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**RENEWAL APPLICATION
CHAPTER F**

RCRA CONTINGENCY PLAN

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6		

1 (WHB Unit) and the Parking Area Container Storage Unit (**Parking Area Unit**), located south
2 of the WHB, and the areas below ground in which waste will be emplaced.

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

7
8 Exhaust Filter Building - houses the filter banks to which the underground ventilation can
9 be diverted in the unlikely event of an underground release of radionuclides.

10
11 Guard and Security Building - houses the facility security personnel and communications
12 equipment necessary for them to perform their duties. Section F-4a specifies the duties
13 of the security officers relative to contingency actions.

14
15 Safety and Emergency Services Building - houses the surface emergency response
16 vehicles (fire truck, rescue truck, ambulance), Health Services (first aid), Emergency
17 Operations Center (**EOC**), and the Dosimetry Laboratory. The Hazardous Material
18 Response Trailer is staged at the WIPP facility in an area that is readily accessible to
19 Emergency Services. Emergency Services is located in Building 452. Table F-**16**
20 describes emergency equipment and associated locations.

21
22 Support Building - houses the Central Monitoring Room (see section F-4a).

23
24 Transuranic Package Transporter-**H** (**TRUPACT**) Maintenance Facility - is located west
25 of the CH bay. No TRU mixed waste management activities will occur in this facility.

26
27 Surface facilities used for storage of support equipment are identified in Table F-**16**.

28
29 Building 452, Safety and Emergency Services Facility, houses the emergency response vehicles,
30 emergency equipment, the mine rescue room, mine rescue team equipment, and the ~~Emergency~~
31 ~~Operations Center (EOC)~~. The Hazardous Material Response Trailer is staged at the WIPP
32 facility in an area readily accessible to Emergency Services. ~~Emergency Services is located in~~
33 ~~Building 452.~~

34
35 The RCRA Renewal Application addresses TRU mixed waste management activities in the
36 WHB Unit, the Parking Area Unit, and the disposal units. The provisions of this Contingency
37 Plan apply to hazardous waste disposal units (**HWDU**) in the underground waste disposal panels,
38 storage in the WHB Unit and the Parking Area Unit, the Waste Shaft, and supporting TRU
39 mixed waste handling areas. The remainder of the facility will not manage TRU mixed waste.
40 This Contingency Plan has also been designed in accordance with 20.4.1.300 NMAC
41 (incorporating 40 CFR § 262.34(a)(4) - Standards for Generators of Hazardous Waste), and will
42 be implemented whenever there is a fire, explosion, or release of hazardous waste which could
43 threaten human health or the environment. Hazardous substances in the remainder of the facility
44 are included as possible triggers of the Contingency Plan but are outside the scope of the
45 regulations promulgated pursuant to RCRA. This allows **the WIPP facility** to maintain one

1 emergency response plan which is consistent with the National Response Teams Integrated
2 Contingency Plan Guidance (Federal Register, Vol. 61, No. 109, June 5, 1996). Inclusion is
3 based on their National Fire Protection Association (**NFPA**) ratings in addition to their storage
4 quantities. The majority of hazardous substances on-site are not expected to trigger the
5 Contingency Plan because they are present in the same form and concentration as the product
6 packaged for distribution and use by the general public or are used in a laboratory under the
7 direct supervision of a technically qualified individual. Superfund Amendments and
8 Reauthorization Act (**SARA**) Title III excludes these from emergency planning reporting. The
9 list of hazardous substances in large enough quantities to constitute a Level II incident (Section
10 F-3) is provided in Table F-2⁴. In addition to TRU mixed waste, these are the only hazardous
11 substances currently on site which, if spilled, may be of sufficient impact to cause this
12 Contingency Plan to be implemented. Magnesium Oxide (**MgO**) is stored on-site in large
13 quantities. It is used as backfill in the waste emplacement rooms as a pH buffer. The pH buffer
14 will limit the solubility of radionuclides after the underground rooms are filled and closed. **The**
15 **MgO backfill** is not a hazardous substance; a release of MgO will not create hazardous waste
16 and poses no threat to human health or the environment, and is therefore not addressed in the
17 Contingency Plan.

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

31
32 Non-Mixed—Hazardous waste liquids contaminated only with hazardous constituents
33 will be placed into containers and managed in accordance with 20.4.1.300 NMAC
34 (incorporating 40 CFR §262.34) requirements. The waste will be shipped to an approved
35 off-site treatment, storage, or disposal facility.

36
37 Mixed—Liquids contaminated with TRU mixed waste (inside the WHB Unit) will be
38 solidified as they are placed into containers with cement, Aquaset, or absorbent material
39 in them. The solidified materials will be disposed of in the underground WIPP repository
40 as derived waste.

41
42 This chapter of the Renewal Application describes the HWDUs, the TRU mixed waste
43 management facilities and operations, compliance with the environmental performance
44 standards, and with the applicable technical requirements of 20.4.1.500 NMAC (incorporating 40
45 CFR §264.170 to §264.178 and §264.601, respectively). The configuration of the WIPP facility

1 consists of completed structures; including all buildings and systems for the operation of the
2 facility.

3

4 F-1a Disposal Phase Overview

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

9

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

17

18 F-1b Waste Description

19 Waste destined for the WIPP facility are, or were, produced as a byproduct of weapons
20 production and have been identified in terms of waste streams based on the processes that
21 produced them. Each waste stream identified by TRU waste sites ~~generators~~ is assigned to a
22 Waste Summary Category to facilitate RCRA waste characterization, and reflect the final waste
23 forms acceptable for WIPP disposal.

24

25 These Waste Summary Categories are:

26

27 S3000—Homogeneous Solids

28 Solid process residues defined as solid materials, excluding soil, that do not meet the
29 applicable regulatory criteria for classification as debris (20.4.1.800 NMAC
30 (incorporating 40 CFR §268.2(~~{g}~~) and (~~{h}~~))). Included in solid process residues are
31 inorganic process residues, inorganic sludges, salt waste, and pyrochemical salt waste.
32 Other waste streams are included in this Waste Summary Category based on the specific
33 waste stream types and final waste form. This category includes wastes that are at least
34 50 percent by volume solid process residues.

35

36 S4000—Soils/Gravel

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

39

40 S5000—Debris Wastes

41 This waste summary category includes waste that is at least 50 percent by volume
42 materials that meet the criteria for classification as debris (20.4.1.800 NMAC
43 (incorporating 40 CFR §268.2)). Debris is a material for which a specific treatment is not
44 provided by 20.4.1.800 NMAC (incorporating 40 CFR §268 Subpart D), including

1 process residuals such as smelter slag from the treatment of wastewater, sludges or
2 emission residues.
3

4 Debris means solid material exceeding a 2.36 inch (60 millimeter) particle size
5 that is intended for disposal and that is: 1) a manufactured object, 2) plant or
6 animal matter, or 3) natural geologic material.
7

8 Included in the S5000 Waste Summary Category are metal debris, lead containing metal
9 debris, inorganic nonmetal debris, asbestos debris, combustible debris, graphite debris,
10 heterogeneous debris, and composite filters, as well as other minor waste streams.

11 Particles smaller than 2.36 inches (60 millimeter) in size may be considered debris if the
12 debris is a manufactured object and if it is not a particle of S3000 or S4000 material.
13

14 Examples of waste that might be included in the S5000 Waste Summary Category are
15 asbestos-containing gloves, fire hoses, aprons, flooring tiles, pipe insulation, boiler
16 jackets, and laboratory tabletops. Also included are combustible debris constructed of
17 plastic, rubber, wood, paper, cloth, graphite, and biological materials. Examples of
18 graphite waste that would be included are crucibles, graphite components, and pure
19 graphite.
20

21 Wastes may be generated at the WIPP facility as a direct result of managing the TRU and TRU
22 mixed wastes ~~received from the off-site generators~~. Such generated waste may occur in either
23 the WHB Unit or the Underground. For example, when TRU mixed wastes are received at the
24 WHB Unit, the CH or RH Package shipping containers and the TRU mixed waste containers are
25 checked for surface contamination. Under some circumstances,¹ if contamination is detected, the
26 shipping container and/or the TRU mixed waste containers will be decontaminated. In the
27 underground, waste may be generated as a result of radiation control procedures used during
28 monitoring activities. The waste generated from radiation control procedures will be assumed to
29 be TRU and/or TRU mixed waste. Throughout the remainder of this plan, this waste is referred
30 to as “derived waste.” ~~All such~~ Derived waste will be placed in the rooms in HWDUs along with
31 the TRU mixed waste for disposal.
32

33 F-1c Containers

34 The waste containers that will be used at the WIPP facility qualify as “containers,” in accordance
35 with 20.4.1.100+ NMAC (incorporating 40 CFR §260.10). That is, they are “portable devices in
36 which a material is stored, transported, treated, disposed of, or otherwise handled.”
37

¹Typically contamination that is less than six square feet in area and less than 2,000 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 TRU **Transuranic** mixed waste containers, containing off-site waste, will not be opened at the
2 WIPP facility. Derived waste containers are kept closed at all times unless waste is being added
3 or removed.
4

5 Liquid waste, including “derived waste” containing liquids, will not be emplaced in the WIPP.
6 TRU **Transuranic** mixed waste for emplacement in the WIPP shall contain as little residual liquid
7 as is reasonably achievable. All internal containers (e.g., bottles, cans, etc.) will be well-drained,
8 but may contain residual liquids. ~~As a guideline, residual~~ Residual liquids in well-drained containers
9 will be restricted to ~~approximately~~ one percent of the volume of the internal container. In no
10 case shall the total liquid ~~equal or exceed~~ one volume percent of the waste **payload** container (i.e.
11 e.g., drum, standard waste box ~~(SWB)~~, ten-drum overpack, or canister).
12

13 Special requirements for ignitable, reactive, and incompatible waste are addressed in 20.4.1.500
14 NMAC (incorporating 40 CFR §264.176 and 177). The RCRA Renewal Application Treatment,
15 Storage, and Disposal Facility Waste Acceptance Criteria (**TSDF-WAC**) precludes ignitable,
16 reactive, or incompatible TRU mixed waste from being placed into storage or disposed of at
17 WIPP.
18

19 F-1d Description of Containers

20 ~~CH~~ **Contact-handled** TRU mixed waste containers will be either 55-gallon (**gal**) (208-liter (**L**))
21 drums singly or arranged into seven (7)-packs, 85-gal (321-L) drums (used as singly or arranged
22 into four (4)-packs, 100-gal (379 L) drums singly or arranged into three (3)-packs, ten-drum
23 overpacks (**TDOP**), or 66.3 ft³ (1.88 m³) SWBs.
24

25 **Remote Handled** ~~RH~~ TRU mixed waste containers are either canisters or drums. Canisters will
26 be loaded singly in an RH-TRU 72-B cask and drums will be loaded in a CNS 10-160B cask.
27 Drums in the CNS 10-160B cask will be arranged singly or in drum carriage units containing up
28 to five drums each. Canisters and drums are described in Renewal Application Appendix M1.
29

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

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

1 F-1e(1) CH Bay Operations

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

11
12 In addition, four ~~Contact-Handled~~ **CH** Packages, containing up to 640 ft³ of CH TRU waste in
13 containers, may occupy positions at the TRUPACT-II Unloading Docks (**TRUDOCK**).

14
15 Aisle space shall be maintained in all CH Bay waste storage areas. The aisle space shall be
16 adequate to allow unobstructed movement of fire response personnel, spill-control equipment,
17 and decontamination equipment that would be used in the event of an off-normal event. An aisle
18 space of at least 44 inches between facility and containment pallets will be maintained in all CH
19 TRU mixed waste storage areas.

20
21 F-1e(2) RH Complex Operations

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

29
30 Single RH TRU mixed waste canisters are unloaded from the RH-TRU 72-B casks in the
31 Transfer Cell of the RH Complex where they are transferred to facility casks. Drums of RH
32 TRU mixed waste will be transferred remotely from the CNS 10-160B cask, into the Hot Cell,
33 and loaded into a canister. Storage in the Hot Cell occurs in either drums or canisters. A
34 maximum of 12 55-gallon drums of RH TRU mixed waste and one 55-gallon drum of derived
35 waste (94.9 ft³ (2.7 m³)) may be stored in the Hot Cell. Except for the derived waste drum,
36 individual 55-gallon drums may not be stored in the Hot Cell for more than 25 days. The
37 Transfer Cell houses the Transfer Cell Shuttle Car, which is used to facilitate transferring the
38 canister to the facility cask. Storage in this area typically occurs at the end of a shift or in an off-
39 normal event that results in the suspension of waste handling. A maximum of one canister
40 (31.4 ft³ (0.89 m³)) may be stored in the Transfer Cell in a shielded insert in the Transfer Cell
41 Shuttle Car or in a RH-TRU 72-B cask.

42

1 The Facility Cask Loading Room provides for transfer of a canister to the facility cask for
2 subsequent transfer to the waste shaft conveyance and to the Underground Hazardous Waste
3 Disposal Unit. The Facility Cask Loading Room also functions as an air lock between the waste
4 shaft and the Transfer Cell. Storage in this area typically occurs at the end of a shift or in an off-
5 normal event that results in the suspension of waste handling. A maximum of one canister
6 (31.4 ft³ (0.89 m³)) may be stored in the Facility Cask in the Facility Cask Loading Room.
7 Derived waste will be stored in the RH Bay and in the Hot Cell.

8 9 F-1e(3) Parking Area Container Storage Unit

10 The area extending south from the WHB within the fenced enclosure identified as the Controlled
11 Area on Figure M1-2 is defined as the Parking Area Container Storage Unit. This area provides
12 storage for up to 6,734 ft³ (191 m³) of CH and/or RH TRU mixed waste contained in up to 40
13 loaded ~~Contact-Handled~~ CH Packages and 8 ~~Remote-Handled~~ RH Packages. Secondary
14 containment and protection of the waste containers from standing rainwater are provided by the
15 transportation containers. Up to 12 additional ~~Contact-Handled~~ CH Packages and four additional
16 ~~Remote-Handled~~ RH Packages may be stored in the Parking Area Surge Area so long as the
17 requirements of Renewal Application Appendix M1, Section M1-1c(2) are met. No more than
18 50 ~~Contact-Handled~~ CH and 12 ~~Remote-Handled~~ RH Packages may be stored in the Parking
19 Area Storage Unit.

20
21 The safety criteria for ~~Contact-Handled~~ CH and ~~Remote-Handled~~ RH Packages require that they
22 be opened and vented at a frequency of at least once every 60 days. During normal operations,
23 ~~Contact-Handled~~ CH and ~~Remote-Handled~~ RH Packages will not require venting while located
24 in the Parking Area Unit. Any off-normal event which results in the need to store a waste
25 container in the Parking Area Unit for a period of time approaching fifty-nine (59) days shall be
26 mitigated by returning the shipment to the generator prior to the expiration of the 60 day NRC
27 venting period or by moving the ~~Contact-Handled~~ CH or ~~Remote-Handled~~ RH Package inside
28 the WHB Unit where the waste will be removed and placed in one of the permitted storage areas
29 or in the underground hazardous waste disposal unit.

30 31 F-1f Off-Normal Events

32 Off-normal events could interrupt normal operations in the waste management process line.
33 ~~Shipments of waste from the generator sites will be stopped in any event which results in an~~
34 ~~interruption to normal waste handling operations that exceeds three days.~~ The Permittees will
35 manage shipments during off-normal events to avoid exceeding storage capacities or time limits
36 as discussed in Renewal Application Appendix M1, Section M1-1d.

37 38 F-1g Containment

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

43

1 During normal operations, the floor of the ~~normal~~ storage areas within the CH Bay and RH
2 Complex shall be visually inspected on a weekly basis to verify that it is in good condition and
3 free of obvious cracks and gaps. When a RH TRU mixed waste container is present in the RH
4 Complex, inspections will be conducted visually and/or using closed-circuit television cameras
5 in order to manage worker ~~dose and minimize~~ radiation exposures. Manual inspections of the
6 areas are performed at least annually during routine maintenance periods when waste is not
7 present.
8

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

16 Secondary containment at permitted storage areas inside the WHB Unit shall be provided by the
17 floor. ~~The Waste stored in Contact-handled or Remote-handled packaging in the~~ Parking Area
18 ~~Unit and TRUDOCK storage area of the~~ or the WHB Unit do not require engineered secondary
19 ~~containment, since waste is not stored there unless it is protected by the Contact-Handled or~~
20 ~~Remote-Handled Packaging.~~ Floor drains, the fire suppression water collection sump, and
21 portable dikes, if needed, will provide containment for liquids that may be generated by fire
22 fighting. Sump capacities and locations are shown in Drawing 41-F-087-014. Residual fire
23 fighting liquids will be placed in containers and managed as described above. Secondary
24 containment at storage locations inside the RH Bay, Cask Unloading Room, Transfer Cell, and
25 Facility Cask Loading Room is provided by the cask or canisters that contain drums of RH TRU
26 mixed waste. In the Hot Cell, secondary containment is provided by the Hot Cell subfloor. In
27 addition, the RH Complex contains a 220-gallon (833-L) sump in the Hot Cell, a 11,400-gallon
28 (43,152-L) sump in the RH Bay, and a 220-gallon (833-L) sump in the Transfer Cell to collect
29 any liquids.
30

31 F-2 Response Personnel

32 The on-duty Facility Shift Manager (FSM) is designated as the RCRA Emergency Coordinator.
33 Persons qualified to act as the RCRA Emergency Coordinator, as required by 20.4.1.500 NMAC
34 (incorporating 40 CFR §264.55), are listed in Table F-~~32~~. A RCRA Emergency Coordinator will
35 be on-site at the WIPP facility 24 hours a day, seven days a week, with the responsibility for
36 coordinating emergency response measures. ~~RCRA Emergency Coordinators are listed in Table~~
37 ~~F-2, where four individuals have been designated primary RCRA Emergency Coordinators. This~~
38 ~~is because the on-duty Facility Shift Manager (FSM) is designated as the RCRA Emergency~~
39 ~~Coordinator. The four individuals shown serve as FSM on a rotating shift basis.~~
40

41 Persons qualified to act as the RCRA Emergency Coordinator are thoroughly familiar with this
42 Contingency Plan, the TRU mixed waste and hazardous waste operations and activities at the
43 WIPP facility, the locations of TRU mixed waste and hazardous waste activities, the locations on
44 the site where hazardous materials are stored and used, and the locations of waste staging and

1 accumulation areas. They are familiar with the characteristics of hazardous substances, TRU
2 mixed waste and hazardous waste handled at the WIPP facility, the location of TRU mixed waste
3 and hazardous waste records within the WIPP facility, and the facility layout. In addition,
4 persons qualified to act as the RCRA Emergency Coordinator have the authority to commit the
5 necessary resources to implement this Contingency Plan. Figure F-4 outlines the RCRA
6 Emergency Coordinator's position relative to other organizations that provide support.

7
8 In addition to the RCRA Emergency Coordinator, the following individuals or groups have
9 specified responsibilities during any WIPP facility emergency:

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

- 1 • Mine Rescue Team (MRT)—Supplemental group responsible for underground
2 reentry and rescue after an emergency evacuation. The MRT responds in accordance
3 with 30 CFR Part 49 requirements. ~~MRT members are part of the WIPP~~
4 ~~Supplemental Emergency Response Program.~~
- 5 • Office Warden—An individual assigned responsibility for assuring that personnel are
6 evacuated from his/her assigned area or building during evacuations. Office Wardens
7 maintain a list of all personnel in their specific area. This list is compared with the
8 physical presence of personnel who assemble at the staging areas. The Office
9 Wardens report area accountability to the ACOWs.
- 10 • Emergency Operations Center (EOC) Staff-The EOC consists of a minimum staff of
11 three MOC management positions (the Crisis Manager, a Safety Representative, and
12 an Operations Representative) to activate the EOC. The full EOC Staff includes the
13 Crisis Manager, the Deputy Crisis Manager, a Safety Representative, an Operations
14 Representative and the EOC Coordinator. Additional technical and logistics
15 personnel will provide support as necessary. The EOC is activated by the FSM.
16 Since the EOC staff are is performing duties similar to their normal job functions and
17 providing support related to their area of expertise, no specific RCRA training is
18 required.

