from the scene of the incident.
- 25 • Evacuating the area.
- 26 • Curtailing nonessential activities in the area.
- 27 • Conducting preliminary inspections of adjacent facilities and equipment to assess
28 damage.
- 29 • Overpacking and/or removing damaged containers/drums from affected areas. Damaged
30 equipment and facilities will be repaired as appropriate.

- 1 • Constructing, monitoring, and reinforcing temporary dikes as needed.
- 2 • Maintaining fire equipment on standby at the incident site in cases where ignitable liquids
- 3 have been or may be released and ensuring that all ignition sources are kept out of the
- 4 area. Ignitable liquids will be segregated, contained, confined, diluted, or otherwise
- 5 controlled to preclude inadvertent explosion or detonation.

6 No operation that has been shut down in response to the incident will be restarted until

7 authorized by the RCRA Emergency Coordinator. Sections F-4g, Incompatible Waste, and F-4h,

8 Post-Emergency Facility and Equipment Maintenance and Reporting, address specific issues

9 related to decreasing the possibility of a recurrence or spread of a release, a fire, or an explosion.

10 After resolution of the incident, a Root Cause Analysis will be conducted to review all Level II

11 and Level III incidents for determination of cause, and the corrective action plan to prevent

12 recurrence.

13 F-4f Management and Containment of Released Material and Waste

14 Once initial release or spill containment has been completed, the RCRA Emergency Coordinator

15 will ensure that recovered hazardous materials and waste are properly stored and/or disposed, as

16 required by 20.4.1.500 NMAC (incorporating 40 CFR §264.56(g)). For spills of liquid, the

17 perimeter of the spill will be diked with an absorbent material that is compatible with the

18 material(s) released. Free-standing liquid will be transferred to a marked compatible container.

19 The remaining liquid will be absorbed with an absorbent material and swept or scooped into a

20 marked compatible container. Spill residue will be removed. Spills of dry material will be swept

21 or shoveled into a labeled compatible recovery container. Material recovered from the spill will

22 be transferred to clean containers or tanks or to containers or tanks that have held a compatible

23 material. All containers will meet DOT specifications for shipping the wastes, and materials will

24 be recovered.

25 Nonradioactive hazardous waste resulting from the cleanup of a fire, an explosion, or a release

26 involving a nonradioactive hazardous waste or hazardous substance at the WIPP facility will be

27 contained and managed as a hazardous waste until such time as the waste is disposed of, or

28 determined to be nonhazardous, as defined in 20.4.1.200 NMAC (incorporating 40 CFR §261)

29 Subparts C and D. In most cases, hazardous materials inventories for the various buildings and

30 areas at the facility will allow a determination of the hazardous materials present in any cleanup

31 of a release or of the residues from an emergency condition. (The quantities of such spills are so

32 small, it is not likely to trigger an Incident Level II or III.) When necessary samples of the waste

33 will be collected and analyzed to determine the presence of any hazardous characteristics and/or

34 hazardous waste constituents; this information is needed to evaluate disposal options. EPA-

35 approved sampling and analytical methods will be utilized. Hazardous wastes will be transferred

36 to the Hazardous Waste Staging Area. The staging area is used to store hazardous waste awaiting

37 transfer to an off-site treatment or disposal facility in accordance with applicable regulations

38 (e.g., 20.4.1 NMAC and DOT regulations). The Hazardous Waste Staging Area for

39 nonradioactive hazardous waste is Buildings 474A and 474B, as shown in Figure F-1.

1 Nonradioactive hazardous wastes will be shipped off-site for disposal at a RCRA permitted
2 disposal facility.

3 Under normal operations, administrative controls will be implemented to ensure that hazardous
4 materials and incompatible materials will not be introduced to the radioactive materials area
5 during TRU mixed waste handling operations. Examples of administrative controls include
6 restricting the waste received in the TRU mixed waste management area(s) to TRU mixed waste
7 properly manifested from the generator sites and ensuring that materials used in these area(s) are
8 restricted to only those that have previously been determined to be compatible with the TRU
9 mixed waste. The RCRA Emergency Coordinator will have access to building design
10 information and information on specific equipment used within an area upon which to base a
11 determination of the compatibility of materials with the area. If necessary, the RCRA Emergency
12 Coordinator will use EPA-600/2-80-076, "A Method for Determining the Compatibility of
13 Hazardous Waste," (EPA, 1980) for making compatibility determinations. Waste resulting from
14 the cleanup of a fire, explosion, or release in the miscellaneous unit, the CH TRU mixed waste
15 handling areas, or the RH Complex will be considered derived from the received TRU mixed
16 waste and may be treated and managed as CH TRU mixed waste depending on the surface dose
17 rate.

18 In the event of a prolonged cessation of TRU mixed waste handling operations, TRU mixed
19 waste can be placed in areas of the WHB Unit that are available for such contingencies. These
20 areas and the TRU mixed waste containers in them would be located so that adequate aisle space
21 would be maintained for unobstructed movement of personnel and equipment in an emergency.
22 Permit Attachments M, M1, and M2 describe the HWMUs in detail, including the facility
23 description, support structures and equipment, security, waste handling areas, ventilation, and
24 fire protection.

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

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

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

1 Because of the restrictions which the WIPP facility places on generators, and because of control
2 of WIPP operations, TRU mixed wastes and derived wastes will not contain any incompatible
3 wastes. However, the areas established for the temporary holding of nonradioactive waste
4 routinely generated at the WIPP facility is divided into bays to accommodate the management of
5 wastes that may be incompatible. If waste is generated as the result of a spill or release of
6 hazardous materials or nonradioactive hazardous waste, the waste generated as a result of
7 abatement and cleanup will be evaluated to determine its compatibility with other wastes being
8 managed in the temporary holding areas. The evaluation will be by identifying the material or
9 waste that was spilled or released and determining its characteristics (e.g., ignitable, reactive,
10 corrosive, or toxic). The waste generated by the abatement and cleanup activities will be stored
11 in that part of the temporary holding area that has been established to manage wastes with which
12 it is compatible.

13 For small nonemergency liquid spills (e.g., a detergent solution leaking out of the pump handle
14 during decontamination, a spill of hydraulic fluid while servicing a vehicle), spill control
15 procedures will be used to contain and absorb free-standing liquid. The contaminated absorbent
16 will be swept or shoveled into a compatible container and managed as described above. No
17 notifications will be required, but site procedures require documentation of the incident.

18 F-4g Incompatible Waste

19 Implementation of the TSDF-WAC for the WIPP ensures that incompatible TRU mixed waste
20 will not be shipped to the WIPP facility. Nonradioactive waste at the WIPP facility will be
21 carefully segregated during handling and holding and will be transported within and off the
22 facility. The RCRA Emergency Coordinator will not allow hazardous or TRU mixed waste
23 operations to resume in a building or area in which incompatible materials have been released
24 prior to completion of necessary post-emergency cleanup operations to remove potentially
25 incompatible materials. In making the determination of compatibility, the RCRA Emergency
26 Coordinator will have available the resources and information described in Section F-4b,
27 Identification of Hazardous Materials. In addition, ES&H department personnel will be available
28 for consultation. Finally, the RCRA Emergency Coordinator may use EPA-600/2-80-076, (EPA,
29 1980).

30 F-4h Post-Emergency Facility and Equipment Maintenance and Reporting

31 The RCRA Emergency Coordinator will ensure that emergency equipment that is located or used
32 in the affected area(s) of the facility and listed in the Contingency Plan is cleaned and ready for
33 its intended use before operations are resumed, as specified in 20.4.1.500 NMAC (incorporating
34 40 CFR §264.56(h)(2)). Any equipment that cannot be decontaminated will be discarded as
35 waste (e.g., hazardous, mixed, solid), as appropriate. The WIPP facility is committed to replacing
36 any needed equipment or supplies that cannot be reused following an emergency. After the
37 equipment has been cleaned, repaired, or replaced, a post-emergency facility and equipment
38 inspection will be performed, and the results will be documented.

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

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

19 F-4i Container Spills and Leakage

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

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

32 F-4j Tank Spills and Leakage

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

1 F-4k Surface Impoundment Spills and Leakage

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

6 F-5 Emergency Equipment

7 A variety of equipment is available at the facility for emergency response, containment, and
8 cleanup operations in both the HWMUs and the facility in general. This includes equipment for
9 spill control, fire control, personnel protection, monitoring, first aid and medical attention,
10 communications, and alarms. This equipment is immediately available to emergency response
11 personnel. A listing of major emergency equipment available at the WIPP facility, as required by
12 20.4.1.500 NMAC (incorporating 40 CFR §264.52(e)), is shown in Table F-6. Table F-7
13 identifies the locations where fire suppression systems are provided. Locations of the
14 underground emergency equipment are shown in Figure F-5. The firewater-distribution system
15 map is shown in Figure F-6. The underground fuel area fire-protection system is shown in
16 Figure F-7.

17 F-6 Coordination Agreements

18 The Permittees have established MOUs with off-site emergency response agencies for
19 firefighting, medical assistance, hazardous materials response, and law enforcement. In the event
20 that on-site response resources are unable to provide all the needed response actions during either
21 a medical, fire, hazardous materials, or security emergency, the RCRA Emergency Coordinator
22 will notify appropriate off-site response agencies and request assistance. Once on site, off-site
23 emergency response agency personnel will be under the direction of the RCRA Emergency
24 Coordinator.

25 The MOUs with off-site cooperating agencies are available from the Permittees. A listing and
26 description of the MOUs with state and local agencies and mining operations in the vicinity of
27 the WIPP facility, as required by 20.4.1.500 NMAC (incorporating 40 CFR §264.37 and
28 §264.52(c)), are:

- 29 • An agreement among the Permittees, Intrepid Potash NM LLC, and Mosaic Potash
30 Carlsbad Inc., provides for the mutual aid and assistance, in the form of MRTs, in the
31 event of a mine disaster or other circumstance at either of the two facilities. This
32 provision ensures that the WIPP MOC will have two MRTs available at all times when
33 miners are underground.
- 34 • A memorandum of agreement between the City of Carlsbad, New Mexico, and the WIPP
35 MOC for ambulance service assistance provides that, upon notification by the WIPP
36 MOC, the Carlsbad Fire Department/Ambulance Service will be dispatched from
37 Carlsbad toward the WIPP site by a designated route and will accept the transfer of

1 patient(s) being transported by the WIPP facility ambulance at the point both ambulances
2 meet. If the patient(s) is not transferrable, the Carlsbad Fire Department/Ambulance
3 Service will provide equipment and personnel to the WIPP facility ambulance, as
4 necessary.