19 F-3 Implementation

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

- 28
- 29 1. Medical Emergencies (does not implement the Contingency Plan)
- 30
- 31 2. Non-emergency (does not implement the Contingency Plan)
- 32 a. Fire already out, did not involve any hazardous materials.
- 33 b. Spill or release involved materials excluded according to the SARA Title III,
34 Statute 42 U.S.C. 11021 (e). Such as:
 - 35 1) Any substance present in the same form and concentration as product
36 packaged for distribution and use by the general public. (Example:
37 Cleaning solutions)
 - 38 2) Any substance to the extent it is used in a laboratory under the direct
39 supervision of a technically qualified individual.

- 1 3) Petroleum, including crude oil or any fraction thereof, which is not
2 otherwise specifically listed or designated as a hazardous substance by
3 Comprehensive Environmental Response, Compensation and Liability Act
4 (**CERCLA**).
- 5 3. Incident Level I: According to the NFPA 471, Responding to Hazardous Materials
6 Incidents (See Table F-43). If the product(s) involved in the fire, explosion, spill or
7 leakage meets the following criteria, it will be classified as a Level I incident and does
8 not implement the Contingency Plan.
9
- 10 a. The product does not require a U.S. Department of Transportation (**DOT**) placard,
11 is a NFPA listed 0 or 1 for all categories, or is Other Regulated Materials A, B, C,
12 or D.
- 13 b. The fire is under control and the reactivity rating of the material is less than a
14 rating 2, indicating a low potential for subsequent explosion as the hazardous
15 material can be considered normally stable.
- 16 c. There was no release or the release can be confined with readily available
17 resources.
- 18 d. There is no life-threatening situation.
- 19 e. There is no potential environmental impact.
- 20
- 21 4. Incident Level II: According to NFPA 471, Responding to Hazardous Materials
22 Incidents, (See Table F-43). If the product(s) involved in the fire, explosion, spill or
23 leakage meets the following criteria, it will be classified as a Level II incident and the
24 Contingency Plan will be implemented by the RCRA Emergency Coordinator.
25
- 26 a. The product requires a DOT placard, is an NFPA 2 for any categories, or is
27 Environmental Protection Agency (**EPA**) regulated waste (Site-specific: Table F-
28 24 and TRU mixed waste) ~~AND~~
- 29 b. The incident involves multiple packages.
- 30 c. There is potential for the fire to spread since the hazardous material's flammability
31 level (rating 2) is below 200 degrees Fahrenheit, or the reactivity (rating 2)
32 indicates that violent chemical changes are possible and thus may be explosive.
- 33 d. The release may not be controllable without special resources.
- 34 e. The incident requires evacuation of a limited area for life safety.
- 35 f. The potential for environmental impact is limited to soil and air within incident
36 boundaries.
- 37 g. The container is damaged but able to contain the contents to allow handling or
38 transfer of product.

- 1 5. Incident Level III: According to NFPA 471, Responding to Hazardous Materials
2 Incidents. (See Table F-43) If the product(s) involved in the fire, explosion, spill or
3 leakage meet the following criteria, it will be classified as a Level III incident and the
4 Contingency Plan will be implemented by the RCRA Emergency Coordinator.
5
6 a. The product is a poison A (gas), an explosive A/B, organic peroxide, flammable
7 solid, material that is dangerous when wet, chlorine, fluorine, anhydrous ammonia,
8 NFPA 3 and 4 for any categories including special hazards, EPA extremely
9 hazardous substances, and cryogenics.
10 b. The site-specific container size for this incident level will be a tank truck.
11 c. There is potential for the fire to spread since the hazardous material's flammability
12 level (rating 3 or 4) is below 100 degrees Fahrenheit, or the reactivity (rating 3 or
13 4) indicates that the material may explode.
14 d. The release may not be controlled even with special resources.
15 e. The incident requires mass evacuation of a large area for life safety.
16 f. Even though the NFPA guidelines for this incident level indicate that the potential
17 for environmental impact is severe, due to the site engineering controls, the impact
18 is contained within the HWMUs.
19 g. The container is damaged to such an extent that catastrophic rupture is possible.

20 The above categories include fire situations, weather conditions, natural phenomena, and
21 explosions which will have to be evaluated to make an incident level determination. A Level II
22 (potential threat to human health in localized area, potential for moderate on-site environmental
23 impact) or Level III (potential threat to human health in a larger area, potential for severe
24 environmental impact) incident by definition is considered to be a potential threat to human
25 health or the environment and, therefore, is considered to be an emergency requiring activation
26 of the Contingency Plan.
27

28 F-4 Emergency Response Method

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

- 31
32 1. Notification (Section F-4a)
33
34 2. Identification of hazardous materials (Section F-4b)
35
36 3. Assessment of the nature and extent of the emergency (Section F-4c)
37
38 4. Control, containment, and correction of the emergency (Section F-4d)
39
40 5. Prevention of recurrence or spread of fires, explosions, or releases (Section F-4e)
41

- 1 6. Management and containment of released material and waste (Section F-4f)
- 2
- 3 7. Incompatible waste (Section F-4g)
- 4
- 5 8. Post-emergency facility and equipment maintenance and reporting (Section F-4h)
- 6
- 7 9. Container spills and leakage (Section F-4i)
- 8
- 9 10. Tank spills and leakage (Section F-4j)
- 10
- 11 11. Surface impoundment spills and leakage (Section F-4k)
- 12

13 F-4a Notification

14 Notification requirements in the event of an emergency at a RCRA hazardous waste management
15 facility are defined by 20.4.1.500 NMAC (incorporating 40 CFR §§264.56(a) and (d)).
16 Necessary notifications in case of an emergency at the WIPP facility are described in this section
17 (Figure F-4a). Personnel at the WIPP facility are trained to respond to emergency notifications.
18

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

20 The first person to become aware of an incident shall immediately report the situation to the
21 CMRO, and provide the following information, as appropriate:
22

- 23 • Name and telephone number of the caller
- 24 • Location of the incident and the caller
- 25 • Time and type of incident
- 26 • Severity of the incident
- 27 • Magnitude of the incident
- 28 • Cause of the incident
- 29 • Assistance needed to deal with or control the incident
- 30 • Areas or personnel affected by the incident.

31
32 In addition to receiving incident reports, the CMRO, who is located in the Support Building
33 (Building 451) (Figure F-1), continuously monitors (24 hours a day) the status of mechanical,
34 electrical, and/or radiological conditions at selected points on the site, both above and below
35 ground. Alarms to indicate abnormal conditions are located throughout the WIPP facility. The
36 alarm(s) (e.g., fire, radiation) may be the first notification of an emergency situation received by
37 the CMRO. The CMRO monitors alarms, takes telephone calls and radio messages, and initiates
38 outgoing calls to emergency staff and outside agencies.
39

1 Once the CMRO is notified of a fire, explosion, or a release anywhere in the facility (either by
2 eyewitness or an alarm), the RCRA Emergency Coordinator is immediately notified. Once
3 notified, the RCRA Emergency Coordinator assumes responsibility for the management of
4 activities related to the assessment, abatement, and/or cleanup of the incident.
5

6 A RCRA Emergency Coordinator is on-site at all times and, therefore, can be reached at any
7 time via a two-way radio or over the public address (PA) and plectrons on-site. If the RCRA
8 Emergency Coordinator is unavailable or unable to perform these duties, a qualified alternate
9 RCRA Emergency Coordinator is available.
10

11 The EST/FPT is also notified in case of fire, explosion, or release. The RCRA Emergency
12 Coordinator, as incident commander, determines if supplemental emergency responders are
13 necessary. Notification of the ERT (surface) is made by using the ERT pagers and/or the public
14 announcement system. Notification of the FLIRT is by using the Mine Page Phone System. If
15 the MRT is needed the RCRA Emergency Coordinator will instruct the CMRO to make a PA
16 announcement for the MRT to assemble in the Mine Rescue Room, located in a predetermined
17 location.
18

19 Off-shift personnel may be notified using the on-call list, which is updated weekly by the
20 Permittees. The FSM/CMRO, each individual on the on-call list, and WIPP Security receive
21 copies of the on-call list. The CMRO may direct Security to make the notifications.
22

23 The response to an unplanned event will be performed in accordance with procedures based on
24 the applicable Federal, State, or local regulations and/or guidelines for that response. These
25 include the U.S. Mine Safety and Health Administration (MSHA); NMAC; CERCLA; Chapter
26 74, Article 4B, New Mexico Statutes Annotated 1978, New Mexico Emergency Management
27 Act; and agreements between the Permittees and local authorities (Section F-6) for emergencies
28 throughout the WIPP facility.
29

30 After notification by the CMRO, the EST/FPT shall immediately investigate to determine
31 pertinent information relevant to the actual or potential threat posed to human health or the
32 environment. The information will include the location of release, type, and quantity of spilled
33 or released material (or potential for release due to fire, explosion, weather conditions, or other
34 naturally occurring phenomena), source, areal extent, and date and time of release. The
35 EST/FPT shall provide information for classification of the incident, according to the emergency
36 response guidelines, to the RCRA Emergency Coordinator. The RCRA Emergency Coordinator
37 then classifies the incident after evaluation of all pertinent information. This classification will
38 consider both direct and indirect effects of the release, fire, or explosion (e.g., the effects of any
39 toxic, irritating, or asphyxiating gases that are generated, or the effects of any hazardous surface
40 water run-off from water or chemical agents used to control fire and heat-induced explosions).
41

42 When the RCRA Emergency Coordinator determines that an Incident Level II or III has
43 occurred, the Contingency Plan is implemented. The RCRA Emergency Coordinator then may
44 choose to activate the EOC for additional support (Figure F-4). If the RCRA Emergency
45 Coordinator determines that due to extenuating circumstances the potential to upgrade to an

1 incident Level II or III exists, the RCRA Emergency Coordinator also may activate the EOC.
2 The EOC will assist the RCRA Emergency Coordinator in mitigation of the incident with use of
3 communications equipment and technical expertise from any WIPP organization (see Section
4 F-4c).

5
6 The EOC staff will assess opportunities for coordination and the use of mutual-aid agreements
7 with local outside agencies making additional emergency personnel and equipment available
8 (Section F-6), as well as the use of specialized response teams available through various State
9 and Federal agencies. ~~As a DOE owned facility, the WIPP facility may use the resources~~
10 ~~available from the Federal Response Plan, signed by 27 Federal departments and agencies in~~
11 ~~April 1987, and developed under the authorities of the Earthquake Hazards Reduction Act of~~
12 ~~1977 (42 U.S.C. 7701 et seq.) and amended by the Stafford Disaster Relief Act of 1988.~~ Most
13 resources are available within 24 hours. The WIPP facility maintains its own emergency
14 response capabilities on-site. In addition to the supplemental emergency responders, radiological
15 control technicians, environmental sampling technicians, wildlife biologists, and various other
16 technical experts are available for use on an as-needed basis.

17
18 F-4a(2) Communication of Emergency Conditions to Facility Employees

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

- 21
- 22 • Local Fire Alarms

 - 23 • The local fire alarms sound a bell tone and may be activated automatically or
24 manually in the event of a fire.

 - 25 • Surface Evacuation Signal

 - 26 • The evacuation signal is a yelp² tone and is manually activated by the CMRO when
27 needed. The CMRO shall follow the evacuation signal with verbal instructions and
28 ensure the Site Notification System (~~i.e., the plectron~~) has been activated.

 - 29 • Underground Evacuation Warning System

 - 30 • The evacuation signal is a yelp tone and flashing strobe light. In the event of an
31 evacuation signal, underground personnel will proceed to the nearest egress hoist
32 station (Section F-7b) to be apprised of the nature of the emergency and the
33 evacuation route to take. Underground personnel are trained to report to the
34 underground assembly areas and await further instruction if all power fails or if
35 ventilation stops. If evacuation of underground personnel is required, this will be

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

1 done using the backup electric generators and in accordance with the applicable
2 requirements of MSHA.

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

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

14
15 F-4a(3) Notification of Local, State, and Federal Authorities

16 If it is determined that the **WIPP** facility has had a fire, an explosion, a spill, or a release of
17 hazardous waste or hazardous waste constituents (included in 20.4.1.200 NMAC (incorporating
18 40 CFR § 261)) in the miscellaneous unit or TRU mixed waste handling areas, or an emergency
19 resulting in a release of a hazardous substance (included in 40 CFR §302.4 and §302.6 or the
20 New Mexico Emergency Management Act, §74-4B-3 and §74-4B-5) that could threaten human
21 health or the environment outside the facility, the RCRA Emergency Coordinator, after
22 consultation with the DOE as the owner of the facility, will assure that local authorities are
23 notified by telephone and/or radio, including:

- 24
- 25 • Carlsbad Police Department (telephone number: {505}(575) 885-2111) (or 911)
 - 26 • Carlsbad Fire Department (telephone number: {505}(575) 885-2111) (or 911)
 - 27 • Eddy County Sheriff (telephone number: {505}(575) 887-7551)
 - 28 • Hobbs Fire Department (telephone number: {505}(575) 397-9265)

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

- 31
- 32 • New Mexico Environment Department (**NMED**)
33 Department of Public Safety
34 24-Hour Emergency Reporting Telephone Number: (505) 827-9329
35 FAX number: (505) 827-9368

- 1 • Department of Public Safety WIPP Coordinator
2 Telephone Number: (505) 827-9221
3 FAX number: (505) 829-3434

- 4 • Hazardous Materials Emergency Response, Chemical Safety Office, Department
5 of Public Safety, State Emergency Response Commission
6 Telephone number: (505) 476-9681
7 FAX number: (505) 476-9695

- 8 • National Response Center
9 Telephone number: 1-800-424-8802
10 FAX number: (202) 479-7181

- 11 • Local Emergency Planning Committee
12 Telephone number: ~~(505)~~(575) 885-3581
13 Fax number: ~~(505)~~(575) 628-3973

14 The first notification of public safety and regulatory agencies will include the following:
15

- 16 • The name and address of the facility and the name and phone number of the reporter

- 17 • The type of incident (fire, explosion, or release)

- 18 • The date and time of the incident

- 19 • The type and quantity of material(s) involved, to the extent known

- 20 • The exact location of the incident

- 21 • The source of the incident

- 22 • The extent of injuries, if any

- 23 • Possible hazards to human health and the environment (air, soil, water, wildlife, etc.)
24 outside the facility

- 25 • The name, address, and telephone number of the party in charge of or responsible for
26 the facility or activity associated with the incident

- 27 • The name and the phone number of the RCRA Emergency Coordinator

- 28 • The identity of any surface and/or groundwater involved or threatened and the extent
29 of actual and potential water pollution

- 30 • The steps being taken or proposed to contain and clean up the material involved in the
31 incident.

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

3
4 F-4a(4) Notification of the General Public

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

14
15 A Hazards Assessment was conducted, which indicated no need for protective actions or
16 emergency action levels, as defined by the Permittees, for the facility. Therefore, no procedures
17 are in place for evacuation of the public. Procedures are in place for notification of the public by
18 radio, television, and newspapers for news items which might include notification of on-site
19 emergency situations. These procedures include a Public Affairs Coordinator in the EOC who
20 writes and transmits press releases to the DOE/CBFO office, where formal press conferences are
21 conducted.

22
23 F-4b Identification of Hazardous Materials

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

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

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

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

11
12 Information required for identifying TRU mixed hazardous constituents in case of an incident is
13 readily available through the WWIS and the waste acceptance records. Waste accepted at WIPP
14 is already known to be compatible with all materials used to respond to an emergency. All non-
15 TRU mixed waste materials received on site, other than those listed in Table F-24, are in such
16 small quantities that no reaction could develop which would trigger an Incident Level II or III
17 response.

18
19 The RCRA Emergency Coordinator will have access to the WWIS through Operations, or
20 through the Facility Shift Manager's Office.

21
22 The RCRA Emergency Coordinator has access to the inventory lists and MSDSs in the Safety
23 and Emergency Services Facility at all times.

24 25 F-4c Assessment of the Nature and Extent of the Emergency

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

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

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

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

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

16 The WIPP facility is required to control an emergency and to minimize the potential for the
17 occurrence, recurrence, or spread of releases due to the emergency situation, as described in
18 20.4.1.500 NMAC (incorporating 40 CFR §264.56 (e)). The WIPP Emergency Response
19 procedures utilize the incident mitigation guidelines in NFPA 471, Responding to Hazardous
20 Materials Incidents, with initial response priority being on control, and those actions necessary to
21 ensure confinement and containment (the first line of defense) in the early, critical stages of a
22 spill or leak. The RCRA Emergency Coordinator is responsible for stopping processes and
23 operations when necessary, and removing or isolating containers. Transuranic TRU mixed waste
24 will remain within the WHB Unit, the Parking Area Unit, and the underground HWDU.
25

26 F-4d(1) All Emergencies

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

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

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

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

8
9 Both natural and synthetic methods will be employed to limit the releases of hazardous materials
10 so that effective recovery and treatment can be accomplished with minimum additional risk to
11 human health or the environment. A combination of the above methods to achieve protection of
12 human health and the environment, with emphasis on two basic methods for mitigation of
13 hazardous materials incidents - Physical and Chemical (Tables F-~~54~~, F-~~65~~) mitigation, will be
14 used.

- 15
16 1. Physical methods of control involve any of several processes to reduce the area of the
17 spill/leak, or other release mechanism (such as fire suppression).
18
19 A. Absorption is the process in which materials hold liquids through the process of
20 wetting. Absorption is accompanied by an increase in the volume of the
21 sorbate/sorbent system through the process of swelling. Some of the materials
22 utilized in response to Level I incidents or Level II incidents involving liquids will
23 be absorbent sheets of polyolefin-type fibers, spill control bucket materials
24 (specifically for solvents, neutralization, or for acids/caustics), and absorbent socks
25 for general liquids or oils.
26
27 B. Covering refers to a temporary form of mitigation for radioactive incidents that
28 will be utilized in response to Level II or Level III incidents involving CH TRU
29 mixed waste. These could include absorbent sheets, plastic, or actual ambulance
30 blankets.
31
32 C. Dikes or ~~D~~iversion refer to the use of physical barriers to prevent or reduce the
33 quantity of liquid flowing into the environment. Dikes may be soil or other
34 barriers temporarily utilized to hold back the spill or leak. Diversion refers to the
35 methods used to physically change the direction of the flow of the liquid.
36 Absorbent socks or earth may be utilized as dikes or diversions for all levels of
37 incidents.
38
39 D. Overpacking is accomplished by the use of an oversized container. Overpack
40 containers will be compatible with the hazards of the materials involved.
41
42 E. Plug and Patch refers to the use of compatible plugs and patches to reduce or
43 temporarily stop the flow of materials from small holes, rips, tears, or gashes in
44 containers. A Series "A" hazardous response kit containing nonsparking

1 equipment to control and plug leaks may be utilized for response to all levels of
2 incidents.

3
4 F. Transfer refers to the process of moving a liquid, gas, or some forms of solids,
5 either manually or by pump, from a leaking or damaged container. Scoops,
6 shovels, jugs, and pails as well as drum transfer pumps for chemical and petroleum
7 transfer are utilized as needed in response to all levels of incidents.

8
9 G. Vapor Suppression refers to the reduction or elimination of vapors emanating from
10 a spilled or released material through the most efficient method or application of
11 specially designed agents such as an aqueous foam blanket.

12
13 2. Chemical Methods of Mitigation

14
15 A. Neutralization is the process of applying acids or bases to a spill to form a neutral
16 salt. The application of solids for neutralizing can often result in confinement of
17 the spilled material. This would include using the neutralizing adsorbents.

18
19 B. Solidification is the process whereby a hazardous liquid is added to material such
20 as an absorbent so that a solid material results.

21
22 The established procedures are based upon the incident level and a graded approach for
23 nonradioactive or CH TRU waste emergencies and initiated to:

- 24
25 1. Minimize contamination or contact (through PPE, etc.)
26 2. Limit migration of contaminants
27 3. Properly dispose of contaminated materials
28

29 For RH TRU mixed waste, the detection of contamination on or damage to a RH TRU mixed
30 waste canister or a facility canister may occur outside the Hot Cell during cask to cask transfer of
31 the canister or during loading of the Shielded Insert in the Transfer Cell. When such
32 contamination or damage is found, the Permittees have the option to decontaminate or return the
33 canister to the generator/storage site or another site for remediation. In the case of a damaged
34 facility canister, the Shielded Insert may be used as an overpack to facilitate further management.
35 Contamination may also be detected within the Hot Cell during the unloading of the CNS 10-
36 160B shipping cask. In this case, the Permittees may decontaminate the 55-gallon drums or
37 return them to the generator/storage site or another site for remediation. Spills or releases that
38 occur within the RH Complex or the underground as the result of RH TRU mixed waste handling
39 will be mitigated by using appropriate measures which may include the items above.

40
41 F-4d(2) Fire

42 The incident level emergency response identified in Section F-3 includes fire/explosion potential.
43 WIPP fire response includes incipient, exterior structure fires, and internal structure fires. The

1 RCRA Emergency Coordinator can implement the Memoranda of Understanding (MOU) for
2 additional support.

3
4 The first option in mine fire response will be to apply mechanical methods to stop fires (e.g., cut
5 electrical power). The last option in mine fire response will be to reconfigure ventilation using
6 control doors associated with the underground ventilation system. The following actions are
7 implemented in the event of a fire:

- 8
9
1. All emergency response personnel at an incident will wear appropriate PPE.
 2. Only fire extinguishing materials that are compatible with the materials involved in
10 the fire will be used to extinguish fires. Compatibility with materials involved in a fire
11 are determined by pre-fire plans, DOT Emergency Response Guide Book (~~DOT~~,
12 1993), DOT labeling, and site-specific knowledge of the emergency response
13 personnel. Water and dry chemical materials have been determined to be compatible
14 with all components of the TRU mixed waste. Pre-fire plans for the WHB are
15 included in Figures F-~~640~~ and F-~~744~~.

16
17 Fires in areas of the WHB Unit should not propagate, due to limited amount of
18 combustibles, and the concrete and steel construction of the structures. Administrative
19 controls, such as landlord inspections and EST/FPT inspections, help to insure good
20 housekeeping is maintained. Combustible material and TRU mixed waste will be
21 isolated, if possible. Firewater drain trenches collect the water and channel it into a
22 sump. In areas not adjacent to the trenches, portable absorbent dikes (pigs) will be
23 used to retain as much as possible, until it can be transferred to containers or sampled
24 and analyzed for hazardous constituents.

- 25
3. If the fire spreads or increases in intensity, personnel will be directed to evacuate.
 4. The RCRA Emergency Coordinator will remain in contact with responding personnel
26 to advise them of the known hazards.
 5. In order to ensure that storm drains and/or sewers do not receive potentially hazardous
27 runoff, dikes will be built around storm drains to control discharge as needed.
28 Collected waste will be sampled and analyzed for hazardous constituents, before being
29 discharged to evaporation ponds. There are two ponds south of the security fence,
30 opposite the WHB Unit, that will collect drainage from the parking area. The rest of
31 the site, inside the security fence, drains to the large pond to the west. Samples will be
32 taken from these ponds, after the emergency has been abated, to determine any
33 cleanup requirements. NMED will approve any procedures associated with the
34 sampling and analysis of the ponds.
 6. The RCRA Emergency Coordinator maintains overall control of the emergency and
35 may accept and evaluate the advice of WIPP facility personnel and emergency
36 response organization members, but retains overall responsibility.
- 37
38
39
40
41
42
43
44

- 1 7. The RCRA Emergency Coordinator will be in overall control of WIPP facility
2 emergency response efforts until the emergency is terminated.
3
4 8. Materials involved in a fire can be identified in the following ways:
5
6 • According to Section F-4b.
7
8 • If the contents of the waste container cannot be determined based on its location and
9 the label is destroyed by fire, the material will be treated as an unknown, evaluated
10 for radiological contamination, and analyzed according to methods in the EPA's
11 "Test Methods for Evaluating Solid Waste Physical/Chemical Methods" (SW-846),
12 Third Edition, after the fire has been extinguished.
13
14 • Airborne radioactivity samples may be obtained during a fire involving radioactive
15 materials, using portable and fixed air samplers. Response personnel will be
16 adequately protected from airborne radioactivity by their PPE required for fire
17 response.
18 9. Only materials compatible with the waste may be used for fire response.
19
20 10. When cleanup has proceeded to the point of finding no radionuclide activity, then the
21 "swipe" can be sent for analysis for hazardous constituents. The use of these
22 confirmation analyses is as follows:
23 • For waste containers, once radiologically clean and free of any visible evidence of
24 hazardous waste spills on the container, it will be placed in the underground without
25 further action.
26 • For area contamination, once the area is cleaned up and is shown to be radiologically
27 clean, it will be sampled for the presence of hazardous waste residues (for further
28 information see Section F-4d, Emergency Termination Procedures).
29 11. Fire suppression materials used in response to incidents will be retained on-scene,
30 where an evaluation will be performed to determine appropriate recovery and disposal
31 methods.

32 F-4d(3) Explosion

33 The following actions will be implemented in the event that an explosion that involves or
34 threatens hazardous or TRU mixed waste or hazardous materials has occurred:
35

- 36 1. The area will be evacuated immediately.
37
38 2. The CMRO will immediately notify the appropriate emergency response personnel
39 and the RCRA Emergency Coordinator about the explosion.
40

- 1 3. Injured personnel will be treated and transported as necessary.
- 2
- 3 4. The RCRA Emergency Coordinator will remain in contact with responding personnel
- 4 to advise them of the known hazards involved and the degree and location of the
- 5 explosion and associated fires.
- 6
- 7 5. The RCRA Emergency Coordinator will be in command and may accept and evaluate
- 8 the advice of WIPP facility personnel and emergency response organization members,
- 9 but retains the overall responsibility. Selections of methods and tactics of response are
- 10 the responsibility of the Incident Commander.
- 11
- 12 6. The RCRA Emergency Coordinator will be in overall control of WIPP facility
- 13 emergency response efforts until the emergency is terminated.
- 14
- 15 7. When cleanup has proceeded to the point of finding no radionuclide activity, then
- 16 samples may be taken for chemical analysis if there is visible evidence to suspect
- 17 additional hazardous waste residues. Chemical residues on floor surfaces resulting
- 18 from a hazardous waste explosion will be evaluated, sampled, analyzed (if required),
- 19 isolated, and returned to appropriate containers, and surfaces will be cleaned using
- 20 appropriate cleaners.
- 21
- 22 8. The RCRA Emergency Coordinator may shut down operational units (e.g., process
- 23 equipment and ventilation equipment) that have been affected directly or indirectly by
- 24 the explosion. Once the areas have been determined safe for reentry, processes may
- 25 be reactivated.
- 26

27 F-4d(4) Spills

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

- 31
- 32 1. The immediate area will be evacuated.
- 33
- 34 2. The RCRA Emergency Coordinator will review facility records to determine the
- 35 identity and chemical nature of released material.
- 36
- 37 3. Entry team procedures will be utilized, with special attention to the following:
- 38
- 39 • Buddy system
- 40 • Appropriate PPE
- 41 • Backup rescue team
- 42 • Supplemental communication signals (hand signals and hand-light signals)

- 1 • Monitoring equipment
- 2 • Exposure time limitations.
- 3 4. If possible, the source of the release will be secured.
- 4
- 5 5. A dike to contain runoff may be built.
- 6
- 7 6. Emergency responders will ensure that storm drains and/or sewers do not receive
- 8 potentially hazardous runoff or spilled material. They may build dikes around storm
- 9 drains to control discharge.
- 10
- 11 7. Released wastes may be collected and contained by stabilizing or neutralizing the
- 12 spilled material, as appropriate, pouring an absorbent over the spilled material, and
- 13 sweeping or shoveling the absorbed material into drums or other appropriate
- 14 containers. The absorbents have been determined to be compatible with all
- 15 components of the TRU mixed waste.
- 16
- 17 8. No TRU mixed waste that may be incompatible with the released material will be
- 18 managed in the affected area until cleanup procedures are complete.
- 19
- 20 9. The RCRA Emergency Coordinator will direct spill control, decontamination, and
- 21 termination procedures described below.
- 22

23 F-4d(5) Decontamination of Personnel

24 Decontamination of personnel with radioactive contamination is the responsibility of the
25 Radiological Control (**RC**) section. If a person is contaminated with radioactivity during a site
26 evacuation to the staging areas, the contaminated area will be covered before the person can be
27 moved (under escort by RC personnel) to the staging area. The RC personnel will ensure the
28 contaminated person remains segregated from other site personnel while under RC supervision.
29

30 In the event of an emergency that requires immediate evacuation of the area, the contamination
31 can be covered by any method warranted, given the circumstance (e.g., clean clothing wrapped
32 around the area). If the size of the radioactive contamination on the body is small and localized,
33 it can be covered with clothing (e.g., glove, shoe cover, coveralls). If the size of the radioactive
34 contamination on the body is large, it may be covered by dressing the individual in a full set of
35 Anti-Contamination clothing (coveralls, hood, gloves, shoe covers, etc.).
36

37 If time and location permit and the contamination is on the face, it will be decontaminated
38 immediately using a cloth moistened with tepid water (and a mild detergent, if necessary). If the
39 size of the radioactive contamination on the individual's body is small and localized, it will be
40 decontaminated using the same method as for the face, but after the individual has been
41 transferred to an area appropriate for conducting decontamination.
42

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

5
6 F-4d(6) Control of Spills or Leaking or Punctured Containers of CH and RH TRU Mixed Waste

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

9
10 During the event, the following immediate actions are completed: 1) stop work, 2) warn others
11 (notify CMR), 3) isolate the area, 4) minimize exposure, and 5) close off unfiltered ventilation.
12 These actions can take place simultaneously, as long as they are completed before proceeding to
13 the re-entry phase.

14
15 CH TRU Mixed Waste

16
17 Prior to the re-entry following an event involving containers of CH TRU mixed waste, a
18 Radiological Work Permit (**RWP**) is written for personnel to enter with protective clothing to
19 assess the conditions, take surveys and samples, and mitigate problems that could compound the
20 hazards in the area (cover up spilled material with plastic material sheeting and or any approved
21 fixatives such as polyvinyl alcohol (**PVA**) or paint, place equipment in a safe configuration, etc.).
22 During the re-entry phase, smears and air sample filters are taken and counted. This information
23 is used by cognizant managers, RC personnel, and As Low As Reasonably Achievable
24 (**ALARA**) Committee representatives to determine an appropriate course of action to recover the
25 area. A plan to decontaminate and recover affected areas and equipment will be approved with a
26 separate RWP written to establish the radiological controls required for the recovery.

27
28 During the recovery phase, the plan will be executed to utilize the necessary resources to conduct
29 decontamination and/or overpacking operations as needed. The completion of this phase will
30 occur prior to returning the affected area and/or equipment to normal activities. The recovery
31 phase will include activities to minimize the spread of contamination to other areas. These
32 activities will involve placing the waste material in another container; vacuuming the waste
33 material; overpacking or plugging/patching the spilled, leaking, or punctured waste container;
34 and/or decontaminating the affected area(s). If an affected surface cannot be decontaminated to
35 releasable levels, it may be covered with a fixative coating and established as a Fixed
36 Contamination Area to prevent spread of contamination, or it may be removed using heavy
37 machinery and tools, packaged in approved waste containers, and emplaced in the underground.
38 Every reasonable effort to minimize the amount of derived waste, while providing for the health
39 and safety of personnel, will be made.

40
41 Should a breach of a CH TRU mixed waste container occur at the WIPP that results in
42 removable contamination exceeding the small area "spot" decontamination levels, the affected
43 container(s) (e.g., breached and contaminated) will be placed into an available overpack
44 container (e.g., 85-gal drum, SWB, TDOP), except that TDOP's will be decontaminated,
45 repaired/patched in accordance with 49 CFR §173 and §178 (e.g., 49 CFR §173.28), or returned

1 to the generator. The decontamination of equipment and the overpacking of
2 contaminated/damaged waste containers will be performed in the vicinity of the incident. For
3 example, under normal operations CH TRU mixed waste will be handled only in the areas of the
4 WHB Unit. Therefore, it is within these same areas that decontamination and/or overpacking
5 operations would occur. By eliminating the transport of contaminated equipment to other areas
6 for decontamination or overpacking, the risk of spreading contamination is reduced.

7
8 Equipment used during a spill cleanup or CH TRU mixed waste overpacking operation could
9 include: cloths, brushes, scoops, absorbents, squeegees, tape, bags, pails, slings, hand tools, and
10 others as needed for a given incident.

11
12 At the underground emplacement room, salt contaminated by a spill of CH TRU mixed waste
13 would be either covered or cleaned up, depending on location, extent, and spilled material, due to
14 potential radioactive contamination spread via the salt dust. The contaminated salt would be
15 covered to isolate it from the workers, and the stacking of waste containers would resume or
16 would be removed and packaged as site-derived waste using applicable site procedures for
17 decontaminating surfaces.

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

25
26 **RWPs** Radiological Work Permits and other administrative controls provide protective measures
27 to help ensure that new hazardous constituents will not be added during decontamination
28 activities.

29
30 Certain structures and/or equipment may be disassembled to facilitate decontamination or may
31 be placed directly into a derived waste container. Items used in the spill cleanup and
32 decontamination operations (e.g., swipes, tools, PPE, etc.) may also be placed into a derived
33 waste container.

34
35 When decontamination is deemed by the recovery team to be complete, RC personnel will
36 conduct one final, intensive radcon survey of the area and components in the area to release it for
37 uncontrolled use. The free release criteria for items, equipment, and areas is < 20 dpm/100 cm²
38 for alpha radioactivity and < 200 dpm/100 cm² for beta-gamma radioactivity. Personnel will
39 then perform hazardous material sampling after decontamination efforts are complete to verify
40 the removal of hazardous waste substances. After cleanup is complete, facility personnel will
41 complete an inspection and include the details of the spill and cleanup in the log.
42

1 RH TRU Mixed Waste
2

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

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

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

40
41 Equipment used during a spill cleanup or RH TRU mixed waste overpacking
42 operation could include: cloths, brushes, scoops, absorbents, squeegees, tape, bags,
43 pails, slings, hand tools, and other equipment as needed for a given incident.

- 1 • The decontamination methods may initially involve wiping down structures,
2 equipment, and other containers in the area with absorbent cloths moistened with
3 tepid water. Surveys of these structures will take place and the need to continue
4 decontamination activities will be established. If further decontamination is required,
5 nonhazardous decontaminating agents, such as Liquinox[®], Simple Green[®], Windex[®],
6 citric acid, Bartlett Strip Coat[®], and high pressure CO₂ will be used to prevent
7 generating CH TRU mixed waste.
8

9 RWP's Radiological Work Permits and other administrative controls provide
10 protective measures to help ensure that new hazardous constituents will not be added
11 during decontamination activities.

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

16 When decontamination of the Hot Cell is deemed by the recovery team to be complete, RC
17 personnel will conduct one final, intensive radcon survey of the area and components in the area
18 to release it for continued use. The free release criteria for items and equipment that will be
19 released for uncontrolled use are < 20 dpm/100 cm² for alpha radioactivity and
20 < 200 dpm/100 cm² for beta-gamma radioactivity. Personnel will then perform hazardous
21 material sampling after decontamination efforts are complete to confirm the removal of
22 hazardous waste substances. After cleanup is complete, facility personnel will complete an
23 inspection and include the details of the spill and cleanup in the log. The recovery phase must be
24 completed before the affected area and/or equipment are returned to service.
25

26 F-4d(7) Natural Emergencies

27 After a natural emergency (earthquake, flood, lightning strike, etc.) that involves hazardous
28 waste or hazardous materials, the FSM will ensure the following actions are taken:
29

- 30 1. Inspect containers which have not been disposed and containment for signs of leakage
31 or damage. Inspect areas where containers are stored looking for leaking containers
32 and for deterioration of containers and the containment system.
33
34 2. Inspect affected equipment or areas associated with hazardous waste management
35 activities for proper operating mode in accordance with site procedures and manually
36 check to ensure automatic and alarmed features on the units are working.
37
38 3. Inspect affected equipment or areas within the HWMUs in accordance with site
39 procedures for damage.
40
41 4. Inspect electrical boards and overhead electrical lines for damage.
42

- 1 5. Check container areas for signs of leakage or damage to drums and containers.
- 2
- 3 6. Check affected buildings and fencing directly related to hazardous waste management
- 4 activities for damage.
- 5
- 6 7. Conduct a general survey of the site looking for signs of land movement, etc.
- 7
- 8 8. Take any necessary corrective measures, however temporary, to rectify potential or
- 9 real problems.
- 10
- 11 9. Record inspection results.
- 12

13 F-4d(8) Roof Fall

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

17
18 The WIPP underground is routinely evaluated for stability and safety of the underground
19 openings. ~~These evaluations can be as simple as the MSHA required visual checks by personnel~~
20 ~~working in the area or as extensive as the expert review of the roof support system for Room 1~~
21 ~~Panel 1 conducted in 1991.~~ An in-depth evaluation of all of the accessible underground is
22 performed on an annual basis as part of the formal ground control operating plans. Weekly
23 visual and sounding inspections are performed by the Permittees. More frequent inspections and
24 evaluations are performed in areas where roof or ribs are in need of evaluations, based on visual
25 observations, analysis of rock deformation data, excavation effects program data acquired from
26 observation holes, and support system performance.

27
28 ~~This process applies not only to the waste disposal rooms but to the entire WIPP underground.~~
29 Prior to waste emplacement, stability of each room will be evaluated. This evaluation will
30 concentrate on the age and current performance of the installed support systems (if any) and the
31 rate of roof beam expansion based on data from installed instrumentation. The roof support
32 system's performance and surety, to provide the support necessary for the required time will be
33 addressed. Criteria used will include design parameters such as the amount of load, the
34 deformation of the installed system, and the number and type of component failures observed, if
35 any. Geotechnical criteria will include parameters such as the type and quantity of fracturing,
36 roof beam expansion rates, and future ground performance based on a predictive model.

37
38 Should the evaluation results indicate that remedial actions are necessary prior to placement of
39 waste, experiences at the WIPP indicate that rebolting or installing supplemental support can
40 extend the safe life of a room for several years.

41
42 ~~After waste emplacement commences, geomechanical monitoring will continue with monitors~~
43 ~~that are tied into a computer network program.~~ The readings obtained from ongoing
44 geomechanical monitoring will provide information needed for the roof beam stability

1 assessment. Visual observations of the ground and the support systems will also continue in all
2 accessible areas. Based on the experiences from the Site and Preliminary Design Validation test
3 rooms, it has been proven that any developing instability will be detected through monitoring.
4 Multiple measures to deal with the observed conditions can be implemented months before an
5 event to mitigate any risk associated with a roof fall in the storage disposal room or any affected
6 area within the mine. At a minimum, the affected area will be isolated and withdrawn from
7 ventilation flow. Isolation operations will utilize using current available methods, materials, and
8 equipment.
9

10 Ground control conditions which could result in a fall can be divided into two scenarios: The
11 first consists of spalling (falling) of individual small and localized rock falling on waste
12 containers. By definition, they can be considered insignificant as no damage to the drums can
13 occur. The second consists of an entire section of roof falling on multiple stacks of waste
14 containers. Each of these scenarios is discussed below.
15

16 Spalling-of-Ground Scenario

17

18 The maximum distance between the room roof and a container of waste is 10 ft. Waste
19 containers are designed to withstand impact loads of at least 1,000 pounds (lbs) dropped
20 from a height of 6 ft. flat or 450 lbs dropped on a circumferential edge from a height of
21 4 ft. Both of which correspond to an allowable impact stress of 25,450 pounds per square
22 inch (psi). Rocks from spalling are small and would not be of sufficient weight when
23 striking a drum from a 10 ft vertical height to cause an impact stress of more than
24 25,450 psi. Taking into account the falling distance, average weight, and the typical
25 shape of the salt rock, the conclusion is that puncturing a drum by spalling is non-
26 credible.
27

28 Fall-of-Ground Scenario

29

30 Fall-of-ground occurs when a large section of roof beam falls onto the waste containers.
31 As previously discussed, the possibility of this occurring in an active room is remote, due
32 to continuous monitoring and engineered roof support systems.
33

34 The following actions have been developed and will be taken by the RCRA Emergency
35 Coordinator should a rock fall occur in an active waste emplacement area of the repository:
36

37 Spalling-of-Ground Actions

38

- 39 1. Determine whether the roof conditions allow for safe entry and if the impacted waste
40 container or containers in question are accessible.
41

42 The process used to determine if a roof condition of a room will allow for safe entry is
43 the same as the ground control inspection process used for inspection of the ground
44 conditions and roof bolt integrity. The inspection will begin at a safe and sound roof
45 starting point and consist of visual inspections of roof bolts, roof, and rib areas for

1 missing or damaged bolts; deformed roof bolt plates; or roof and rib cracks, fractures,
2 or separations. If during the visual inspection suspicious roof bolts, roof, or ribs are
3 found, then operators will proceed with sounding the area in question with a scaling
4 bar for loose roof bolts, bad roof, or ribs (loose roof bolts will not ring when sounded).
5 Bad roof or ribs will have a drummy, hollow, or un-solid sound when struck with the
6 scaling bar. When this operation is performed, a safe avenue for retreat is always
7 maintained. Also maintained is a position such that an unexpected event will not place
8 personnel in a position where the scaling bar or material being scaled could fall on
9 personnel. If the inspection reveals ground that cannot be safely scaled manually or
10 with the available mining equipment, the affected area, up to and including the entire
11 room, will be barricaded and removed from ventilation flow.