- 5 • A MOU between the DOE and the Carlsbad Medical Center provides for the treatment of
6 radiologically contaminated personnel who have incurred injuries beyond the treatment
7 capabilities at the WIPP facility. The DOE will provide transport of the patient(s) to the
8 Carlsbad Medical Center for decontamination and medical treatment.
- 9 • A MOU between the DOE and the Lea Regional Medical Center provides for the
10 treatment of radiologically contaminated personnel who have incurred injuries beyond
11 the treatment capabilities at the WIPP facility. The DOE will provide transport of the
12 patient(s) to the Lea Regional Medical Center for decontamination and medical
13 treatment.
- 14 • A MOU between the DOE and the U.S. Department of Interior (**DOI**), represented by the
15 Bureau of Land Management (**BLM**), Roswell District, provides for a fire-management
16 program that will ensure a timely, well-coordinated, and cost-effective response to
17 suppress wild fire within the withdrawal area using the WIPP incident commander for
18 fire-management activities. The DOI will provide firefighting support if requested. In
19 addition, the MOU provides for responsibilities concerning cultural resources, grazing,
20 wildlife, mining, gas and oil production, realty/lands/rights-of-way, and reclamation.
- 21 • A mutual-aid firefighting agreement between the Eddy County Commission and the DOE
22 provides for the assistance of the Otis and Joel Fire Departments (a volunteer fire district
23 created under the Eddy County Commission and the New Mexico State Fire Marshall's
24 Office), including equipment and personnel, at any location within the WIPP Fire
25 Protection Area upon request by an authorized representative of the WIPP Project. These
26 responsibilities are reciprocal.
- 27 • A mutual-aid agreement between the City of Hobbs and the DOE provides for mutual
28 ambulance, medical, fire, rescue, and hazardous material response services; provides for
29 joint annual exercises; provides for use of WIPP facility radio frequencies by the City of
30 Hobbs during emergencies; and provides for mutual security and law enforcement
31 services, within the appropriate jurisdiction limits of each party.
- 32 • A mutual-aid agreement between the City of Carlsbad and the DOE provides for mutual
33 ambulance, medical, fire, rescue, and hazardous material response services; provides for
34 joint annual exercises; provides for use of WIPP facility radio frequencies by the City of
35 Carlsbad during emergencies; and provides for mutual security and law enforcement
36 services, within the appropriate jurisdiction limits of each party.
- 37 • A MOU between the DOE and the New Mexico Department of Public Safety (**DPS**)
38 concerning Mutual Assistance and Emergency Management applies to any actual or

1 potential emergency or incident that: 1) involves a significant threat to employees of the
2 Permittees or general public; 2) involves property under the control or jurisdiction of
3 either the DOE or the State; 3) involves a threat to the environment which is reportable to
4 an off-site agency; 4) requires the combined resources of the DOE and the state; 5)
5 requires a resource that the DOE has which the State does not have, or a resource the
6 State has which DOE does not have; or 6) involves any other incident for which a joint
7 determination has been made by the DOE and the State that the provisions of this MOU
8 will apply. The MOU provides that the DPS shall permit qualified and security cleared
9 DOE Emergency Management members into the State EOC for the purpose of: a)
10 coordinating communications functions; b) evaluating and maintaining communications
11 capabilities; c) participating in exercises; d) link the State's High Frequency radio
12 communications network with the DOE; and e) assisting the State during radioactive
13 materials accidents that require joint operations or the use of the DOE Radiological
14 Assistance Program team. The DOE shall permit qualified and security cleared members
15 the State Emergency Management community into the DOE's EOCs for the purposes of
16 coordinating communications and activities. Additional duties for each participant are
17 specified for assistance in incidents or emergencies.

18 F-7 Evacuation Plan

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

25 F-7a Surface Evacuation On-site and Off-site Staging Areas

26 Figure F-8 shows the surface staging areas. Personnel report to their Office Wardens at
27 designated staging areas where accountability is conducted. If site evacuation is necessary, the
28 RCRA Emergency Coordinator will decide which staging areas are to be used and will advise
29 Office Wardens of the selections. The RCRA Emergency Coordinator will communicate the
30 locations to Office Wardens via office warden pager, radio, plectron, WIPP Security, or
31 telephone, as appropriate. Office Wardens will direct personnel to the selected staging area
32 outside the security fence. Personnel who are working in a contaminated area when site
33 evacuation is announced, will assemble at specific staging areas to minimize contact with other
34 personnel during the evacuation (Figure F-8).

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

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

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

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

14 F-7b Underground Assembly Areas and Egress Hoist Stations

15 In the event of an underground or surface event, the RCRA Emergency Coordinator can call for
16 underground personnel to report to assembly areas (Figure F-9). Underground personnel are also
17 trained to immediately report to assembly areas under specific circumstances (i.e. loss of
18 underground power or ventilation). If accountability is required, the underground will be
19 evacuated. The Underground Controller is responsible for underground accountability by
20 comparing the brass numbers with the brass tags signed out in the lamproom. Each assembly
21 area contains a Mine Page Phone, miners aid station, and evacuation maps.

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

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

28 F-7c Plan for Surface Evacuation

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

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

1 F-7d Plan for Underground Evacuation

2 Notification for underground evacuation will be made using the underground evacuation alarm
3 and strobe light signals.

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

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

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

17 F-7e Further Site Evacuation

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

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

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

27 F-8 Required Reports

28 The RCRA Emergency Coordinator, on behalf of the Permittees, will note in the operating
29 record the time, date, and details of any incident that requires implementing this Contingency
30 Plan. This notation will be in the facility log maintained by the CMRO. In compliance with
31 20.4.1.500 NMAC (incorporating 40 CFR §264.56(j)), within 15 days after the incident, the
32 Permittees will ensure that a written report on the incident will be submitted to the EPA Region
33 VI Administrator and to the Secretary of the NMED. The report will include:

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

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

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

19 The WIPP requires the EST/FPT to initiate the “WIPP Hazardous Materials Incident Report” if
20 the Contingency Plan is implemented. A form is attached as Figure F-12. The form is initiated by
21 the EST/FPT. The RCRA Emergency Coordinator, CMRO, and Environmental Compliance
22 representatives complete their respective sections.

23 F-9 Location of the Contingency Plan and Plan Revision

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

- 30 • Intrepid Potash NM LLC and Mosaic Potash Carlsbad Inc.
- 31 • Carlsbad Fire Department, Carlsbad

- 1 • Carlsbad Medical Center, Carlsbad
- 2 • Lea Regional Medical Center, Hobbs
- 3 • Otis Fire Department, Otis
- 4 • Hobbs Fire Department, Hobbs
- 5 • Joel Fire Department, Carlsbad
- 6 • BLM, Carlsbad
- 7 • New Mexico State Police
- 8 The owner/operator of the WIPP facility will ensure that this plan is reviewed annually and
- 9 amended whenever:
- 10 • Applicable regulations are revised
- 11 • The RCRA Part B permit for the WIPP facility is revised in any way that would affect the
- 12 Contingency Plan
- 13 • This plan fails in an emergency
- 14 • The WIPP facility design, construction, operation, maintenance, or other circumstances
- 15 change in a way that materially increases the potential for fires, explosions, or releases of
- 16 hazardous waste or hazardous constituents or change the response necessary in an
- 17 emergency
- 18 • The list of RCRA Emergency Coordinators change
- 19 • 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 Printing
5 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-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	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-2
 RESOURCE CONSERVATION AND RECOVERY ACT
 EMERGENCY COORDINATORS**

Name	Address*	Office Phone	Home 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		234-8457	
G. L. (Gary) Kessler ²		234-8326	
A. E. (Alvy) Williams ¹ (primary)		234-8216 or 234-8276	
P.J. (Paul) Paneral ²		234-8498	
J. R. (Joel) Howard ²		234-8276	
M. L. (Mark) Long ²		234-8170	

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

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-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-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.

3 * Contingency Plan is implemented
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**TABLE F-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-5
 CHEMICAL METHODS OF MITIGATION**

METHOD	CHEMICAL		RADIOLOGICAL	
	LIQUID	SOLID	LIQUID	SOLID
NEUTRALIZATION	YES	YES ⁽¹⁾	NO	NO
SOLIDIFICATION	YES	NO	YES ⁽²⁾	NO

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- (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.

**TABLE F-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

**TABLE F-6
 EMERGENCY EQUIPMENT MAINTAINED AT THE WASTE ISOLATION PILOT PLANT**

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
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

**TABLE F-6
EMERGENCY EQUIPMENT MAINTAINED AT THE WASTE ISOLATION PILOT PLANT**

Equipment	Description and Capabilities	Location
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
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

**TABLE F-6
 EMERGENCY EQUIPMENT MAINTAINED AT THE WASTE ISOLATION PILOT PLANT**

Equipment	Description and Capabilities	Location
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
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

**TABLE F-6
EMERGENCY EQUIPMENT MAINTAINED AT THE WASTE ISOLATION PILOT PLANT**

Equipment	Description and Capabilities	Location
Automatic Dry Chemical Extinguishing Systems	Automatic; 1,000-pound system (Purple K); 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
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

**TABLE F-6
 EMERGENCY EQUIPMENT MAINTAINED AT THE WASTE ISOLATION PILOT PLANT**

Equipment	Description and Capabilities	Location
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
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

**TABLE F-6
 EMERGENCY EQUIPMENT MAINTAINED AT THE WASTE ISOLATION PILOT PLANT**

Equipment	Description and Capabilities	Location
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
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

**TABLE F-6
 EMERGENCY EQUIPMENT MAINTAINED AT THE WASTE ISOLATION PILOT PLANT**

Equipment	Description and Capabilities	Location
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
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

**TABLE F-6
 EMERGENCY EQUIPMENT MAINTAINED AT THE WASTE ISOLATION PILOT PLANT**

Equipment	Description and Capabilities	Location
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-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-5)		*	*	*
Station A Effluent Monitoring Shed			*	*
Station B Effluent Monitoring Shed			*	*

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- (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

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- (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

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- The Safety and Emergency Services Building contains the following:
 - Automatic wet pipe sprinklers
 - Manual pull stations
 - Portable fire extinguishers
 - Automatic detectors

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- The Core Storage Building contains the following:
 - Automatic wet pipe sprinklers
 - Portable fire extinguishers

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- (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.