12
13 The criteria used to determine whether a waste container is accessible is based on the
14 location of the container, the amount of waste in the room, and the expense of
15 reaching the waste container safely versus the expense of abandonment of the room.
16 For example, if the room is 95% filled and spalling-of-ground punctured a waste
17 container at or near the exit of the room, the decision to isolate the room and move
18 waste emplacement activities to the next room would be prudent.

- 19
20 2. Restrict access in ventilation flow path downstream of the incident.
- 21
22 3. Restrict ventilation to the affected room to ensure that there is no spread of
23 contamination that may have been released. Survey for contamination and establish
24 the boundaries.
- 25
26 4. Inspect accessible and affected containers and containment for signs of leakage or
27 damage.
- 28
29 5. Cover the spill area with material such as plastic or fabric sheets or PVA, in a way that
30 would safely isolate the area.
- 31
32 6. Determine if the covered spill area safely allows for continued waste disposal
33 operations or whether further cleanup is required. If further cleanup is required,
34 provide with cleanup methods described below. Note: Cleaning may not be required
35 since this is the permitted disposal area.
- 36
37 7. Inspect any affected equipment (vehicles, handling equipment, and communication
38 and alarm equipment) for proper function.
- 39
40 8. Repackage spilled waste and ~~repackage, plug, or patch~~, **or overpack** breached waste
41 containers into 55 or 85-gallon drums, SWBs, or TDOPs, depending on volume.
42 Temporarily locate overpack waste containers in an adjacent room. Remove only
43 those intact waste containers necessary to clear the area for decontamination.
44

- 1 9. At the underground emplacement room, salt contaminated by a spill of TRU mixed
2 waste will be covered with materials such as salt, plastic or fabric sheets or PVA to
3 isolate it from the workers or removed and packaged as site derived waste in
4 accordance with site procedures for decontaminating surfaces.
5
- 6 10. Manage the radioactive debris as derived waste.
7
- 8 11. Characterize containers of waste based on the waste containers that were damaged.
9
- 10 12. Replace the removed and derived waste containers into the waste stack as appropriate
11 and update the WWIS.
12
- 13 13. Document activities and record results.
14

15 Fall-of-Ground Actions 16

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

26 The criteria used to determine whether to close the entire panel or just the affected
27 room of waste containers would include the location of the roof fall and the stability of
28 the unaffected roof area in the panel. Techniques to determine the stability would be
29 the same as previously described in this section.
30

31 F-4d(9) Structural Integrity Emergencies

32 In the event of a WIPP facility emergency involving underground structural integrity, the
33 situation will be handled as a natural emergency. Monitoring and inspection procedures ensure
34 the safety and integrity of the WIPP facility underground.
35

36 F-4d(10) Emergency Termination Procedures

37 For the transition from emergency phase to cleanup phase, the following items will be complete:
38

- 39 • Emergency scene will be stable
- 40 • Release of hazardous substance will be stopped

- 1 • Reaction of hazardous substance will be controlled
- 2 • The released hazardous substance will be contained within a localized and
- 3 manageable area
- 4 • The area of contamination will be adequately secure from unauthorized entry.

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

8
9 For nonemergencies and Incident Level I emergencies, the following methods of
10 decontamination are available for personnel, environment, and/or equipment according to
11 emergency response procedures:

- 12
- 13 • Absorption
- 14 • Adsorption
- 15 • Chemical degradation
- 16 • Dilution
- 17 • Disposal
- 18 • Isolation
- 19 • Neutralization
- 20 • Solidification.

21
22 Any necessary verification of air, soil, or water samples will be directed by the RCRA
23 Emergency Coordinator. Immediately after an emergency, the RCRA Emergency Coordinator
24 will provide for treating, storing, or disposing of recovered waste, contaminated soil or surface
25 water, or any other material that results from a release, fire, or explosion at the facility in
26 accordance with standard operating procedures.

27
28 For Level II and III incidents after the emergency itself is controlled and contained, the RCRA
29 Emergency Coordinator will be responsible for the development and implementation of an
30 incident-specific decontamination plan.

31
32 **The** PPE will be decontaminated or disposed according to procedure before it is returned to its
33 storage location.

34
35 As part of the facility's defense-in-depth approach, equipment will be assumed to be
36 contaminated after each hazardous material response and a thorough check for radioactive
37 contamination will be conducted. If contamination is found, a technically sound
38 decontamination process will be followed. Many types of equipment are difficult to
39 decontaminate and may have to be discarded as hazardous or derived waste. Whenever possible,
40 pieces of equipment will be disposable or made of nonporous material.

41

1 If radioactive contamination is detected on equipment or on structures, it will be assumed that
2 hazardous constituents may also be present. Radiological surveys to determine whether a
3 potential release of hazardous constituents has occurred (Renewal Application Appendix I3) will
4 be used along with other techniques as a detection method to determine when decontamination is
5 required. Radiological cleanup standards will be used to determine the effectiveness of
6 decontamination efforts. To provide verification of the effectiveness of the removal of
7 hazardous waste constituents, once a contaminated surface is demonstrated to be radiologically
8 clean, the “swipe” can be sent for analysis for hazardous constituents. The use of these
9 confirmation analyses is as follows:

10
11 For waste containers, the analyses become documentation of the condition of the
12 container at the time of emplacement. These containers will be placed in the
13 underground without further action, once the radiological contamination is removed,
14 unless there is visible evidence of hazardous waste spills or hazardous waste on the
15 container and this contamination is considered likely to be released prior to emplacement
16 in the underground. In no case shall these containers contain a total liquid content equal
17 to, or which exceeds, one volume percent of the container.

18
19 For area contamination, once the area is cleaned up and is shown to be radiologically
20 clean, it will be sampled for the presence of hazardous waste residues. If the area is
21 large, a sampling plan will be developed. ~~The sampling plan will be approved by the~~
22 ~~NMED before it is implemented.~~ If the area is small, swipes will be used. If the results
23 of the analysis show that residual contamination remains, a decision will be made
24 whether further cleaning will be beneficial or whether final clean up will be deferred until
25 closure. Appropriate notations will be entered into the operating record to assure proper
26 consideration of formerly contaminated areas at the time of closure. Furthermore,
27 measures such as covering, barricading, and/or placarding will be used as needed to mark
28 areas that remain contaminated.

29
30 For all Contingency Plan emergency responses, the RCRA Emergency Coordinator will ensure,
31 in keeping with standard operating procedures, that, in the affected area(s) of the facility:

- 32
33
- 34 • No waste that may be incompatible with the released material is treated, stored, or
disposed of until cleanup procedures are completed
 - 35 • All emergency equipment listed in the Contingency Plan is cleaned and fit for its
36 intended use, or replaced ~~before operations are resumed~~

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

2 During an emergency, the RCRA Emergency Coordinator will ensure that reasonable measures
3 are taken so that fires, explosions, and releases do not occur, recur, or spread to TRU mixed
4 waste or other hazardous materials at the facility, as required under 20.4.1.500 NMAC
5 (incorporating 40 CFR §§264.56(e) and (f)). These measures include:
6

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

26 No operation that has been shut down in response to the incident will be restarted until
27 authorized by the RCRA Emergency Coordinator. Sections F-4g, Incompatible Waste, and F-4h,
28 Post-Emergency Facility and Equipment Maintenance and Reporting, address specific issues
29 related to decreasing the possibility of a recurrence or spread of a release, a fire, or an explosion.
30

31 ~~After resolution of the incident, a Root Cause Analysis will be conducted to review all Level II~~
32 ~~and Level III incidents for determination of cause, and the corrective action plan to prevent~~
33 ~~recurrence.~~
34

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

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

13
14 Nonradioactive hazardous waste resulting from the cleanup of a fire, an explosion, or a release
15 involving a nonradioactive hazardous waste or hazardous substance at the WIPP facility will be
16 contained and managed as a hazardous waste until such time as the waste is disposed of, or
17 determined to be nonhazardous, as defined in 20.4.1.200 NMAC (incorporating 40 CFR §261)
18 Subparts C and D. In most cases, hazardous materials inventories for the various buildings and
19 areas at the facility will allow a determination of the hazardous materials present in any cleanup
20 of a release or of the residues from an emergency condition. (The quantities of such spills are so
21 small, it is not likely to trigger an Incident Level II or III.) When necessary samples of the waste
22 will be collected and analyzed to determine the presence of any hazardous characteristics and/or
23 hazardous waste constituents; this information is needed to evaluate disposal options. EPA-
24 approved sampling and analytical methods will be utilized. Hazardous wastes will be transferred
25 to the Hazardous Waste Staging Area. The staging area is used to store hazardous waste
26 awaiting transfer to an off-site treatment or disposal facility in accordance with applicable
27 regulations (e.g., 20.4.1 NMAC and DOT regulations). The Hazardous Waste Staging Area for
28 nonradioactive hazardous waste is Buildings 474A and 474B, as shown in Figure F-1.
29 Nonradioactive hazardous wastes will be shipped off-site for disposal at a RCRA permitted
30 disposal facility.

31
32 Under normal operations, administrative controls will be implemented to ensure that hazardous
33 materials and incompatible materials will not be introduced to the radioactive materials area
34 during TRU mixed waste handling operations. Examples of administrative controls include
35 restricting the waste received in the TRU mixed waste management area(s) to TRU mixed waste
36 properly manifested from the generator sites and ensuring that materials used in these area(s) are
37 restricted to only those that have previously been determined to be compatible with the TRU
38 mixed waste. The RCRA Emergency Coordinator will have access to building design
39 information and information on specific equipment used within an area upon which to base a
40 determination of the compatibility of materials with the area. If necessary, the RCRA
41 Emergency Coordinator will use EPA-600/2-80-076, "A Method for Determining the
42 Compatibility of Hazardous Waste," (EPA, 1980) for making compatibility determinations.
43 Waste resulting from the cleanup of a fire, explosion, or release in the miscellaneous unit, the
44 CH TRU mixed waste handling areas, or the RH Complex will be considered derived from the

1 received TRU mixed waste and may be treated and managed as CH TRU mixed waste depending
2 on the surface dose rate.

3
4 In the event of a prolonged cessation of TRU mixed waste handling operations, TRU mixed
5 waste can be placed in areas of the WHB Unit that are available for such contingencies. These
6 areas and the TRU mixed waste containers in them would be located so that adequate aisle space
7 would be maintained for unobstructed movement of personnel and equipment in an emergency.
8 Renewal Application Chapter ~~and Attachments M~~, and Renewal Application Appendices M1,
9 and M2 describe the HWMUs in detail, including the facility description, support structures and
10 equipment, security, waste handling areas, ventilation, and fire protection.

11
12 The contaminated area will be decontaminated. If a release is to a permeable surface, such as
13 soil, asphalt, concrete, or other surface, the surface material will be removed and placed in
14 containers meeting applicable ~~DOT~~ requirements. Contaminated soil, asphalt, concrete, or other
15 surface material, as well as materials used in the cleanup (e.g., rags and absorbent material) will
16 be contained and disposed of in the same manner as dictated for the contaminant. Clean soil,
17 new asphalt, or new concrete will be emplaced at the spill location.

18
19 If a spill occurs on an impermeable surface, the surface will be decontaminated with water and/or
20 a detergent. In the event that the spilled material is water reactive, a compatible nonhazardous
21 cleaning solution will be used. Contaminated wash water or cleaning solution will be transferred
22 to an appropriate container, marked, and managed as described above for nonradioactive or
23 radioactive liquid wastes.

24
25 In the event of a hazardous material or hazardous waste release, the RCRA Emergency
26 Coordinator will ensure that no wastes will be received or disposed of in the affected areas until
27 cleanup operations have been completed. This is to ensure that incompatible waste will not be
28 present in the vicinity of the release.

29
30 Because of the restrictions which the WIPP facility places on ~~generators~~ certified
31 characterization programs, and because of control of WIPP operations, TRU mixed wastes and
32 derived wastes will not contain any incompatible wastes. However, the areas established for the
33 temporary holding of nonradioactive waste routinely generated at the WIPP facility is divided
34 into bays to accommodate the management of wastes that may be incompatible. If waste is
35 generated as the result of a spill or release of hazardous materials or nonradioactive hazardous
36 waste, the waste generated as a result of abatement and cleanup will be evaluated to determine its
37 compatibility with other wastes being managed in the temporary holding areas. The evaluation
38 will be by identifying the material or waste that was spilled or released and determining its
39 characteristics (e.g., ignitable, reactive, corrosive, or toxic). The waste generated by the
40 abatement and cleanup activities will be stored in that part of the temporary holding area that has
41 been established to manage wastes with which it is compatible.

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

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

3
4 F-4g Incompatible Waste

5 Implementation of the TSDF-WAC for the WIPP ensures that incompatible TRU mixed waste
6 will not be shipped to the WIPP facility. Nonradioactive waste at the WIPP facility will be
7 carefully segregated during handling and holding and will be transported within and off the
8 facility. The RCRA Emergency Coordinator will not allow hazardous or TRU mixed waste
9 operations to resume in a building or area in which incompatible materials have been released
10 prior to completion of necessary post-emergency cleanup operations to remove potentially
11 incompatible materials. In making the determination of compatibility, the RCRA Emergency
12 Coordinator will have available the resources and information described in Section F-4b,
13 Identification of Hazardous Materials. In addition, environmental, safety, and health ~~ES&H~~
14 ~~department~~ personnel will be available for consultation. Finally, the RCRA Emergency
15 Coordinator may use EPA-600/2-80-076, (EPA, 1980) in making the determination of
16 compatibility.
17

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

19 The RCRA Emergency Coordinator will ensure that emergency equipment that is located or used
20 in the affected area(s) of the facility and listed in the Contingency Plan is cleaned and ready for
21 its intended use before operations are resumed, as specified in 20.4.1.500 NMAC (incorporating
22 40 CFR §264.56(h)(2)). Any equipment that cannot be decontaminated will be discarded as
23 waste (e.g., hazardous, mixed, solid), as appropriate. The WIPP facility is committed to
24 replacing any needed equipment or supplies that cannot be reused following an emergency.
25 After the equipment has been cleaned, repaired, or replaced, a post-emergency facility and
26 equipment inspection will be performed, and the results will be documented.
27

28 Cleaning and decontaminating equipment will be accomplished by physically removing gross or
29 solid residue; rinsing with water or another suitable liquid, if required; and/or washing with
30 detergent and water. Decontamination and cleaning will be conducted in a confined area, such
31 as a wash pad or building equipped with a floor drain and sump isolated from the environment.
32 Care will be taken to prevent wind dispersion of particles and spray. Liquid or particulate
33 resulting from cleaning and decontamination of equipment will be placed in clean, compatible
34 containers. Waste produced in an emergency cleanup in the TRU mixed waste handling areas is
35 derived waste and will be emplaced in the active disposal ~~underground derived waste~~
36 ~~emplacement~~ area. Waste resulting from decontamination operations elsewhere in the WIPP
37 facility will be analyzed for hazardous waste constituents and/or hazardous waste characteristics
38 to ensure proper management.
39

40 When the WIPP facility has completed post-emergency cleanup of waste and hazardous residues
41 from areas where waste management operations are ready to resume, ~~and the RCRA Emergency~~
42 ~~Coordinator has ensured that emergency equipment used in managing the emergency has been~~
43 ~~cleaned or replaced and is fit for service,~~ the notifications will be made by the Permittees to the

1 following: the EPA Region VI Administrator; the Secretary of the NMED; and any relevant local
2 authorities. This post-emergency notification complies with 20.4.1.500 NMAC (incorporating
3 40 CFR §264.56(i)), and is the responsibility of the RCRA Emergency Coordinator.

4 F-4i Container Spills and Leakage

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

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

20 F-4j Tank Spills and Leakage

21 The TRU mixed waste handling areas at the WIPP facility do not include tank storage or
22 treatment of hazardous waste, as defined in 20.4.1.100+ NMAC (incorporating 40 CFR §260.10),
23 and as regulated under 20.4.1.500 NMAC (incorporating 40 CFR §264) Subpart J. At the WIPP
24 facility, tanks are used to store water and petroleum fuels only. The petroleum tanks store diesel
25 and unleaded gasoline.

27 F-4k Surface Impoundment Spills and Leakage

28 The WIPP facility does not manage hazardous or TRU mixed waste using a surface
29 impoundment, as defined in 20.4.1.100+ NMAC (incorporating 40 CFR §260.10), and as
30 regulated under 20.4.1.500 NMAC (incorporating 40 CFR, §264) Subpart K. Surface
31 impoundment regulations are not applicable to the WIPP facility.

33 F-5 Emergency Equipment

34 A variety of equipment is available at the facility for emergency response, containment, and
35 cleanup operations in both the HWMUs and the facility in general. This includes equipment for
36 spill control, fire control, personnel protection, monitoring, first aid and medical attention,
37 communications, and alarms. This equipment is immediately available to emergency response
38 personnel. A listing of major emergency equipment available at the WIPP facility, as required
39 by 20.4.1.500 NMAC (incorporating 40 CFR §264.52(e)), is shown in Table F-16. Table F-7

1 identifies the locations where fire suppression systems are provided. Locations of the
2 underground emergency equipment are shown in Figure F-85. The firewater-distribution system
3 map is shown in Figure F-96. The underground fuel area fire-protection system is shown in
4 Figure F-107.
5

6 F-6 Coordination Agreements

7 The Permittees have established MOUs with off-site emergency response agencies for
8 firefighting, medical assistance, hazardous materials response, and law enforcement. In the
9 event that on-site response resources are unable to provide all the needed response actions during
10 either a medical, fire, hazardous materials, or security emergency, the RCRA Emergency
11 Coordinator will notify appropriate off-site response agencies and request assistance. Once on
12 site, off-site emergency response agency personnel will be under the direction of the RCRA
13 Emergency Coordinator.
14

15 The MOUs with off-site cooperating agencies are available from the Permittees. A listing and
16 description of the MOUs with state and local agencies and mining operations in the vicinity of
17 the WIPP facility, as required by 20.4.1.500 NMAC (incorporating 40 CFR §264.37 and
18 §264.52(c)), are:
19

- 20 • An agreement among the Permittees, Intrepid Potash NM LLC, and Mosaic Potash
21 Carlsbad Inc., provides for the mutual aid and assistance, in the form of MRTs, in the
22 event of a mine disaster or other circumstance at either of the two facilities. This
23 provision ensures that the WIPP MOC will have two MRTs available at all times
24 when miners are underground.
- 25 • A memorandum of agreement between the City of Carlsbad, New Mexico, and the
26 WIPP MOC for ambulance service assistance provides that, upon notification by the
27 WIPP MOC, the Carlsbad Fire Department/Ambulance Service will be dispatched
28 from Carlsbad toward the WIPP site by a designated route and will accept the transfer
29 of patient(s) being transported by the WIPP facility ambulance at the point both
30 ambulances meet. If the patient(s) is not transferable, the Carlsbad Fire
31 Department/Ambulance Service will provide equipment and personnel to the WIPP
32 facility ambulance, as necessary.
- 33 • A MOU between the DOE and the Carlsbad Medical Center provides for the
34 treatment of radiologically contaminated personnel who have incurred injuries
35 beyond the treatment capabilities at the WIPP facility. The DOE will provide
36 transport of the patient(s) to the Carlsbad Medical Center for decontamination and
37 medical treatment.
- 38 • A MOU between the DOE and the Lea Regional Medical Center provides for the
39 treatment of radiologically contaminated personnel who have incurred injuries
40 beyond the treatment capabilities at the WIPP facility. The DOE will provide

- 1 transport of the patient(s) to the Lea Regional Medical Center for decontamination
2 and medical treatment.
- 3 • A MOU between the DOE and the U.S. Department of Interior (**DOI**), represented
4 by the Bureau of Land Management (**BLM**), Roswell District, provides for a fire-
5 management program that will ensure a timely, well-coordinated, and cost-effective
6 response to suppress wild fire within the withdrawal area using the WIPP incident
7 commander for fire-management activities. The DOI will provide firefighting
8 support if requested. In addition, the MOU provides for responsibilities concerning
9 cultural resources, grazing, wildlife, mining, gas and oil production,
10 realty/lands/rights-of-way, and reclamation.
 - 11 • A mutual-aid firefighting agreement between the Eddy County Commission and the
12 DOE provides for the assistance of the Otis and Joel Fire Departments (a volunteer
13 fire district created under the Eddy County Commission and the New Mexico State
14 Fire Marshall's Office), including equipment and personnel, at any location within
15 the WIPP Fire Protection Area upon request by an authorized representative of the
16 WIPP Project. These responsibilities are reciprocal.
 - 17 • A mutual-aid agreement between the City of Hobbs and the DOE provides for mutual
18 ambulance, medical, fire, rescue, and hazardous material response services; provides
19 for joint annual exercises; provides for use of WIPP facility radio frequencies by the
20 City of Hobbs during emergencies; and provides for mutual security and law
21 enforcement services, within the appropriate jurisdiction limits of each party.
 - 22 • A mutual-aid agreement between the City of Carlsbad and the DOE provides for
23 mutual ambulance, medical, fire, rescue, and hazardous material response services;
24 provides for joint annual exercises; provides for use of WIPP facility radio
25 frequencies by the City of Carlsbad during emergencies; and provides for mutual
26 security and law enforcement services, within the appropriate jurisdiction limits of
27 each party.
 - 28 • A MOU between the DOE and the New Mexico Department of Public Safety (**DPS**)
29 concerning Mutual Assistance and Emergency Management applies to any actual or
30 potential emergency or incident that: 1) involves a significant threat to employees of
31 the Permittees or general public; 2) involves property under the control or jurisdiction
32 of either the DOE or the State; 3) involves a threat to the environment which is
33 reportable to an off-site agency; 4) requires the combined resources of the DOE and
34 the state; 5) requires a resource that the DOE has which the State does not have, or a
35 resource the State has which DOE does not have; or 6) involves any other incident for
36 which a joint determination has been made by the DOE and the State that the
37 provisions of this MOU will apply. The MOU provides that the DPS shall permit
38 qualified and security cleared DOE Emergency Management members into the State
39 EOC for the purpose of: a) coordinating communications functions; b) evaluating and
40 maintaining communications capabilities; c) participating in exercises; d) link the

1 State's High Frequency radio communications network with the DOE; and e)
2 assisting the State during radioactive materials accidents that require joint operations
3 or the use of the DOE Radiological Assistance Program team. The DOE shall permit
4 qualified and security cleared members the State Emergency Management
5 community into the DOE's EOCs for the purposes of coordinating communications
6 and activities. Additional duties for each participant are specified for assistance in
7 incidents or emergencies.

8 F-7 Evacuation Plan

9 If it becomes necessary to evacuate the WIPP facility, the assigned on-site and off-site staging
10 areas have been established. The off-site staging areas are outside the security fence. The WIPP
11 facility has implementation procedures for both surface and underground evacuations. Drills are
12 performed on these procedures at the WIPP facility at least once annually. The following
13 sections describe the evacuation plan for the WIPP facility, as required under 20.4.1.500 NMAC
14 (incorporating 40 CFR §264.52(f)).
15

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

17 Figure F-118 shows the surface staging areas. Personnel report to their Office Wardens at
18 designated staging areas where accountability is conducted. If site evacuation is necessary, the
19 RCRA Emergency Coordinator will decide which staging areas are to be used and will advise
20 Office Wardens of the selections. The RCRA Emergency Coordinator will communicate the
21 locations to Office Wardens via office warden pager, radio, plectron, WIPP Security, or
22 telephone, as appropriate. Office Wardens will direct personnel to the selected staging area
23 outside the security fence. Personnel who are working in a contaminated area when site
24 evacuation is announced, will assemble at specific staging areas to minimize contact with other
25 personnel during the evacuation (Figure F-118).
26

27 Office Wardens conduct accountability of personnel assigned to their specific areas. For
28 complete surface accountability, the Office Wardens report to their ACOW, who reports to the
29 COW. When the COW has reports from all ACOWs, surface accountability is reported to the
30 CMRO, who then notifies the RCRA Emergency Coordinator of the accountability.
31

32 The COW and all ACOWs have radios for communication between them and the CMRO. The
33 Office Wardens, Assistant Office Wardens, ACOWs, and COW also have pagers with which
34 they are notified of evacuations. At the staging areas Office Wardens report directly to their
35 ACOW.
36

37 There are three off-on-site staging areas identified on Figure F-118. The RCRA Emergency
38 Coordinator determines which staging area will be used. Security officers remain at the primary
39 staging area gate 24 hours a day, and the vehicle trap is opened for personnel during emergency
40 evacuations. The north gate has a single person gate and large gate which can be opened, similar
41 to the main gates for the primary staging area. The east gate is a turnstile gate. Upon
42 notification by the RCRA Emergency Coordinator, Security will respond, open gates, and
43 facilitate egress for evacuation.

1
2 ~~The on-site staging areas are identified in Figure F-8. These are used for building or area~~
3 ~~evacuations as determined by the RCRA Emergency Coordinator.~~
4

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

6 In the event of an underground or surface event, the RCRA Emergency Coordinator can call for
7 underground personnel to report to assembly areas (Figure F-129). Underground personnel are
8 also trained to immediately report to assembly areas under specific circumstances (i.e. e.g., loss
9 of underground power or ventilation). If accountability is required, the underground will be
10 evacuated. The Underground Controller is responsible for underground accountability by
11 comparing the brass numbers with the brass tags signed out in the lamproom. Each assembly
12 area contains a Mine Page Phone, miners aid station, and evacuation maps.
13

14 In accordance with 30 CFR §57.11, the mine maintains two escapeways. These escapeways are
15 designated as Egress Hoist Stations. When an underground evacuation is called for, all
16 underground personnel report to the Egress Hoist Stations.
17

18 Decontamination of underground personnel will be conducted the same way as described for
19 surface decontamination. Contaminated personnel are trained to remain segregated from other
20 personnel until RC personnel can respond to the incident at the underground location.
21

22 F-7c Plan for Surface Evacuation

23 Surface evacuation notification is initiated by the RCRA Emergency Coordinator directing the
24 CMRO to sound the surface evacuation alarm. The Office Wardens assist personnel in
25 evacuation from their areas. Evacuation routes and instructions are posted throughout the site.
26

27 If the EST/FPT notifies the ERT members by pager to respond to an identified area, these
28 members ~~will not depart the site during an evacuation, but~~ will report to the EST/FPT for
29 instructions and accountability. The EST/FPT notifies the COW of response members present.
30 These personnel will not evacuate until released by the RCRA Emergency Coordinator.
31

32 F-7d Plan for Underground Evacuation

33 Notification for underground evacuation will be made using the underground evacuation alarm
34 and strobe light signals.
35

36 Personnel will evacuate to the nearest egress hoist station. Primary underground evacuation
37 routes (identified by green reflectors on the rib) will be used, if possible. Secondary
38 underground evacuation routes (identified by red reflectors on the rib) will be used if necessary
39 (Figure F-85). Brass tags will be collected from personnel at the hoist collar on the surface, and
40 taken to the Underground Controller, who functions as an Office Warden. When all brass tags
41 are accounted for, underground accountability is reported to the RCRA Emergency Coordinator.
42

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

3
4 Members of the FLIRT and the MRT who may be underground, will evacuate the underground
5 when an underground evacuation is called for. A reentry by the MRT will be performed
6 according to 30 CFR 49 and MSHA regulations for reentry into a mine. The two MRTs are
7 trained in compliance with 30 CFR 49 in mine mapping, mine gases, ventilation, exploration,
8 mine fires, rescue, and recovery.

9
10 F-7e Further Site Evacuation

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

- 13
14 • Buses/vans—WIPP facility buses/vans will be available for evacuation of personnel.
15 The buses/vans are stationed in the employee parking lot.
- 16 • Privately Owned Vehicles—Because many employees drive to work in their own
17 vehicles, these vehicles may be utilized in an emergency. Personnel may be directed
18 as to routes to be taken when leaving the WIPP facility.

19 These Any other available vehicles may be used to transport personnel who have been released
20 from the site by the RCRA Emergency Coordinator.

21
22 F-8 Required Reports

23 The RCRA Emergency Coordinator, on behalf of the Permittees, will note in the operating
24 record the time, date, and details of any incident that requires implementing this Contingency
25 Plan. This notation will be in the facility log maintained by the CMRO. In compliance with
26 20.4.1.500 NMAC (incorporating 40 CFR §264.56(j)), within 15 days after the incident, the
27 Permittees will ensure that a written report on the incident will be submitted to the EPA Region
28 VI Administrator and to the Secretary of the NMED. The report will include:

- 29
30 • The name, address, and telephone number of the Owner/Operator
- 31 • The name, address, and telephone number of the facility
- 32 • The date, time, and type of incident (e.g., fire, explosion or release)
- 33 • The name and quantity of material(s) involved
- 34 • The extent of injuries, if any

- 1 • An assessment of actual or potential hazards to human health or the environment,
2 where this is applicable
- 3 • The estimated quantity and disposition of recovered material that resulted from the
4 incident.

5 In addition to the above report, the Permittees will ensure that the ES&H Manager, or designee,
6 submits reports to the appropriate agencies as listed in Tables F-8 and F-9.
7

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

16 The WIPP requires the EST/FPT to initiate the “WIPP Hazardous Materials Incident Report” a
17 hazardous materials incident report, similar to Figure F-5, if the Contingency Plan is
18 implemented. A form is attached as Figure F-12. The form report is initiated by the EST/FPT.
19 The RCRA Emergency Coordinator, CMRO, and Environmental Compliance representatives
20 complete their respective sections.
21

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

23 The owner/operator of the WIPP facility will ensure that a copies of this Contingency Plan is
24 maintained at the facility, available to the RCRA Emergency Coordinator through the WIPP
25 ~~electronic controlled document distribution system or in appropriate controlled document~~
26 ~~locations throughout the facility~~, and the alternate Emergency Operations Center and the Joint
27 Information Center at the Skeen-Whitlock Building, and isare, ~~consequently~~, available to all
28 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

- 31 • Intrepid Potash NM LLC
- 32 • Mosaic Potash Carlsbad Inc.
- 33 • Carlsbad Fire Department, Carlsbad
- 34 • Carlsbad Medical Center, Carlsbad
- 35 • Lea Regional Medical Center, Hobbs
- 36 • Otis Fire Department, Otis
- 37 • Hobbs Fire Department, Hobbs

- 1 • Joel Fire Department, Carlsbad
- 2 • Bureau of Land Management, Carlsbad
- 3 • New Mexico State Police.

4 The owner/operator of the WIPP facility will ensure that this ~~plan~~ Contingency Plan is reviewed
5 annually and amended whenever:

- 6
- 7 • Applicable regulations are revised
- 8 • The ~~RCRA Part B permit~~ Permit for the WIPP facility is revised in any way that
9 would affect the Contingency Plan
- 10 • This plan fails in an emergency
- 11 • The WIPP facility design, construction, operation, maintenance, or other
12 circumstances change in a way that materially increases the potential for fires,
13 explosions, or releases of hazardous waste or hazardous constituents or change the
14 response necessary in an emergency
- 15 • The list of RCRA Emergency Coordinators change
- 16 • The list of WIPP facility emergency equipment changes.

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F-10 ~~List of~~ References

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

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

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

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

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

TABLES

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TABLE F-16
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
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

TABLE F-16
EMERGENCY EQUIPMENT MAINTAINED
AT THE WASTE ISOLATION PILOT PLANT

Equipment	Description and Capabilities	Location
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
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

TABLE F-16
EMERGENCY EQUIPMENT MAINTAINED
AT THE WASTE ISOLATION PILOT PLANT

Equipment	Description and Capabilities	Location
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
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

TABLE F-16
EMERGENCY EQUIPMENT MAINTAINED
AT THE WASTE ISOLATION PILOT PLANT

Equipment	Description and Capabilities	Location
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 <u>(surface)</u>	Special purpose vehicle; light and heavy duty rescue equipment; transports 1 litter patient, medical oxygen and supplies for mass casualties, fire suppression support equipment (rescue tool, air bag, K-12 Rescue Saw, 5,000-watt generator, self-contained breathing apparatus (SCBA), and much more equipment	Surface (Safety and Emergency Services Facility)
Fire Detection and Fire Suppression Equipment		
Building Smoke, Thermal Detectors, or Manual Pull Stations	Ionization and photoelectric or fixed temperature/rate of rise detectors; visual display and alarm in CMR; manual pull stations. The underground has manual fire alarm pull stations located where personnel have access when evacuating. These are connected to the U/G evacuation alarm.	Guard and Security Building, Warehouse/Shops, Support Building, CMR/Computer Room, Waste Handling Building, TRUPACT Maintenance Facility, Waste Shaft Collar, Underground Fuel Station, SH Hoisthouse, Engineering Building, Industrial Safety Building, Training Facility
Fire Truck # 1	Equipped per Class "A" fire truck per NFPA; capacity 750 gallons, with pump capacity of 1200 gallons per minute	Surface (Safety and Emergency Services Facility)
Rescue Truck # 2 (U/G)	(1) 125-pound dry chemical extinguisher (1) 150-pound foam extinguisher	Underground
Extinguishers	Individual fire extinguisher stations; various types located throughout the facility, conforming to NFPA-10.	Buildings, underground, and underground vehicles
Automatic Dry Chemical Extinguishing Systems	Automatic; 1,000-pound system (Purple K); actuated by thermal detectors or by manual pull stations	Underground fuel station

TABLE F-16
EMERGENCY EQUIPMENT MAINTAINED
AT THE WASTE ISOLATION PILOT PLANT

Equipment	Description and Capabilities	Location
Sprinkler Systems	Fire alarms activated by water flow	Pumphouse, Guard and Security Building, Support Building, Waste Handling Building (contact-transuranic CH TRU 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 <u>Protective</u> 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

TABLE F-16
EMERGENCY EQUIPMENT MAINTAINED
AT THE WASTE ISOLATION PILOT PLANT

Equipment	Description and Capabilities	Location
Emergency Medical Equipment		
Antishock Trousers	Shock treatment; (2) inflatable, one on each ambulance	Ambulance # 1 and # 2
Zoll 1600 Heart Monitor and Defibrillator	Heart Monitor/defibrillator	Ambulance # 1 and # 2
Oxygen	Patient care; Size D: (2) Ambulance #1 (1) Underground Ambulance (1) Health Services Size E: (1) Rescue Truck (2) Underground Ambulance Size M: (1) Ambulance #1	Ambulance # 1 and # 2, surface rescue truck
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-16
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
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

TABLE F-16
EMERGENCY EQUIPMENT MAINTAINED
AT THE WASTE ISOLATION PILOT PLANT

Equipment	Description and Capabilities	Location
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
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

TABLE F-16
EMERGENCY EQUIPMENT MAINTAINED
AT THE WASTE ISOLATION PILOT PLANT

Equipment	Description and Capabilities	Location
Non hazardous Decontaminating Agents	4-1 Gallon bottles for decontamination of surfaces, equipment, and personnel	Building 481

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TABLE F-21
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 Renewal Application Appendix M1	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-32
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-43
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-24 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.

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5 * Contingency Plan is implemented

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TABLE F-54
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-55
CHEMICAL METHODS OF MITIGATION

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

10
11
12

⁽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.

1
2
3

**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-85)		*	*	*
Station A Effluent Monitoring Shed			*	*
Station B Effluent Monitoring Shed			*	*

4
5
6
7
8
9

⁽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

10
11
12
13
14
15
16

⁽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

17
18
19
20
21
22

The Safety and Emergency Services Building contains the following:

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

23
24
25
26

The Core Storage Building contains the following:

- Automatic wet pipe sprinklers
- Portable fire extinguishers

27
28

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

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

**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.
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) (575) 885-3581	1) Name, address and telephone number of owner or operator; 2) name, address and telephone number of facility; 3) date, time and type of incident; 4) name and quantity of material(s) involved; 5) extent of any injuries; 6) assessment of actual or potential threat to environment or human health; and 7) estimated quantity and disposition of recovered material.	Written submission within one week of time permittees become aware of discharge. Same as oral and description of noncompliance and its cause, the period of noncompliance including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence. Send reports to New Mexico Environment Department, Chief, Groundwater Quality Bureau, P.O. Box 26110, Santa Fe, New Mexico, 87502, New Mexico State Emergency Response Commission Department of Public Safety, Title III Bureau, P.O. Box 1628 Santa Fe, New Mexico, 87504-1628, and Local Emergency Planning Committee, 324 S. Canyon Street, Suite B, Carlsbad, New Mexico 88220.
New Mexico Water Quality Control Commission, Part 1, Section 203	Any discharge from any facility of oil or any other water contaminant in such quantities as may, with reasonable probability, injure or be detrimental to human health, animal or plant life, or property.	Chief, Groundwater 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, Groundwater Quality Bureau, 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 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.	New Mexico Underground Storage Tank Regulations-2

1

FIGURES

1

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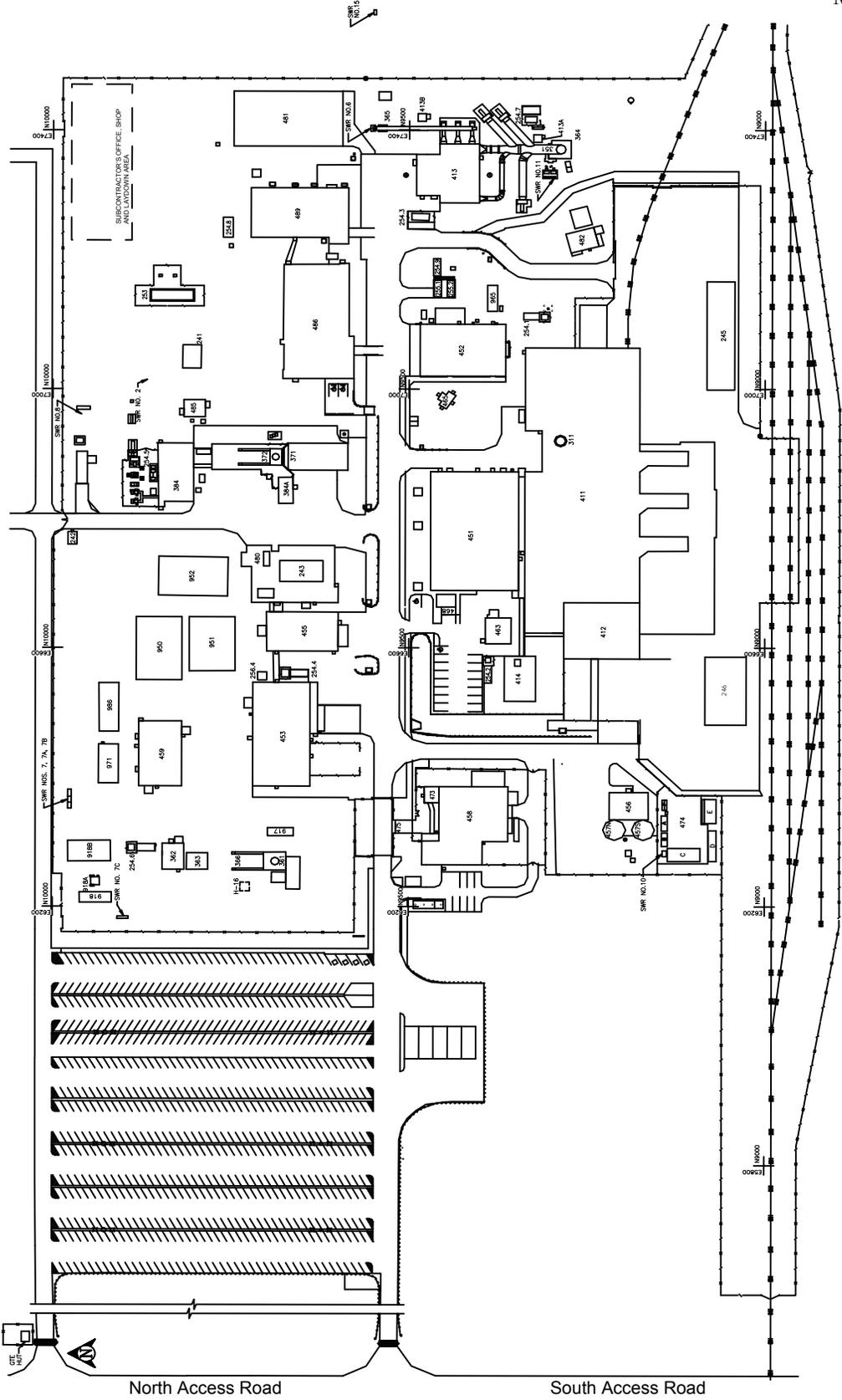