**TABLE F-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: (505) 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: (505) 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.

**TABLE F-8
 HAZARDOUS RELEASE REPORTING, FEDERAL**

Statute	Chemical Releases Covered	To Whom Report Will Be Made	What Will Be Reported	
			Immediately (Oral)	Subsequently (Written)
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)
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.

**TABLE F-8
 HAZARDOUS RELEASE REPORTING, FEDERAL**

Statute	Chemical Releases Covered	To Whom Report Will Be Made	What Will Be Reported	
			Immediately (Oral)	Subsequently (Written)
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) 428-2500.	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-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 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.

**TABLE F-9
 HAZARDOUS RELEASE REPORTING, STATE OF NEW MEXICO**

Regulations	Chemical Releases Covered	To Whom Report Will Be Made	What Will Be Reported	
			Immediately (Oral)	Subsequently (Written)
20.4.1 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)428-2500.	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.

**TABLE F-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)
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: (505) 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.

**TABLE F-9
 HAZARDOUS RELEASE REPORTING, STATE OF NEW MEXICO**

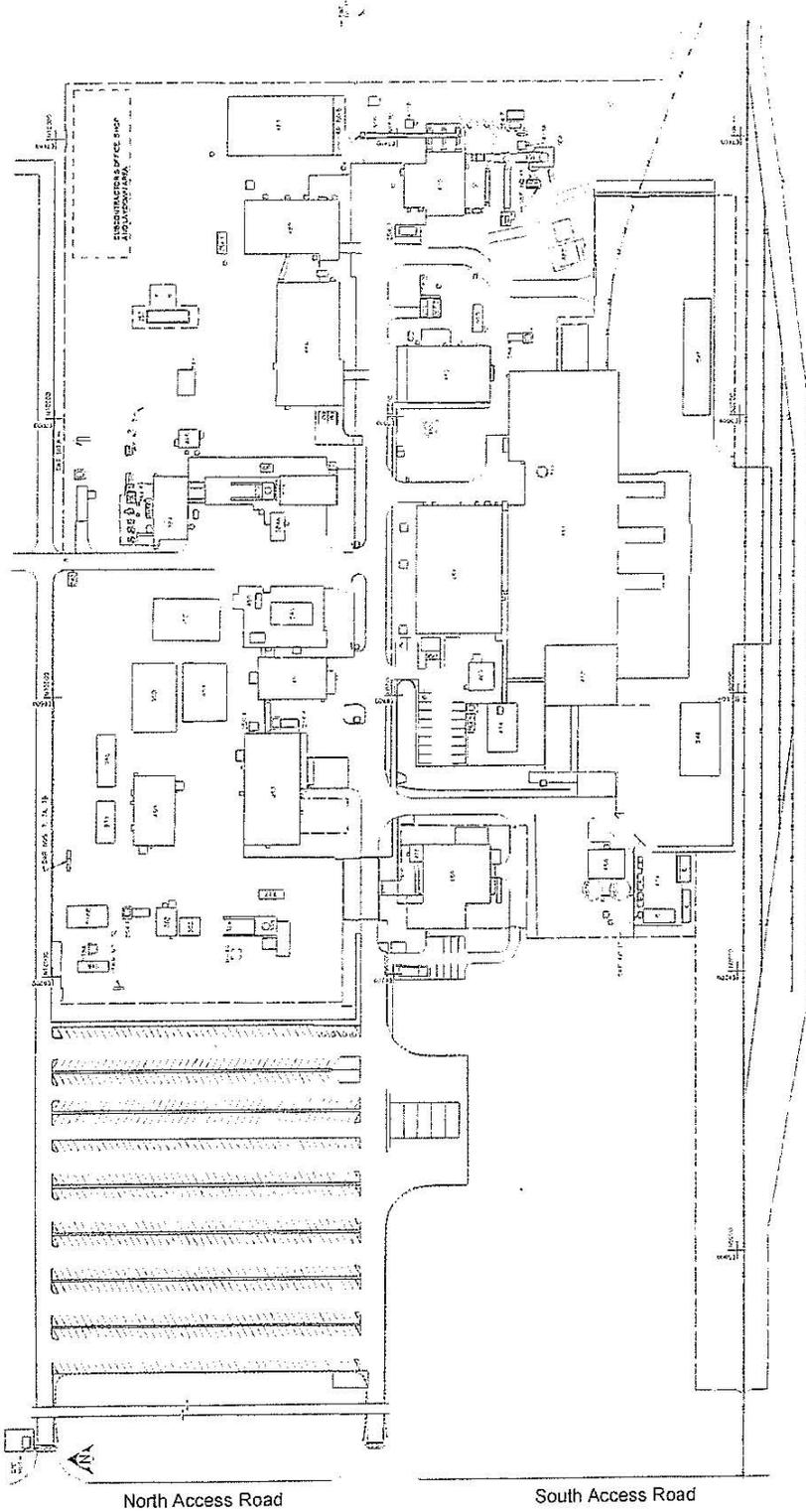
Regulations	Chemical Releases Covered	To Whom Report Will Be Made	What Will Be Reported	
			Immediately (Oral)	Subsequently (Written)
New Mexico Water Quality Control Commission, Part 1, Section 203	Any discharge from any facility of oil or any other water contaminant in such quantities as may, with 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.
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.

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FIGURES

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Figure F-1
WIPP Surface Structures

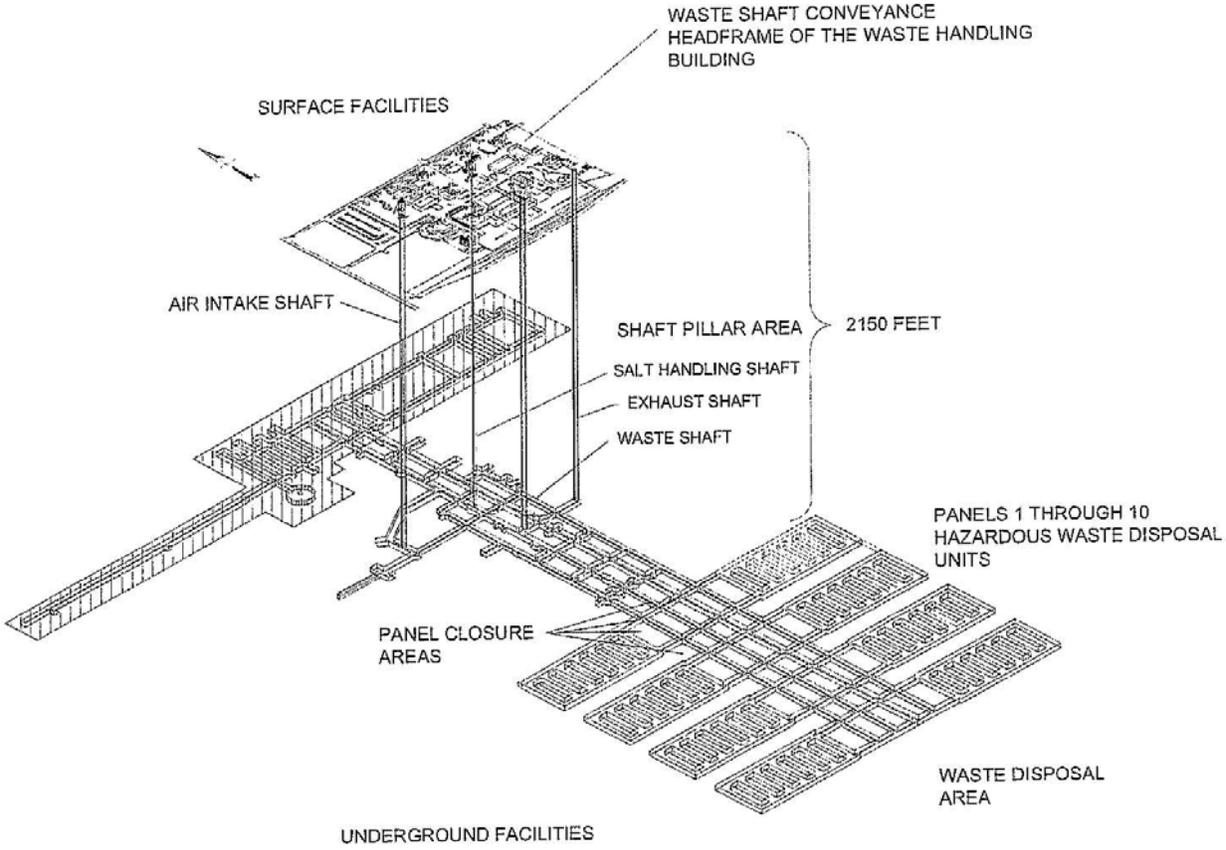
Waste Isolation Pilot Plant
Hazardous Waste Facility Permit
Renewal Application
September 2009

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	SAMPLE LABORATORY TRAILER
#255.1	BACK-UP DIESEL GENERATOR #1 25-PE 503	#458	CORE STORAGE BUILDING	#965	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	AUXILIARY AIR INTAKE	#986	SWITCHRACK NO. 6
#311	WASTE SHAFT	#465	TELEPHONE HUT	SWR NO. 6	7A, 7B
#351	EXHAUST SHAFT	#468	ARMORY BUILDING	SWR NO. 7	SWITCHRACK NO. 7, 7A, 7B
#361	AIR INTAKE SHAFT	#473	HAZARDOUS WASTE STORAGE FACILITY	SWR NO. 7C	SWITCHRACK NO. 7C
#362	AIR INTAKE SHAFT/HOIST HOUSE	#474	HAZARDOUS WASTE STORAGE BUILDING	SWR NO. 10	SWITCHRACK NO. 10
#363	AIR INTAKE SHAFT/WINCH HOUSE	#474A	HAZARDOUS WASTE STORAGE BUILDING	SWR NO. 11	SWITCHRACK NO. 11
#364	EFFLUENT MONITORING INSTRUMENT SHED A	#474B	OIL & GREASE STORAGE BUILDING	SWR NO. 12	SWITCHRACK NO. 12
#365	EFFLUENT MONITORING INSTRUMENT SHED B	#474C	GAS BOTTLE STORAGE BUILDING	SWR NO. 15	SWITCHRACK NO. 15
#366	AIR INTAKE SHAFT HEADFRAME	#474D	HAZARD MATERIAL STORAGE BUILDING		
#371	SALT HANDLING SHAFT	#474E	WASTE OIL RETAINER		
#372	SALT HANDLING SHAFT HEADFRAME	#474F			