Figure F-1
WIPP Surface Structures
RENEWAL APPLICATION CHAPTER F
Page F-75 of 99

Waste Isolation Pilot Plant
 Hazardous Waste Facility Permit
 Renewal Application
 May 20, 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 PROCU	REMENT/PURCHASING
#254.9	480V SWITCHGEAR (25P-SWGO4/9)	#457S	GUARD AND SECURITY BUILDING	#952 TRAILER	
#255.1	BACK-UP DIESEL GENERATOR #1 25-PE 503	#458	CORE STORAGE BUILDING	#965	SAMPLE LABORATORY TRAILER
#255.2	BACK-UP DIESEL GENERATOR #2 25-PE 504	#459	COMPRESSOR BUILDING	#971	HUMAN RESOURCES TRAILER
#256.4	SWITCHBOARD #4 (25P-SBD04/4)	#463		#986	PUBLICATIONS & PROCEDURES TRAILER
#311	WASTE SHAFT	#465	AUXILIAR Y AIR INTAKE	SWR NO. 6	SWITCHRACK NO. 6
#351	EXHAUST SHAFT	#468	TELEPHONE HUT	SWR NO. 7	7A, 7B SWITCHRACK NO. 7, 7A, 7B
#361	AIR INTAKE SHAFT	#473	ARMORY BUILDING	SWR NO. 7C	SWITCHRACK NO. 7C
#362	AIR INTAKE SHAFT/HOIST HOUSE	#474	HAZARDOUS WASTE STORAGE FACILITY	SWR NO. 10	SWITCHRACK NO. 10
#363	AIR INTAKE SHAFT/WINCH HOUSE	#474A	HAZARDOUS WASTE STORAGE BUILDING	SWR NO. 11	SWITCHRACK NO. 11
#364	EFFLUENT MONITORING INSTRUMENT SHED A	#474B	HAZARDOUS WASTE STORAGE BUILDING	SWR NO. 12	SWITCHRACK NO. 12
#365	EFFLUENT MONITORING INSTRUMENT SHED B	#474C	OIL & GREASE STORAGE BUILDING	SWR NO. 15	SWITCHRACK NO. 15
#366	AIR INTAKE SHAFT HEADFRAME	#474D	GAS BOTTLE STORAGE BUILDING		
#371	SALT HANDLING SHAFT	#474E	HAZARD MATERIAL STORAGE BUILDING		
#372	SALT HANDLING SHAFT HEADFRAME	#474F	WASTE OIL RETAINER		

Figure F-1a
 Legend to Figure F-1

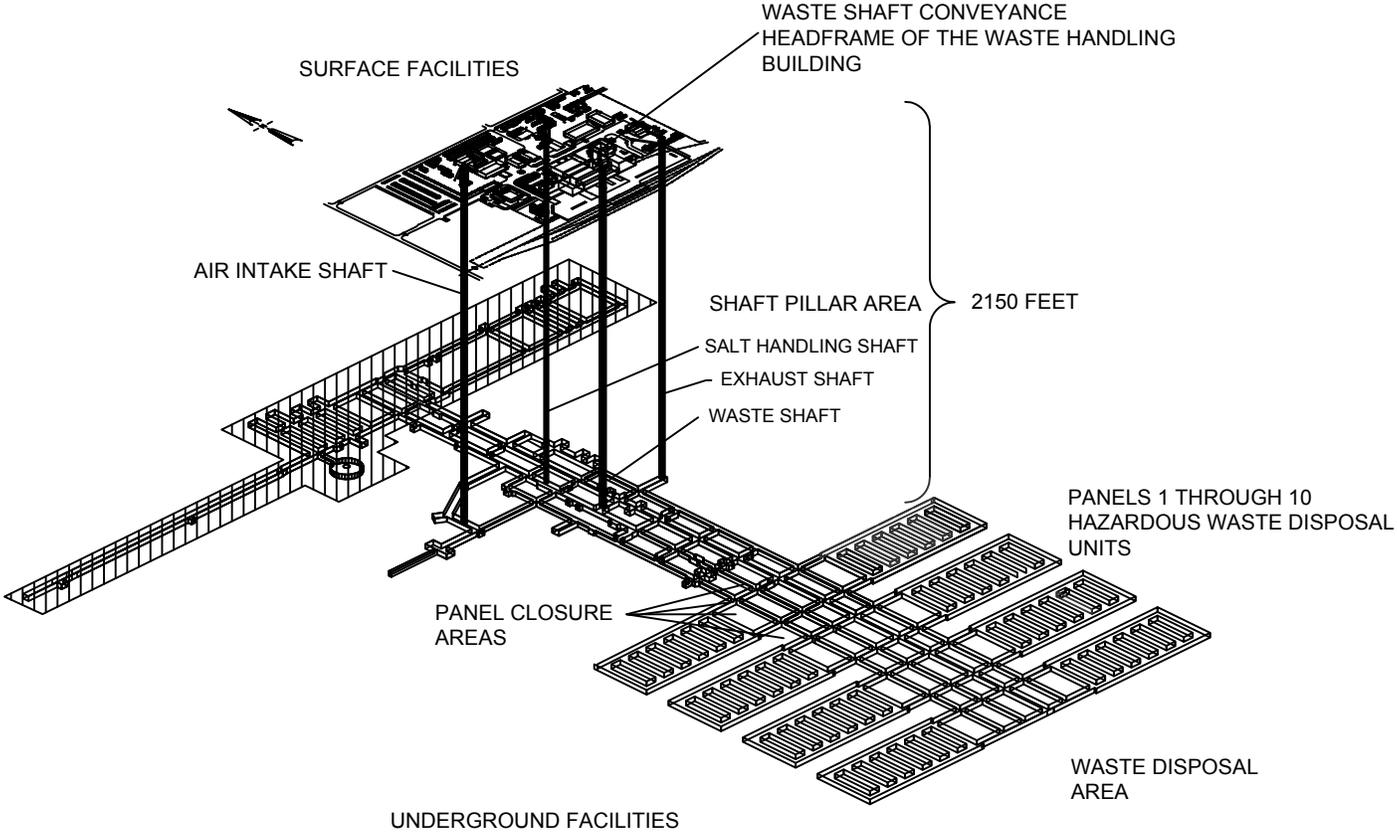


Figure F-2
Spatial View of the WIPP Facility

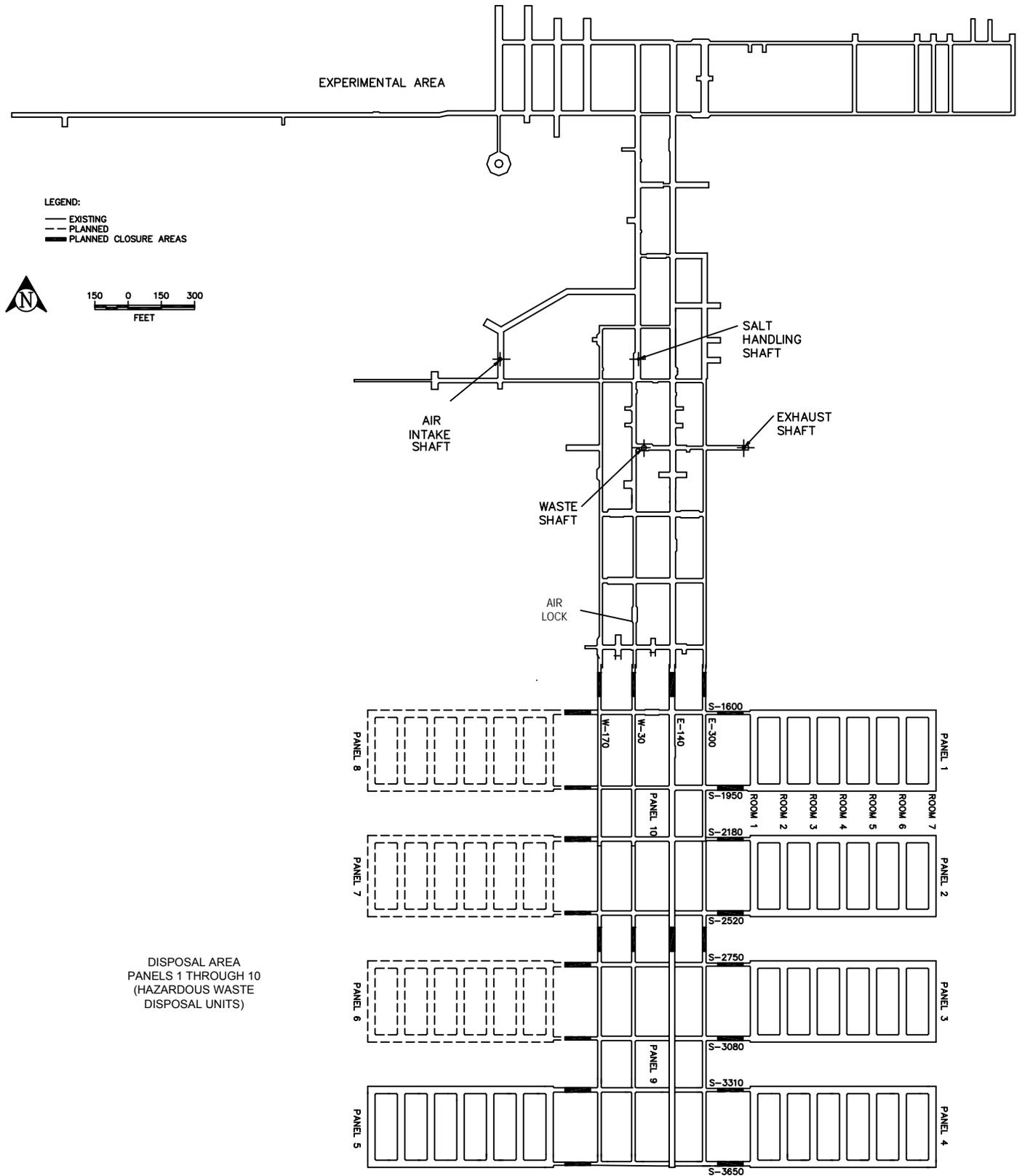


Figure F-3
 WIPP Underground Facilities

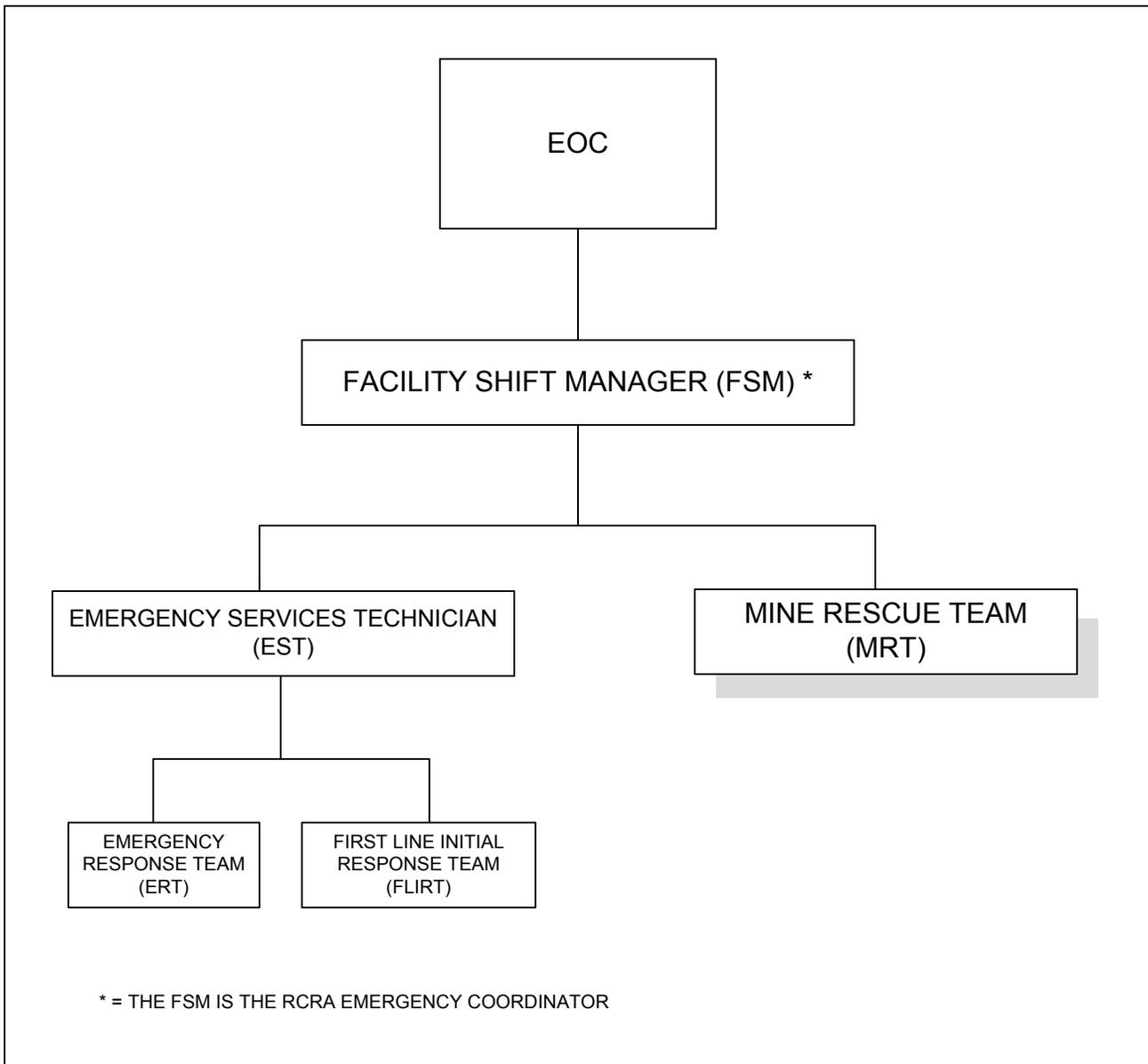


Figure F-4
Direction and Control Under Emergency Conditions in Which the Plan Has Been Implemented

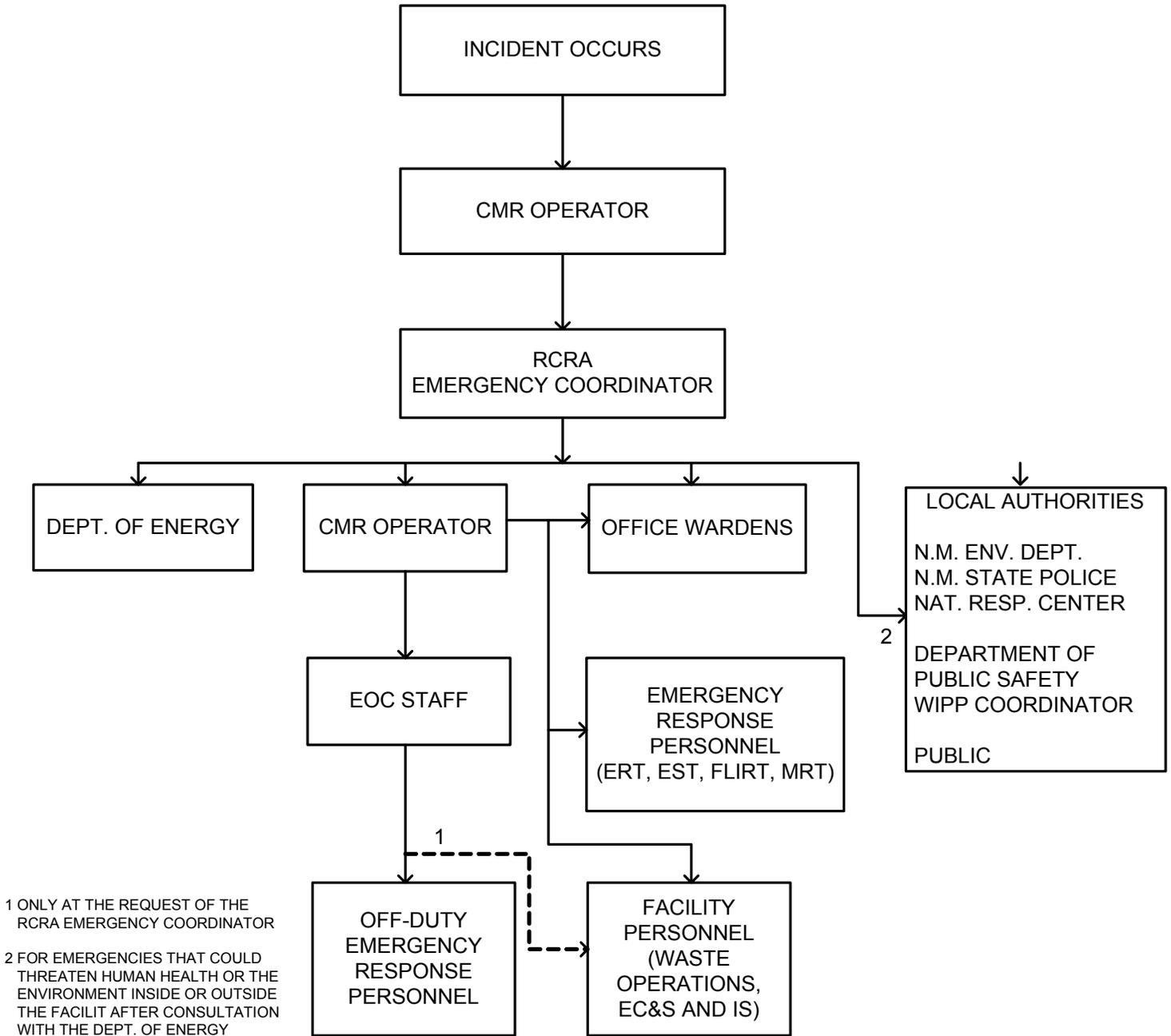


Figure F-4a
 WIPP Facility Emergency Notifications

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

Figure F-5
 WIPP Hazardous Materials Incident Report (Example), 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: _____				

Figure F-5 (Continued)
 WIPP Hazardous Materials Incident Report Example, Page 3 of 3

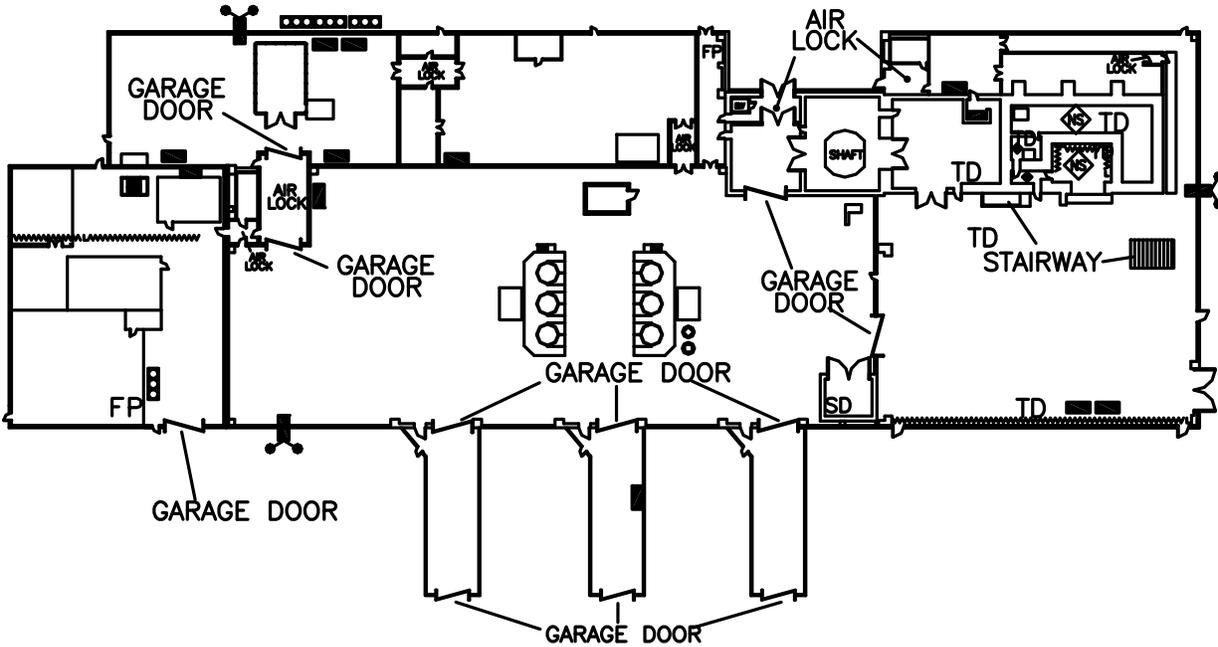
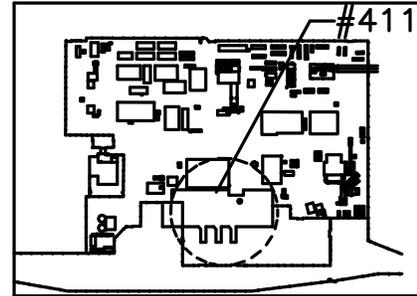
Pre-Fire Survey

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

LEGEND	
	ELECTRICAL PANEL
	FLAMMABLE CABINET
TD	THERMAL DETECTOR
	NON-SPRINKLERED AREA
L W W	LADDER WITH OVERHEAD WALKWAY
FP	FIRE CONTROL PANEL
SD	SMOKE DETECTOR
	SPRINKLER RISER WITH F.D. CONNECTION
	COMP. GAS CYL.
---	FENCE

411

WASTE HANDLING BUILDING
1ST FLOOR



11. Comments: WATER SHUT-OFF AT PIV #8, PIV #17, PIV #19, PIV #38, PIV #39
- _____
- _____
- _____

Figure F-6
 Waste Handling Building Pre-Fire Survey (First Floor)

Pre-Fire Survey Cont.

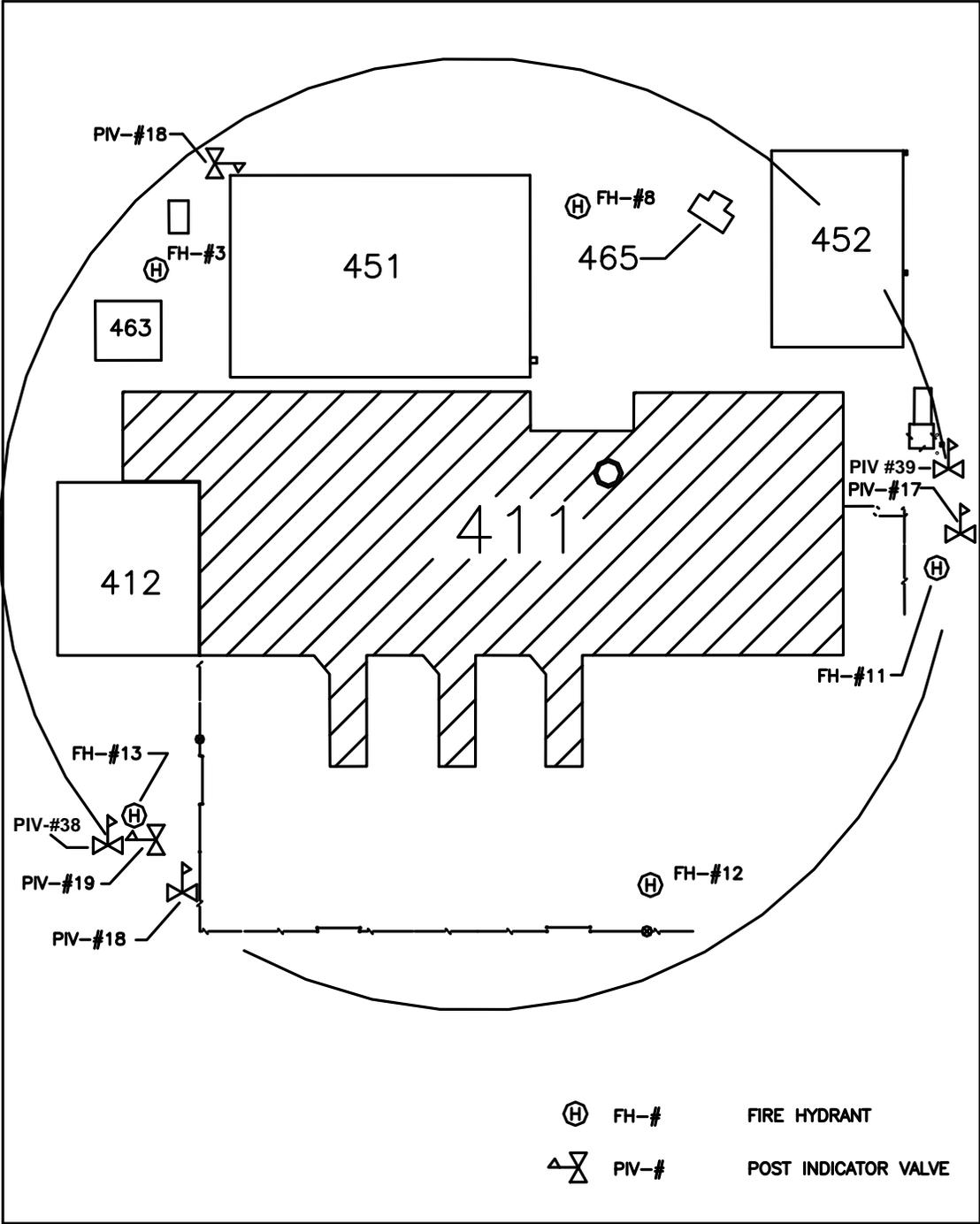


Figure F-6a
Waste Handling Building Pre-Fire Survey (First Floor – Fire Hydrant/Post Indicator Location)

Pre-Fire Survey

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

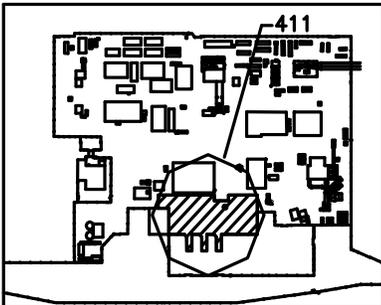
411

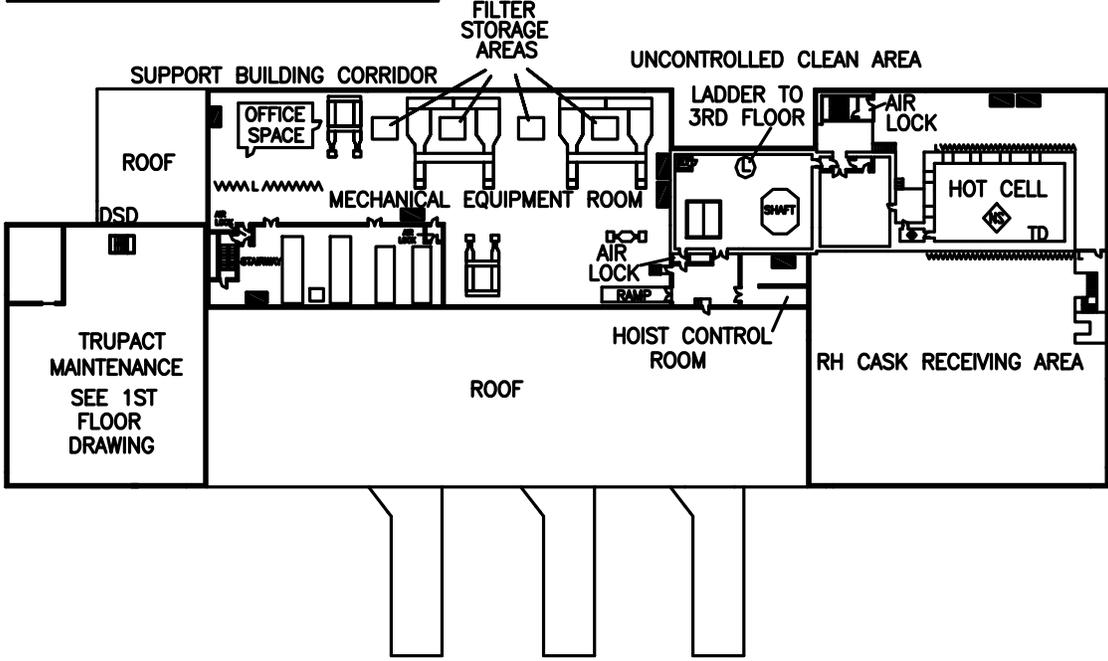
WASTE HANDLING BUILDING (2ND FLOOR)

LEGEND

- ELECTRICAL PANEL
- FLAMMABLE CABINET
- TD THERMAL DETECTOR
- NONSPRINKLERED AREA
- L V V V V LADDER & WALKWAY
- DSD INDUCT SMOKE DETECTOR







11. Comments: WATER SHUT-OFF AT PIV #8, PIV #17, PIV #19, PIV #38, PIV #39

Figure F-7
 Waste Handling Building Pre-Fire Survey (Second Floor)

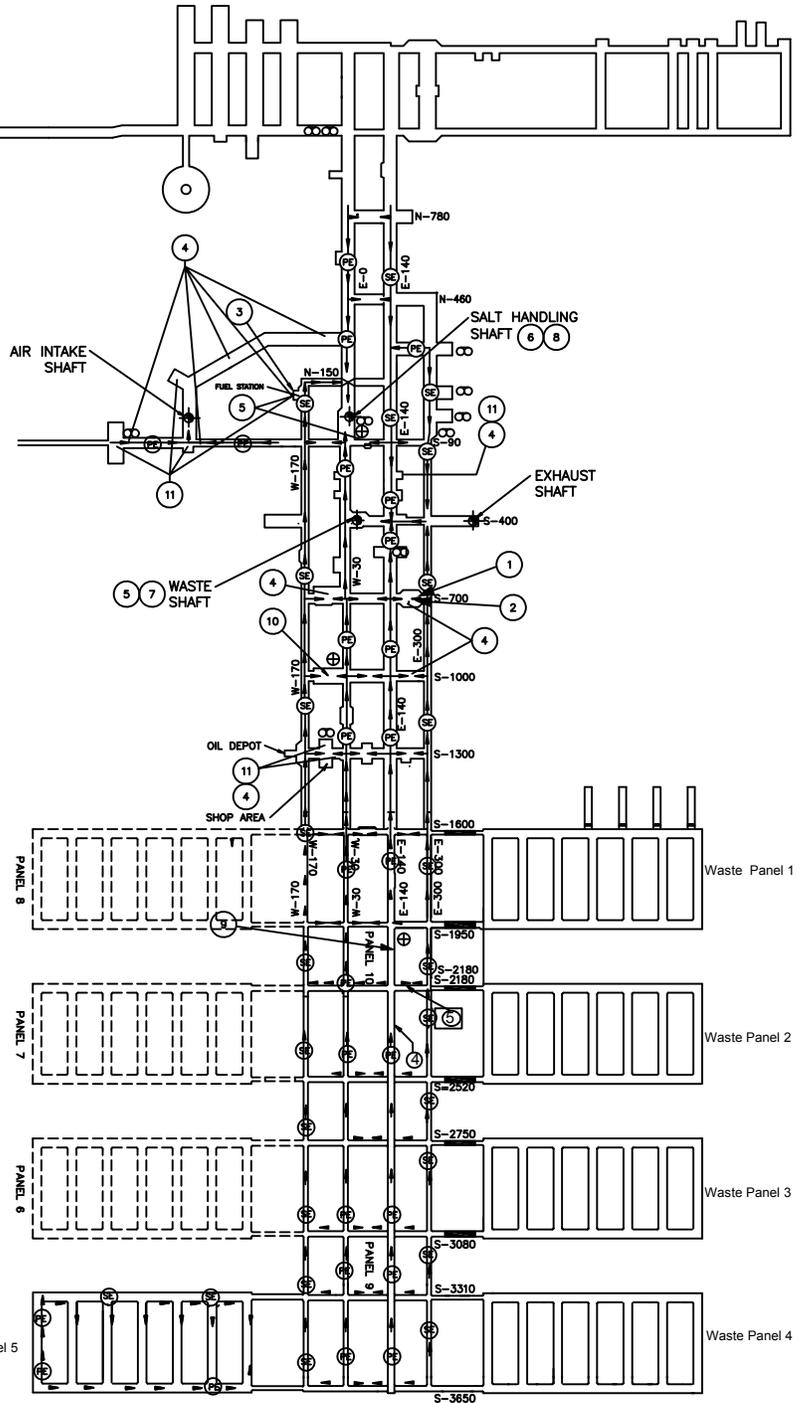
Waste Isolation Pilot Plant
 Hazardous Waste Facility Permit
 Renewal Application
 May 20, 2009

GENERAL INSTRUCTIONS

ANY TIME AN EVACUATION ALARM IS SOUNDED PROCEED TO THE NEAREST EGRESS HOIST STATION.

ALL CARTS, TRUCKS, ETC. WILL BE PARKED.

CONTACT THE CMR VIA MINE PAGER PHONE, DIAL PHONE, OR GATRONICS ON DIRECTION FROM THE CMR OPERATOR, PROCEED ON FOOT TO THE NEAREST EGRESS HOIST STATION.



INFORMATION

PRIMARY ESCAPE = INTAKE AIR = GREEN REFLECTIVE MARKERS INDICATE YOU ARE HEADING TOWARD A SHAFT IN INTAKE AIR

SECONDARY ESCAPE = EXHAUST AIR = RED REFLECTIVE MARKERS INDICATE YOU ARE HEADING TOWARD A SHAFT IN EXHAUST AIR

WHITE REFLECTIVE MARKERS INDICATE YOU ARE IN INTAKE AIR OR EXHAUST AIR HEADING AWAY FROM A SHAFT

NOTE:
 SECONDARY ESCAPE ROUTE WILL ONLY BE USED UNTIL CLEAR ACCESS AT A BULKHEAD PAST THE BLOCKED AREA TO THE PRIMARY ACCESS ROUTE IS FOUND.

LEGEND

- PRIMARY ESCAPEWAY
- SECONDARY ESCAPEWAY
- UNPASSABLE BULKHEAD (PROHIBITED AREA)
- OVERCAST
- VERTICAL SHAFT
- FIRST AID STATION (PHONE)
- EYE WASH STATION *
- AMBULANCE
- RESCUE TRUCK
- DRY CHEMICAL SYSTEM
- FIRE ALARM HAND SWITCH (PHONE)
- FIRE ALARM PANEL
- SALT HANDLING SHAFT ASSEMBLY AREA (PHONE)
- SH SHAFT UNDERGROUND STATION EMERGENCY AREA (PHONE)
- WASTE SHAFT UNDERGROUND STATION ASSEMBLY AREA (PHONE)
- S-1950 & E-140 ASSEMBLY AREA (PHONE)
- S-1000 ASSEMBLY AREA (PHONE)
- THERMAL DETECTOR

*Eyewash stations are typical locations and may be moved as operational areas change



EMERGENCY/ALARM RESPONSE

CONTACT CMR BY MINE PAGER PHONE OR GATRIONIC HANDSET OR
 CMR EXTENSION 8111
 IDENTIFY TYPE OF EMERGENCY AND LOCATION

PERSONNEL REPORT TO THE NEAREST EGRESS HOIST STATION FOR UNDERGROUND EVACUATION

PERSONNEL REPORT TO THE NEAREST DESIGNATED ASSEMBLY AREA FOR OTHER SITE EMERGENCIES AND CMR ESCAPE ROUTE INSTRUCTIONS

DURING AN EMERGENCY/ALARM RESPONSE PERSON-IN-CHARGE IS THE U/G FE

Figure F-8
 Underground Emergency Equipment Locations and Underground Evacuation Routes
 RENEWAL APPLICATION CHAPTER F
 Page F-88 of 99