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Figure F-1a
Legend to Figure F-1

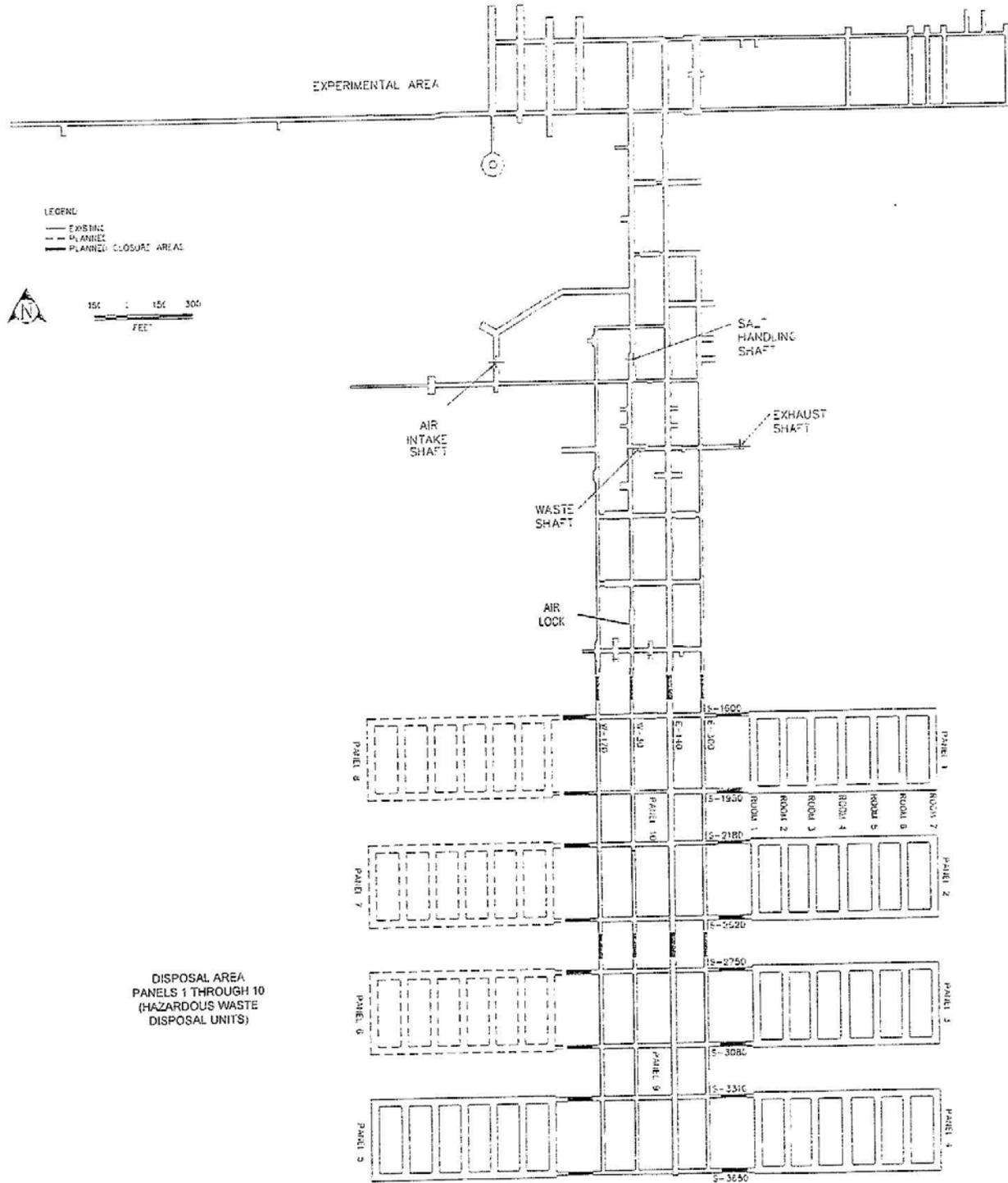


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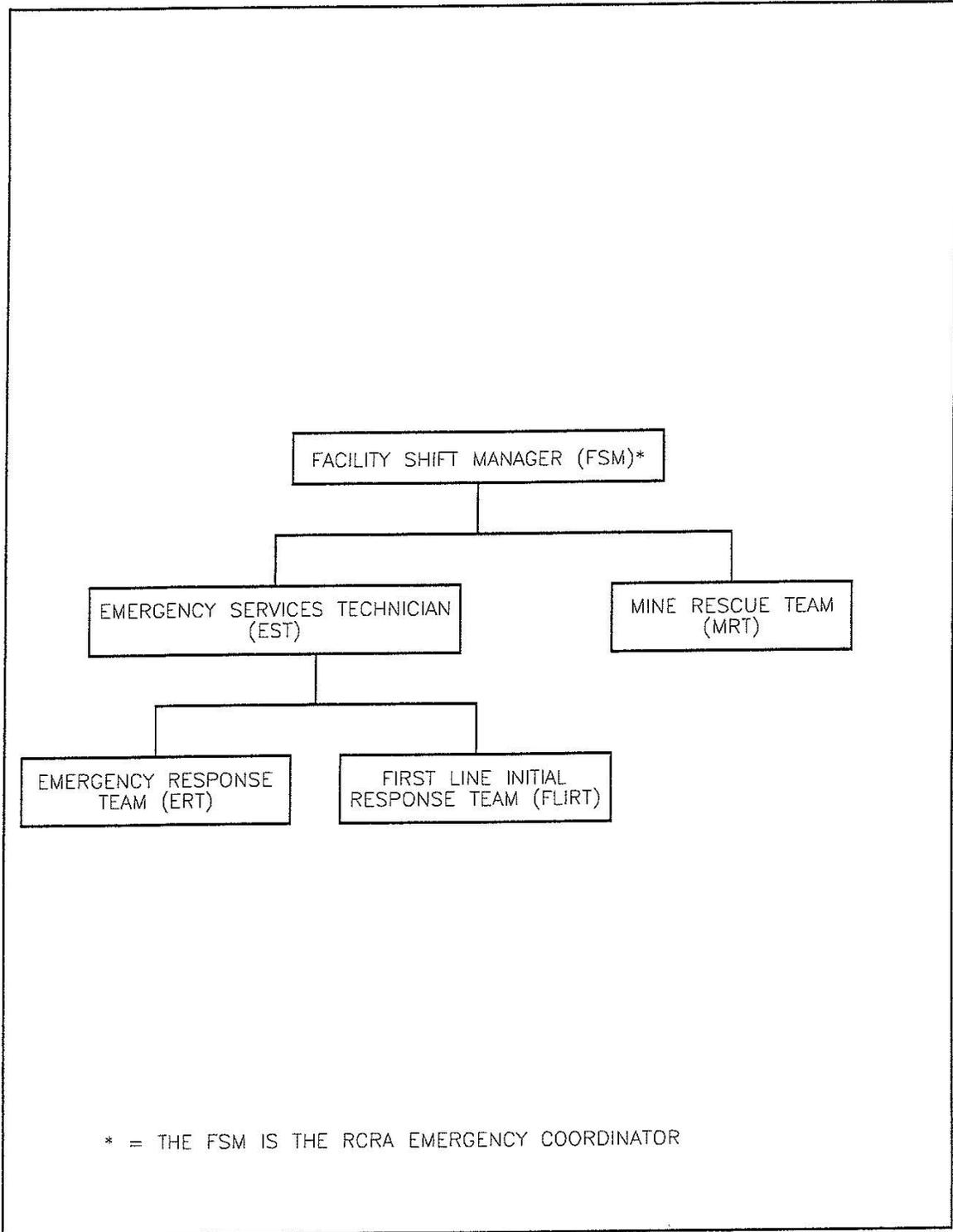
Figure F-2
Spatial View of the WIPP Facility

Waste Isolation Pilot Plant
 Hazardous Waste Facility Permit
 Renewal Application
 September 2009



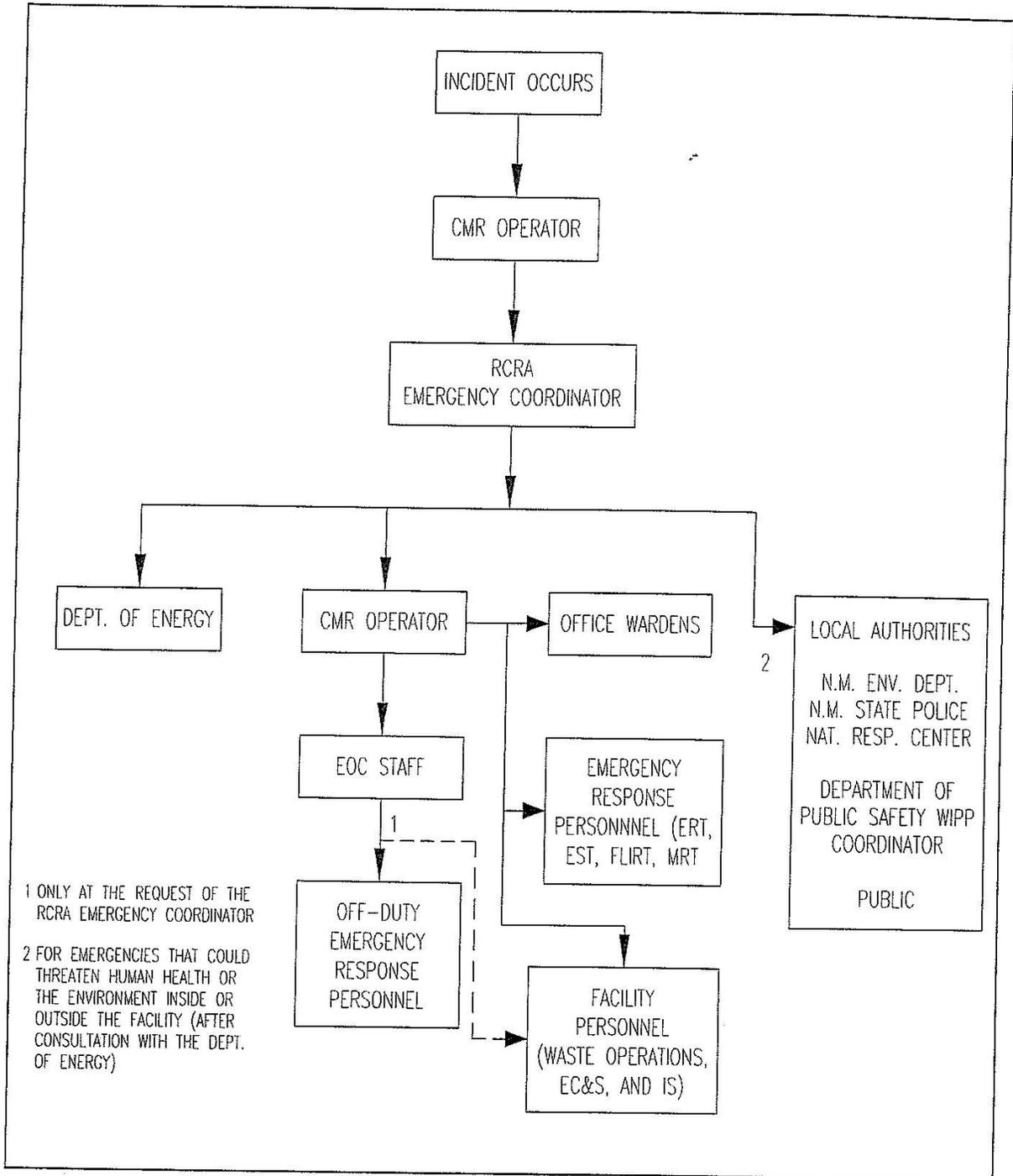
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Figure F-3
 WIPP Underground Facilities



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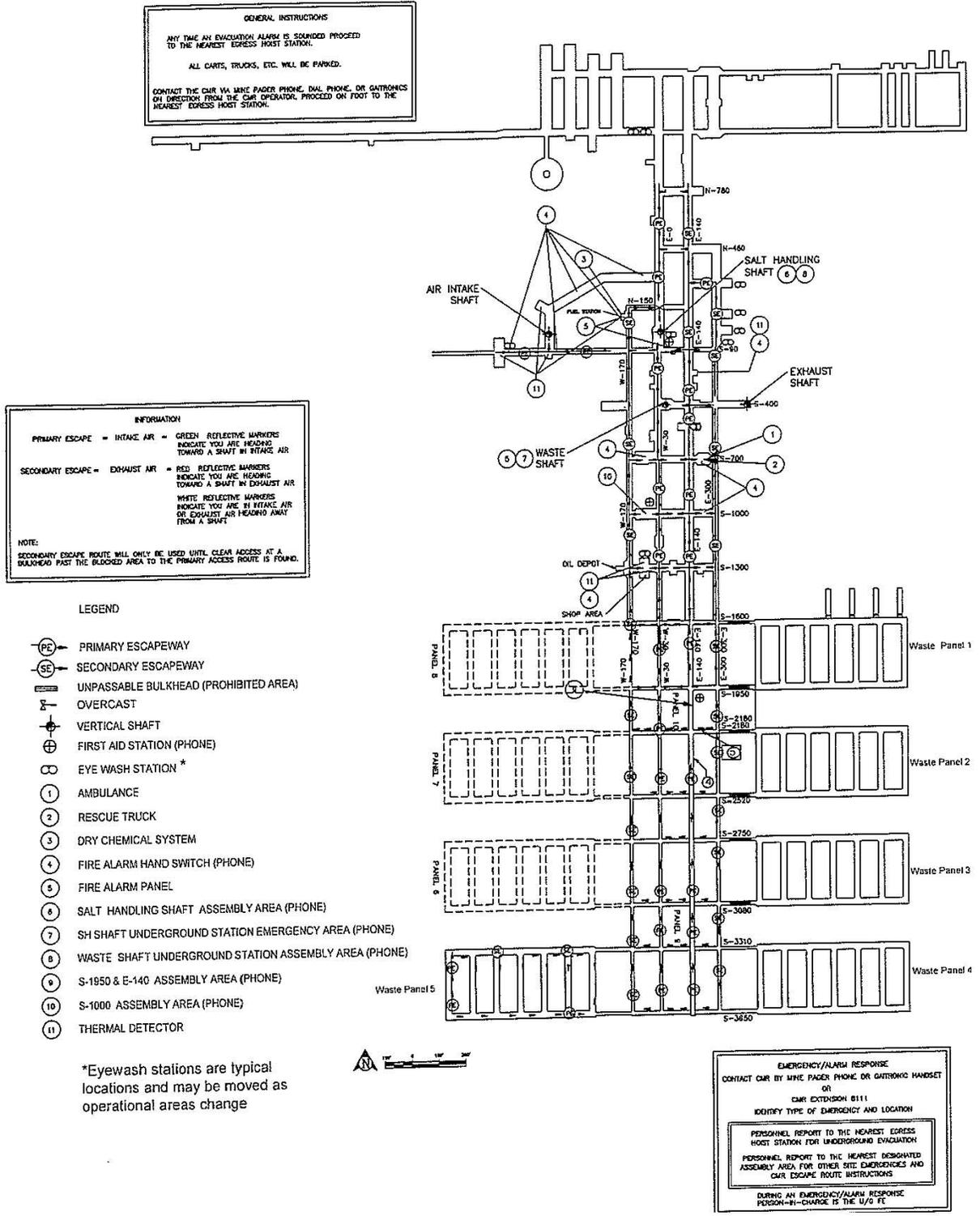
Figure F-4
Direction and Control Under Emergency Conditions in Which the Plan Has Been Implemented



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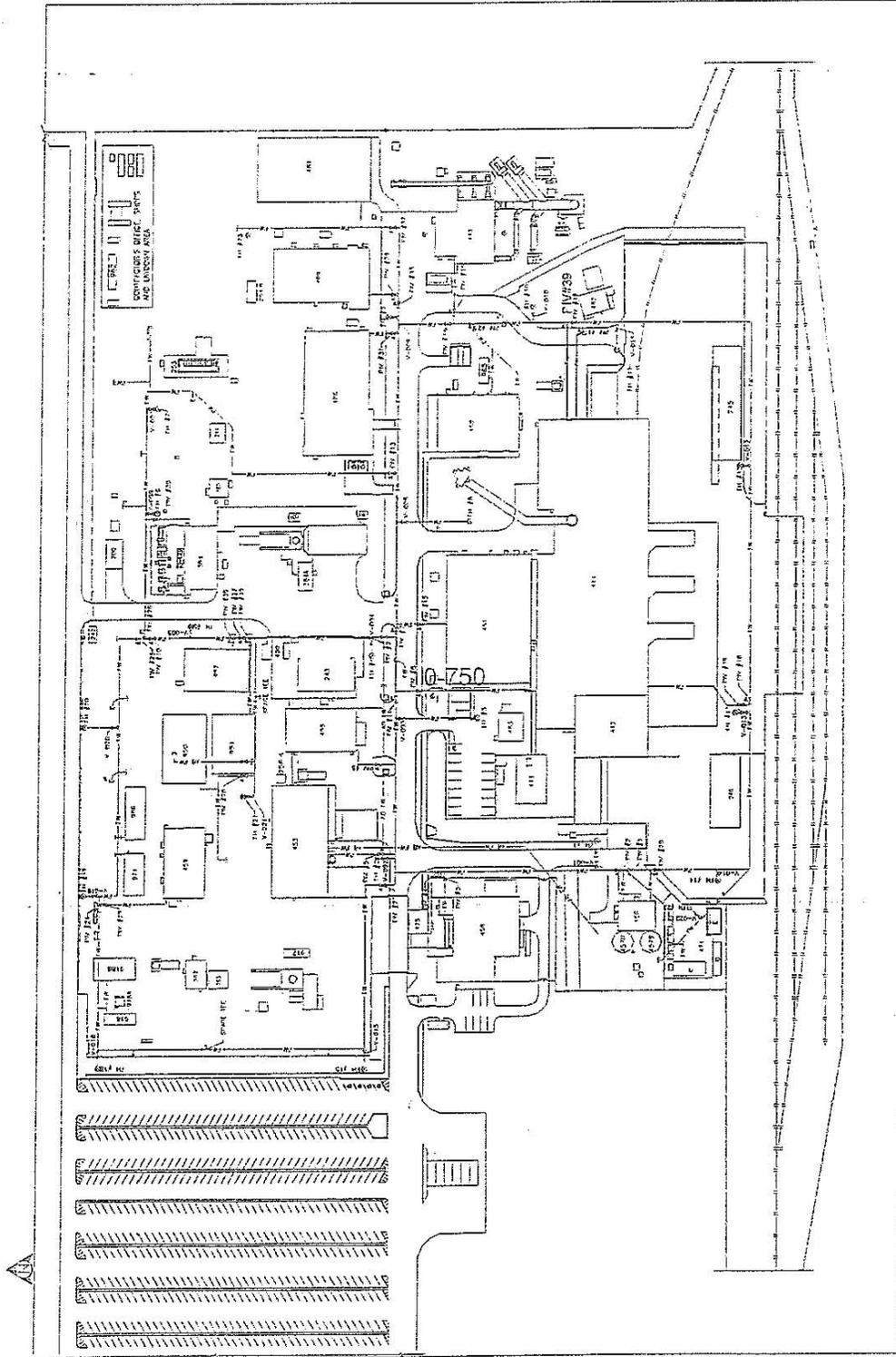
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Figure F-4a
 WIPP Facility Emergency Notifications



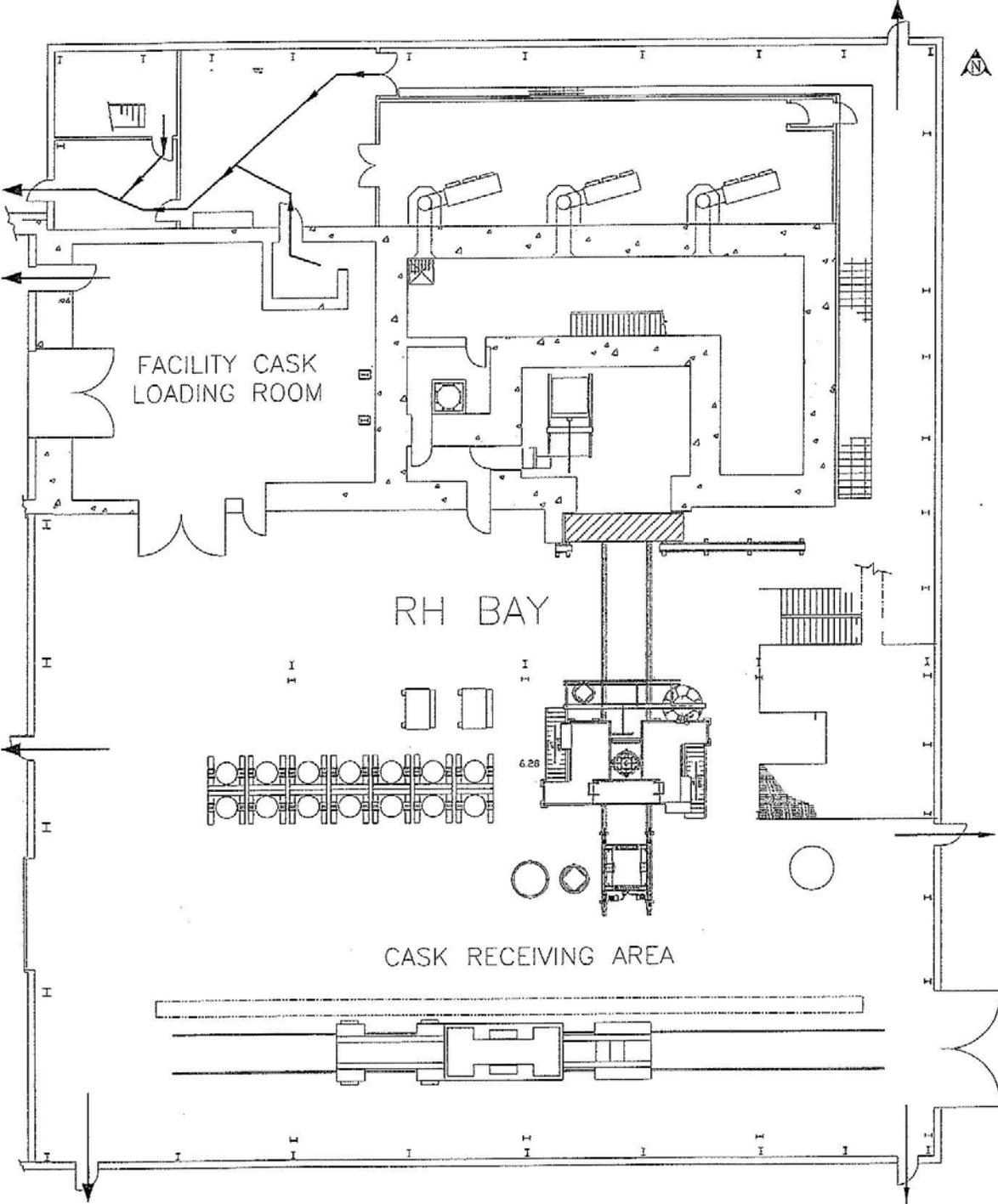
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Figure F-5
 Underground Emergency Equipment Locations and Underground Evacuation Routes



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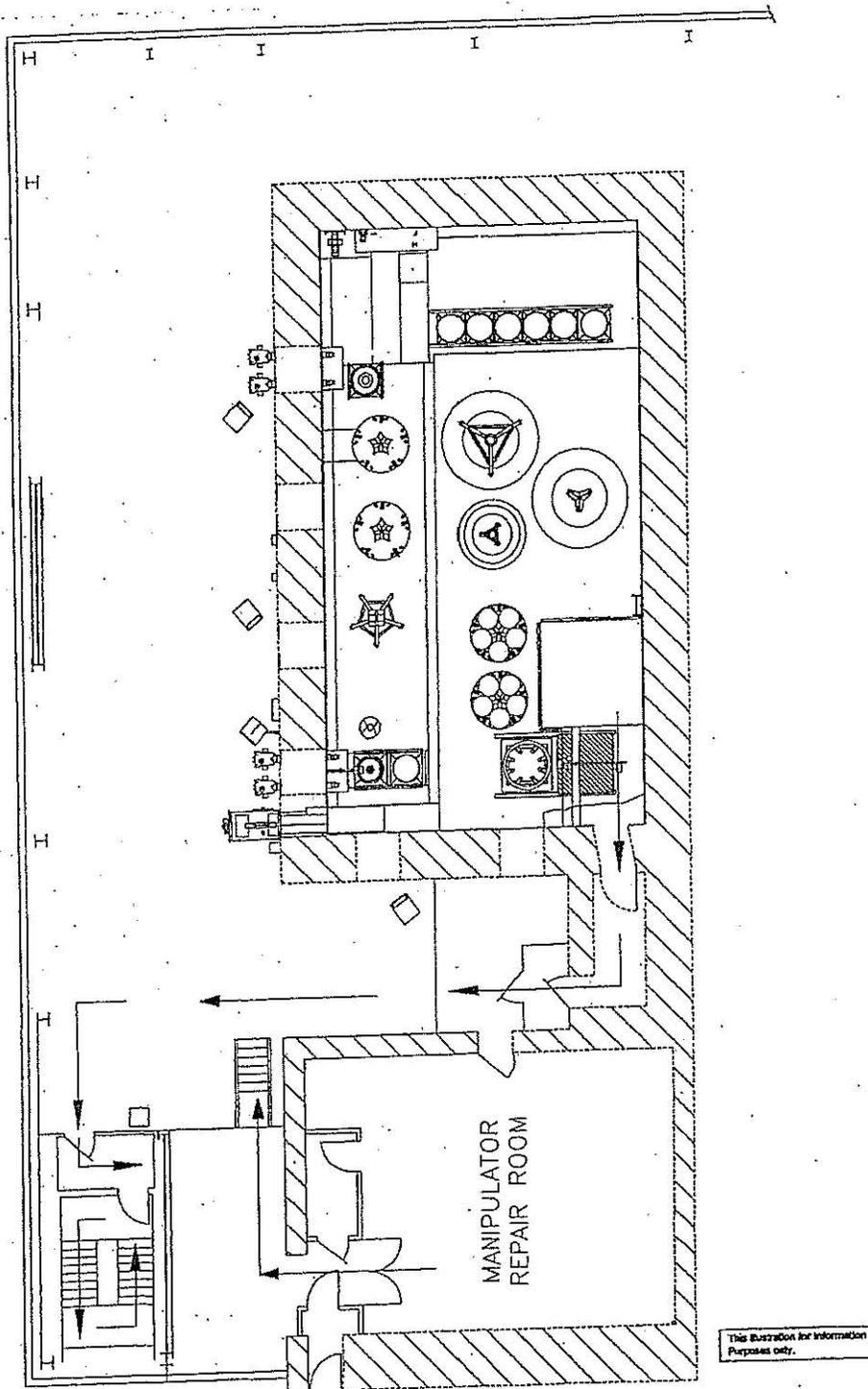
Figure F-6
Fire-Water Distribution System



This illustration for Information
Purposes Only.

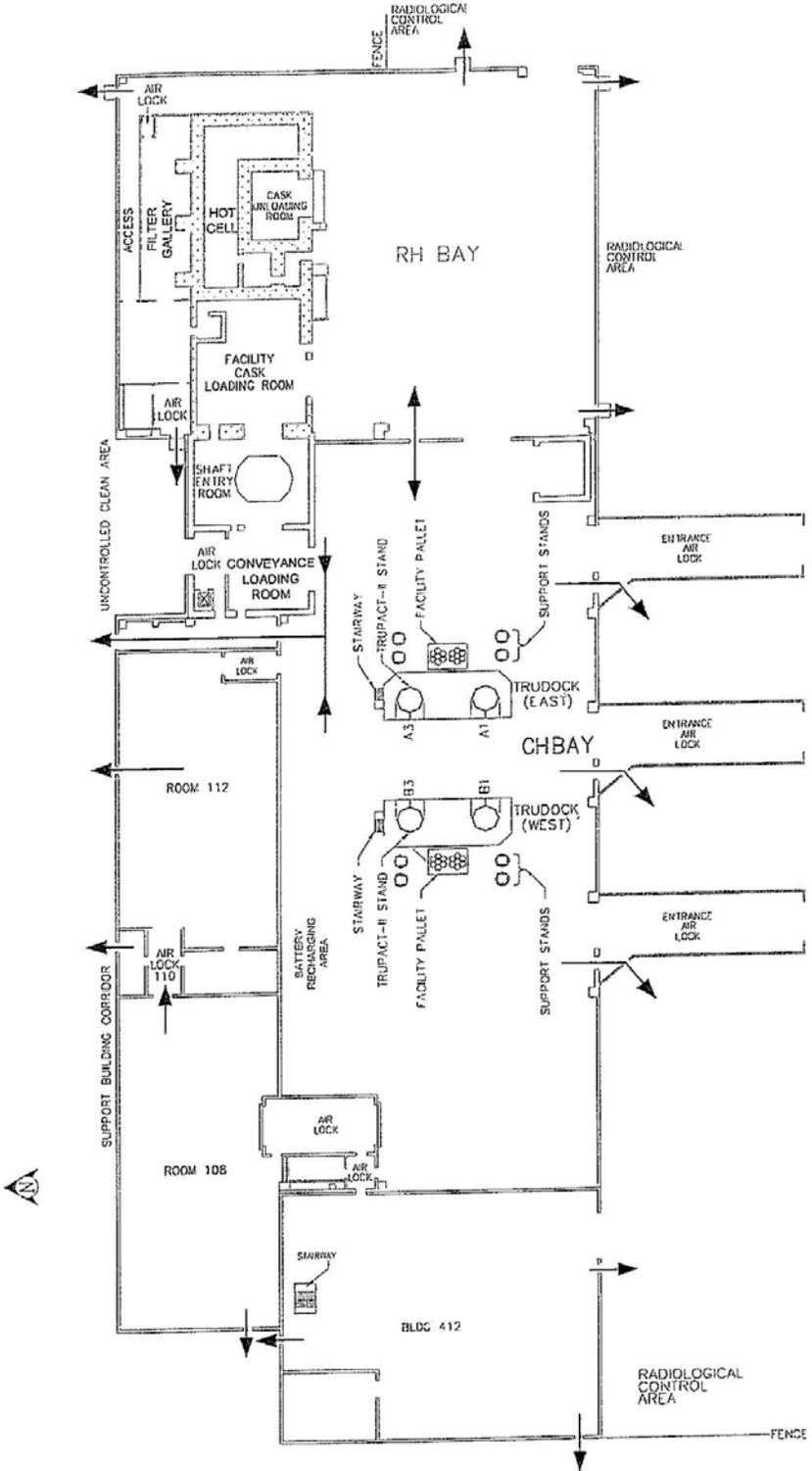
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Figure F-8a
RH Bay Evacuation Routes



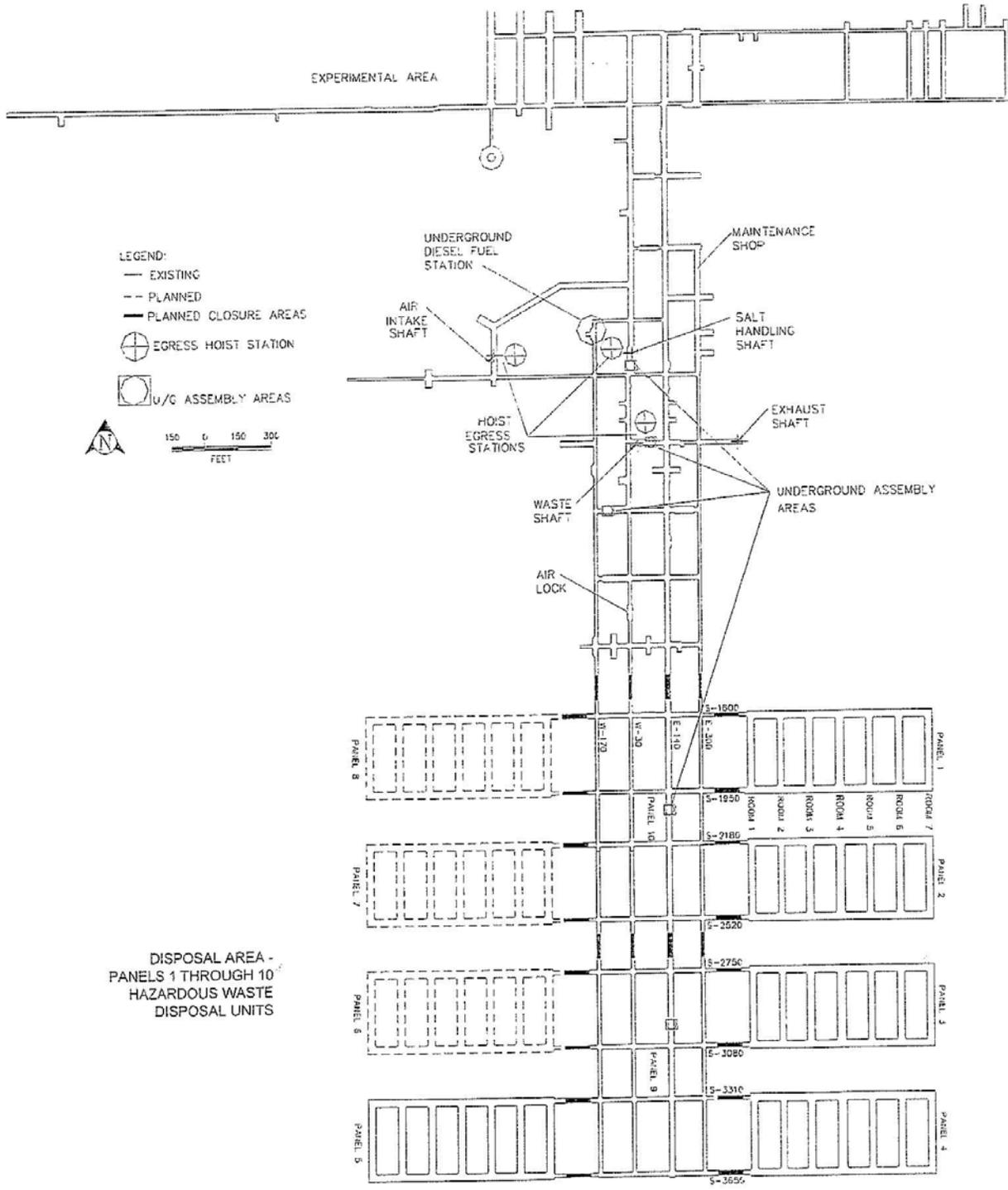
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Figure F-8b
RH Bay Hot Cell Evacuation Route



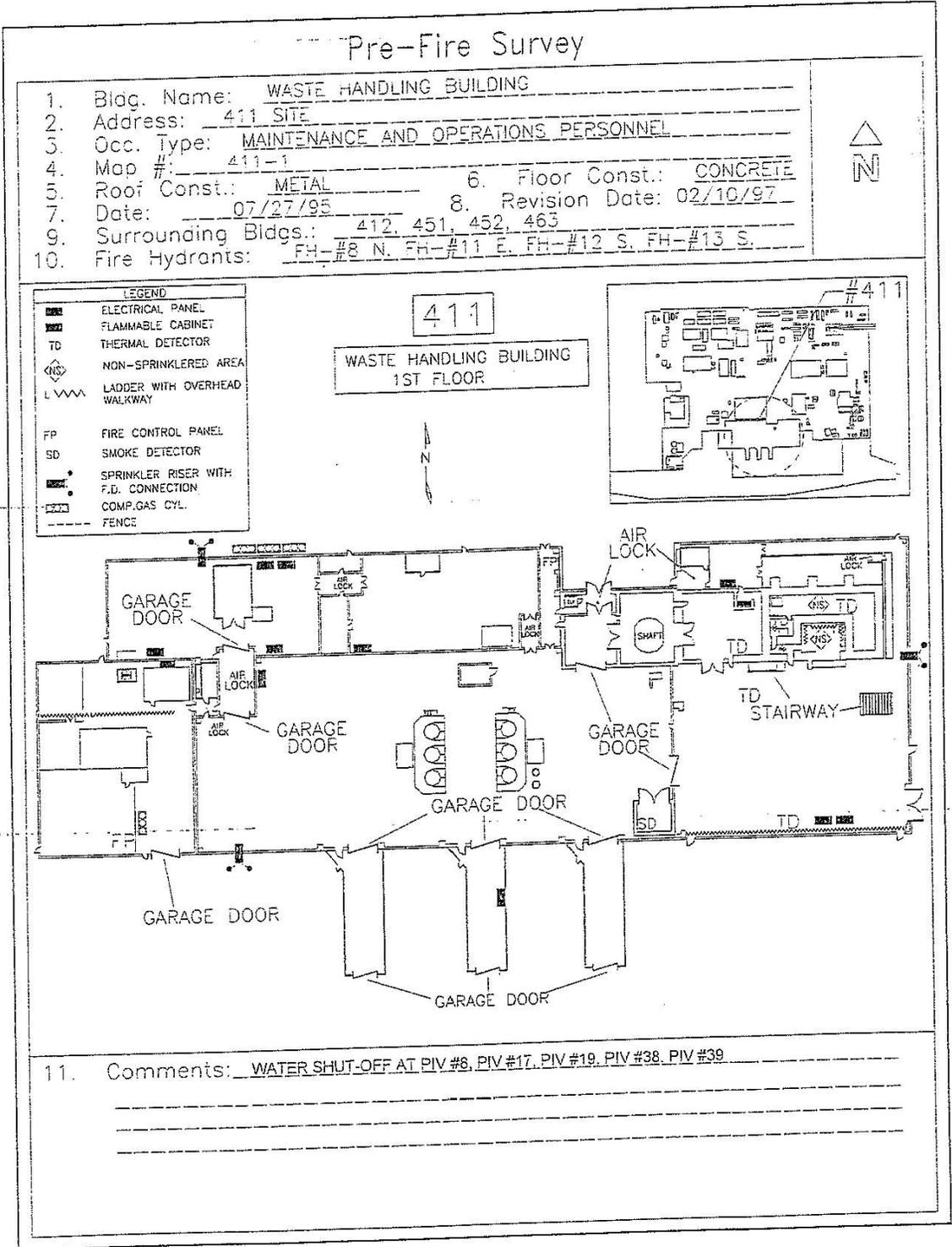
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Figure F-8c
 Evacuation Routes in the Waste Handling Building



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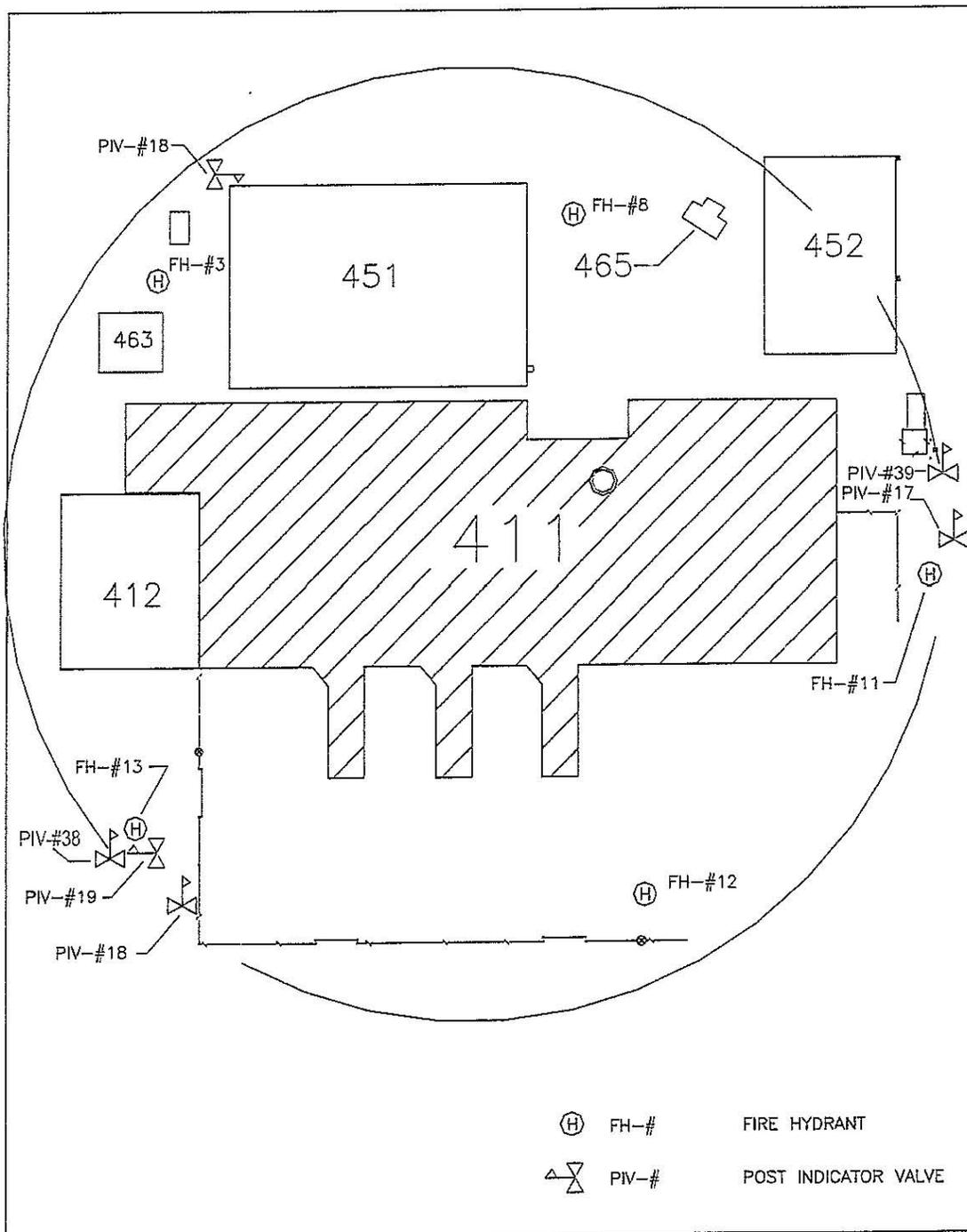
Figure F-9
 Designated Underground Assembly Areas



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

Pre-Fire Survey Cont.



MAP #: 411-1

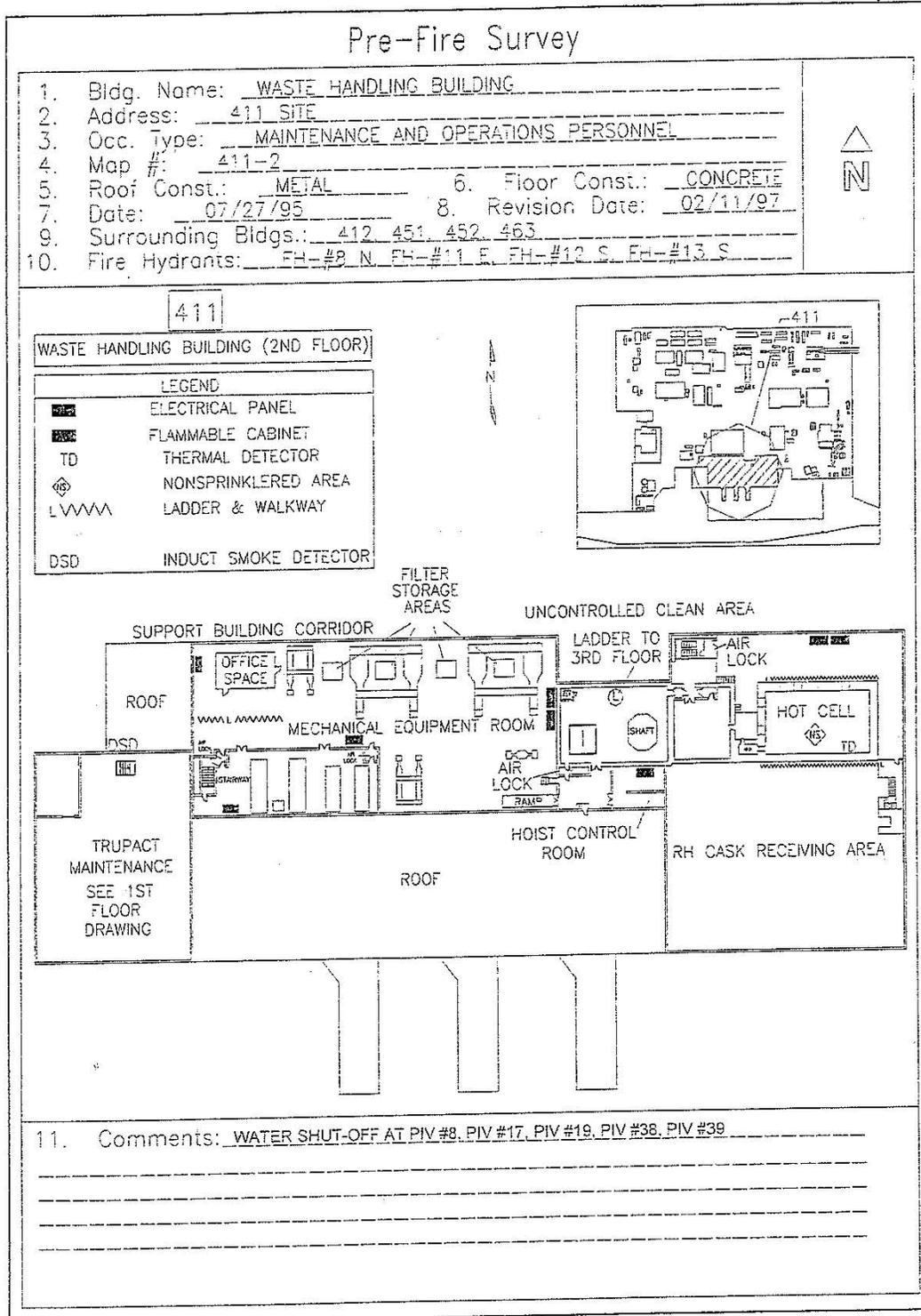
PAGE 2

REVISION DATE: 1/02/2007

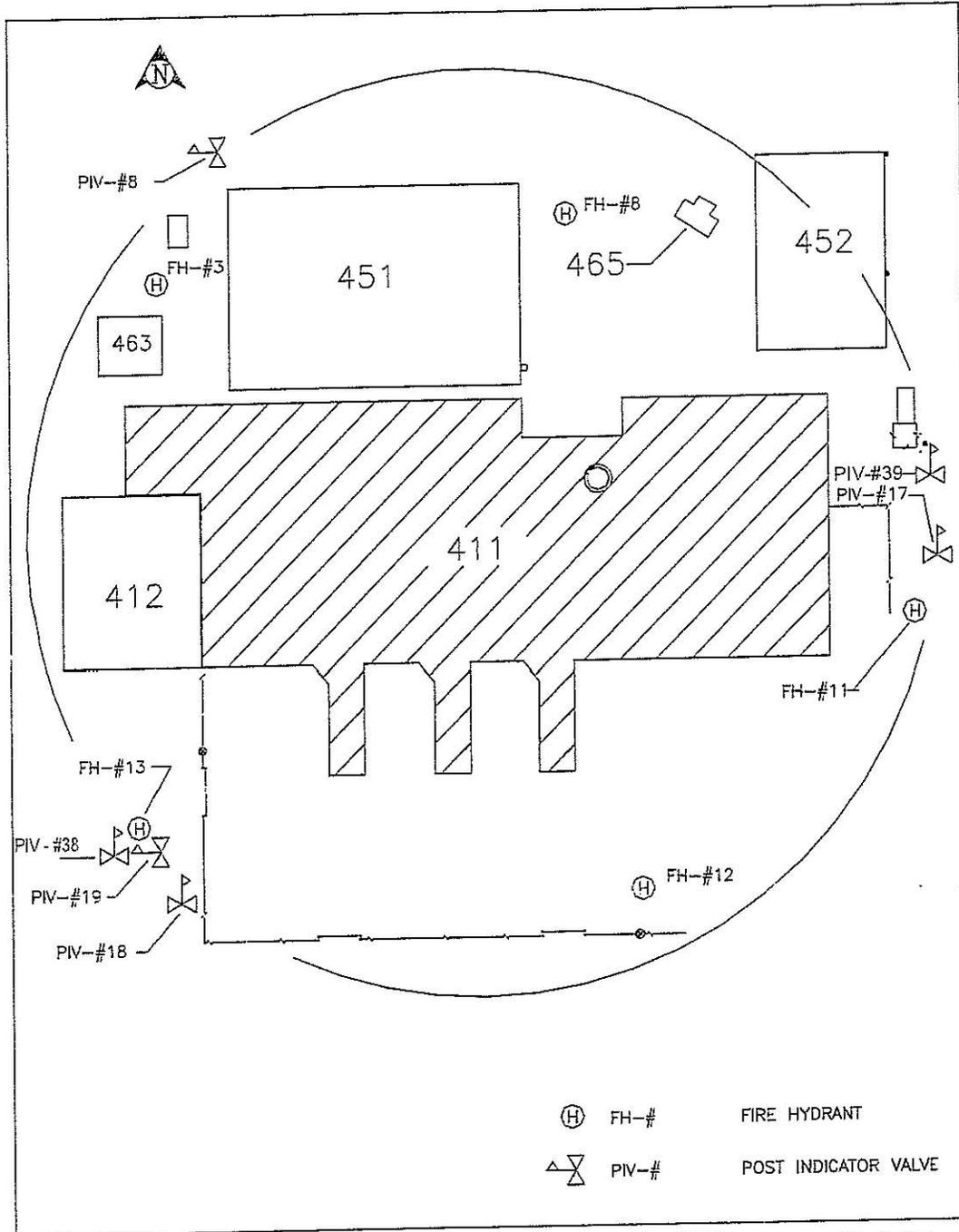
411-1-PFS

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



Pre-Fire Survey Cont.



MAP #: 411-2

PAGE 2

REVISION DATE: 8/30/2006

411-2-PFS

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Figure F-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>		
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

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

WIPP HAZARDOUS MATERIAL INCIDENT REPORT			
Date: _____		Location: _____	
IX. INITIAL NOTIFICATION BY CMRO			
<u>DEPARTMENT</u>	<u>PERSON CONTACTED</u>	<u>TIME</u>	<u>NOTIFIED BY</u>
Facility Ops (FSM) _____	_____	_____	_____
Emerg. Mgmt (EST) _____	_____	_____	_____
EC _____	_____	_____	_____
Industrial Safety _____	_____	_____	_____
Facility Ops. (FM/FMD) _____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
CMRO: _____			
Print name	Signature	Date	
FSM: _____			
Print name	Signature	Date	
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: _____			

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

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DRAWINGS

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