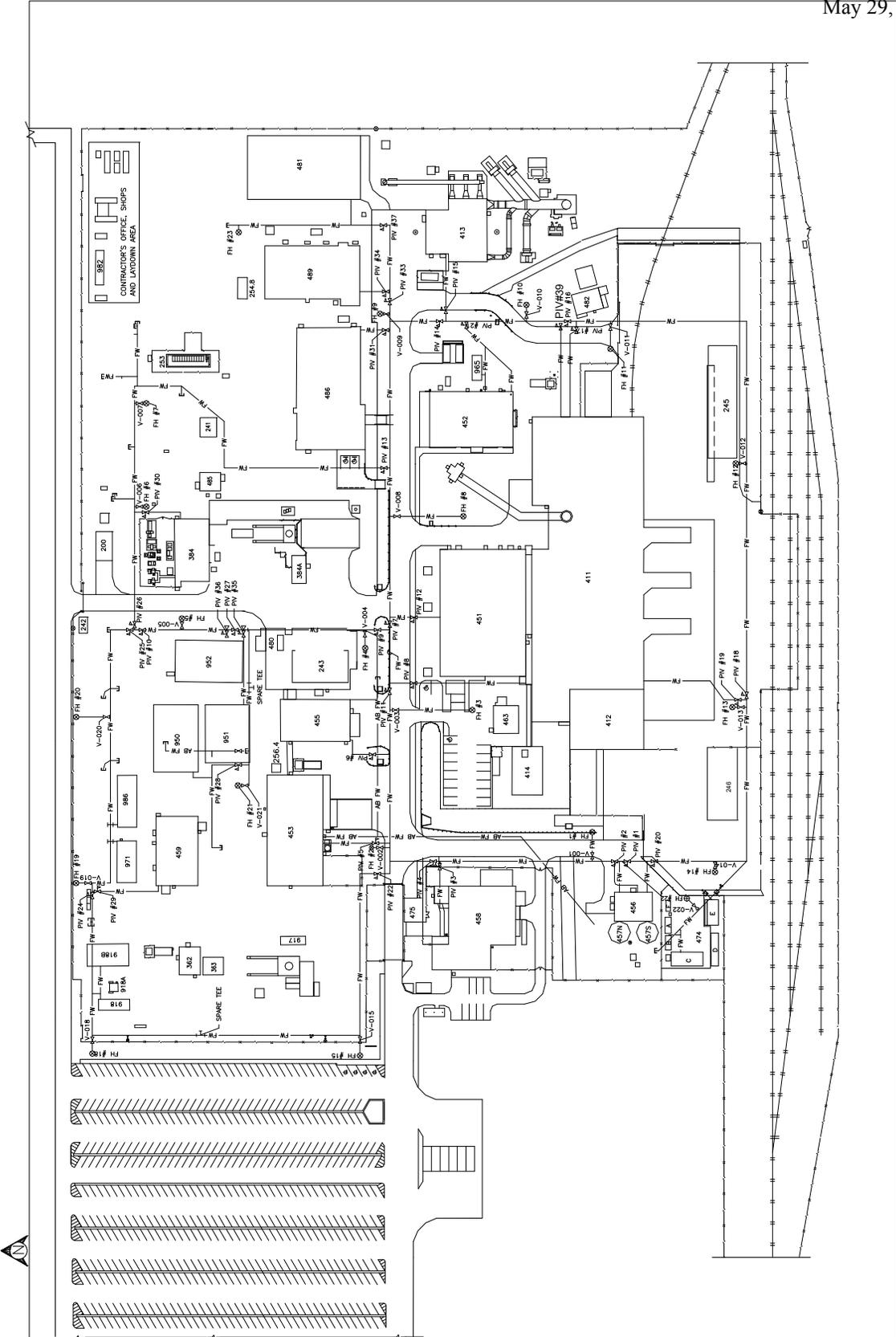


Figure F-9
Fire-Water Distribution System
RENEWAL APPLICATION CHAPTER F
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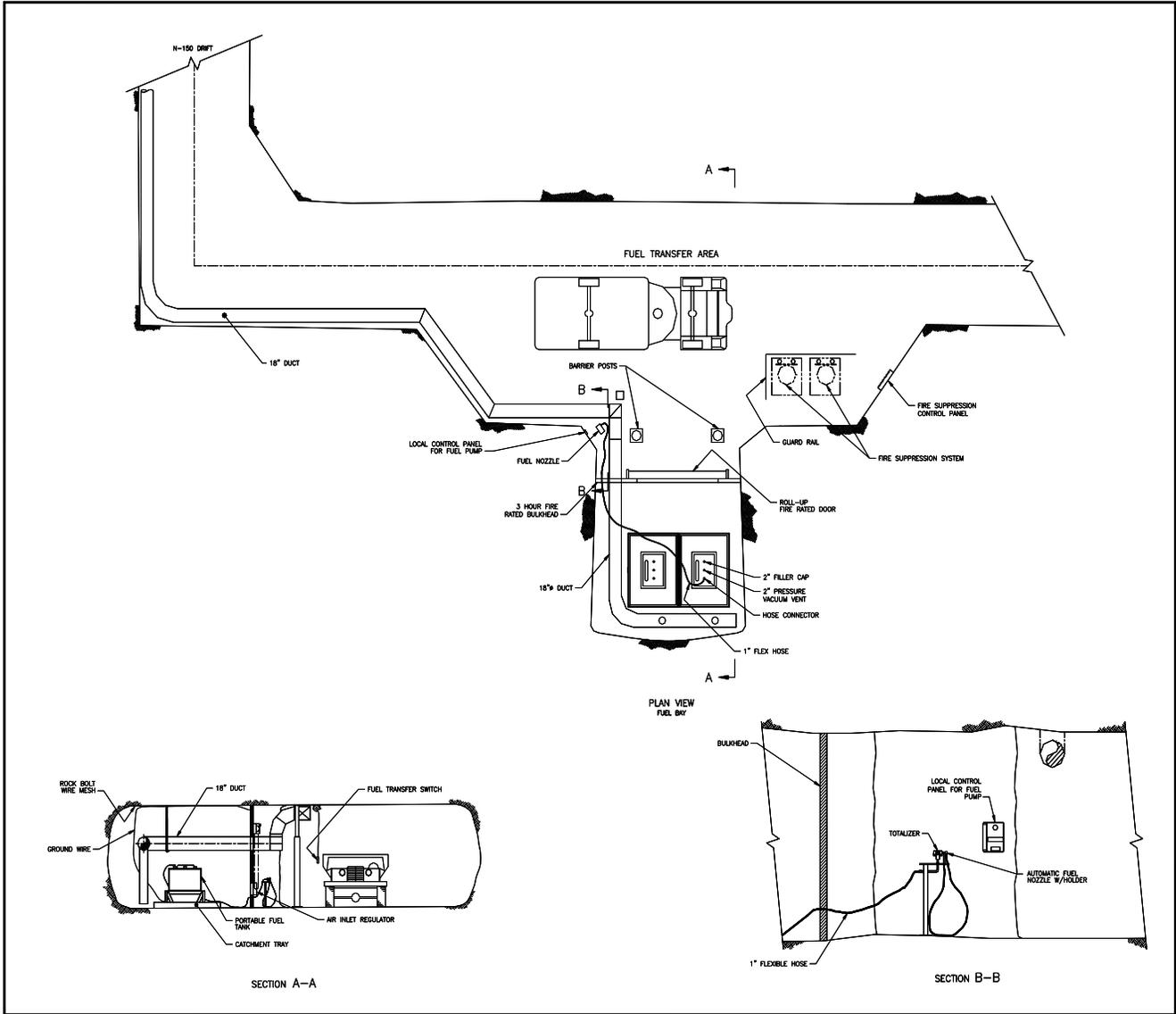


Figure F-10
Underground Diesel Fuel-Station Area Fire Protection System

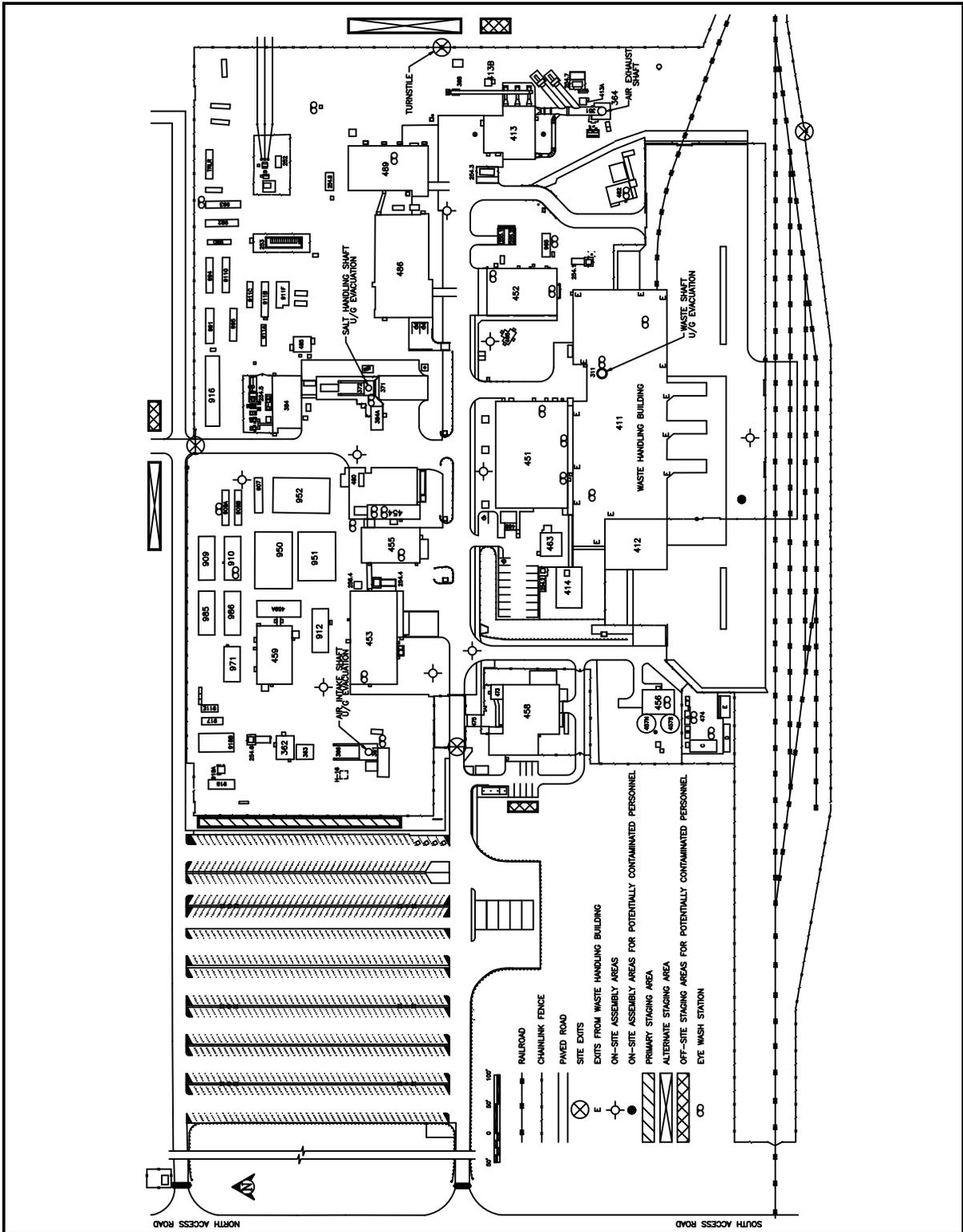


Figure F-11
 WIPP On-Site Assembly Areas and WIPP Staging Areas

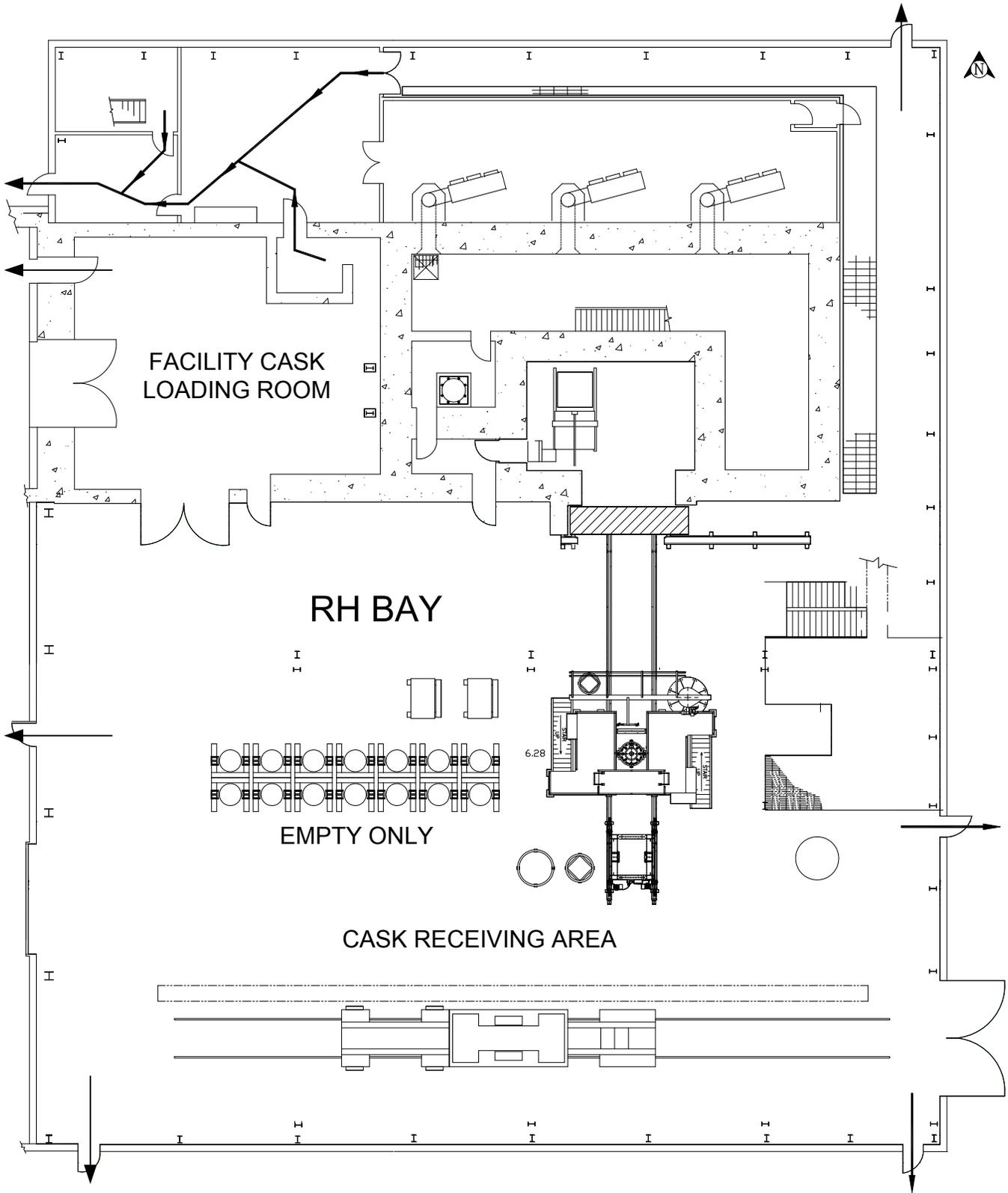


Figure F-11a
RH Bay Evacuation Routes

This Illustration for
Information Purposes Only.

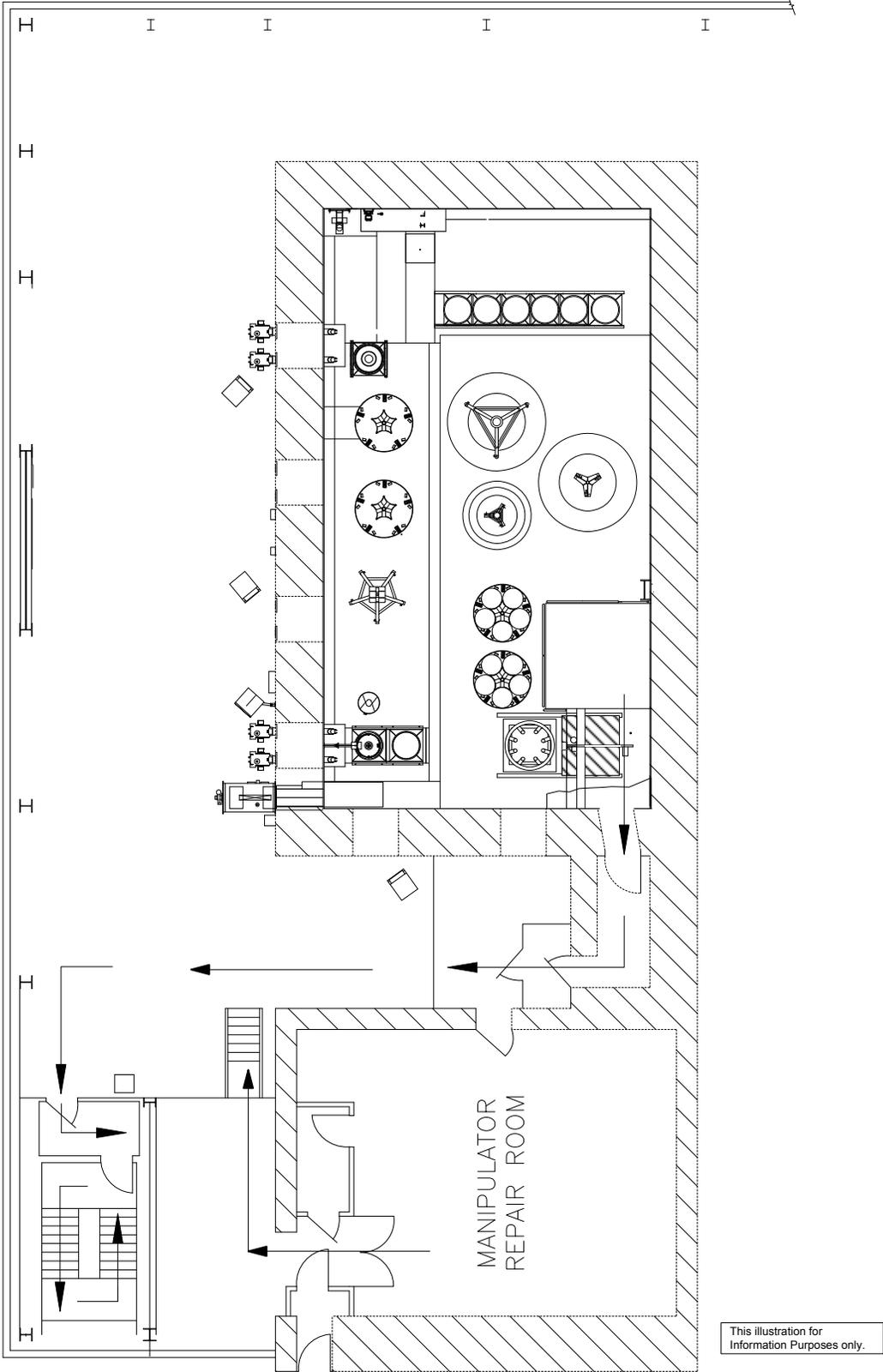


Figure F-11b
RH Bay Hot Cell Evacuation Route

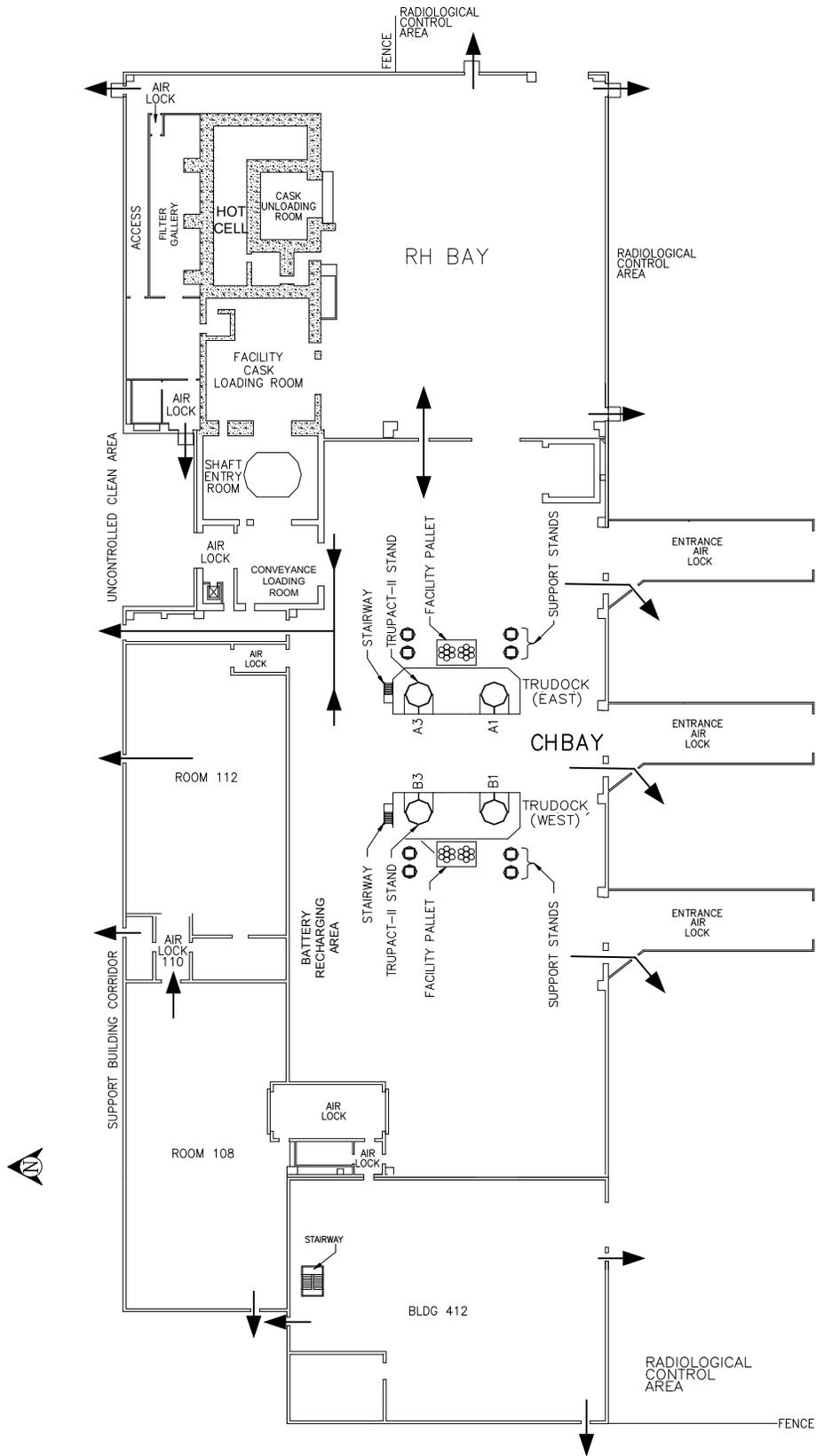


Figure F-11c
Evacuation Routes in Waste Handling Building

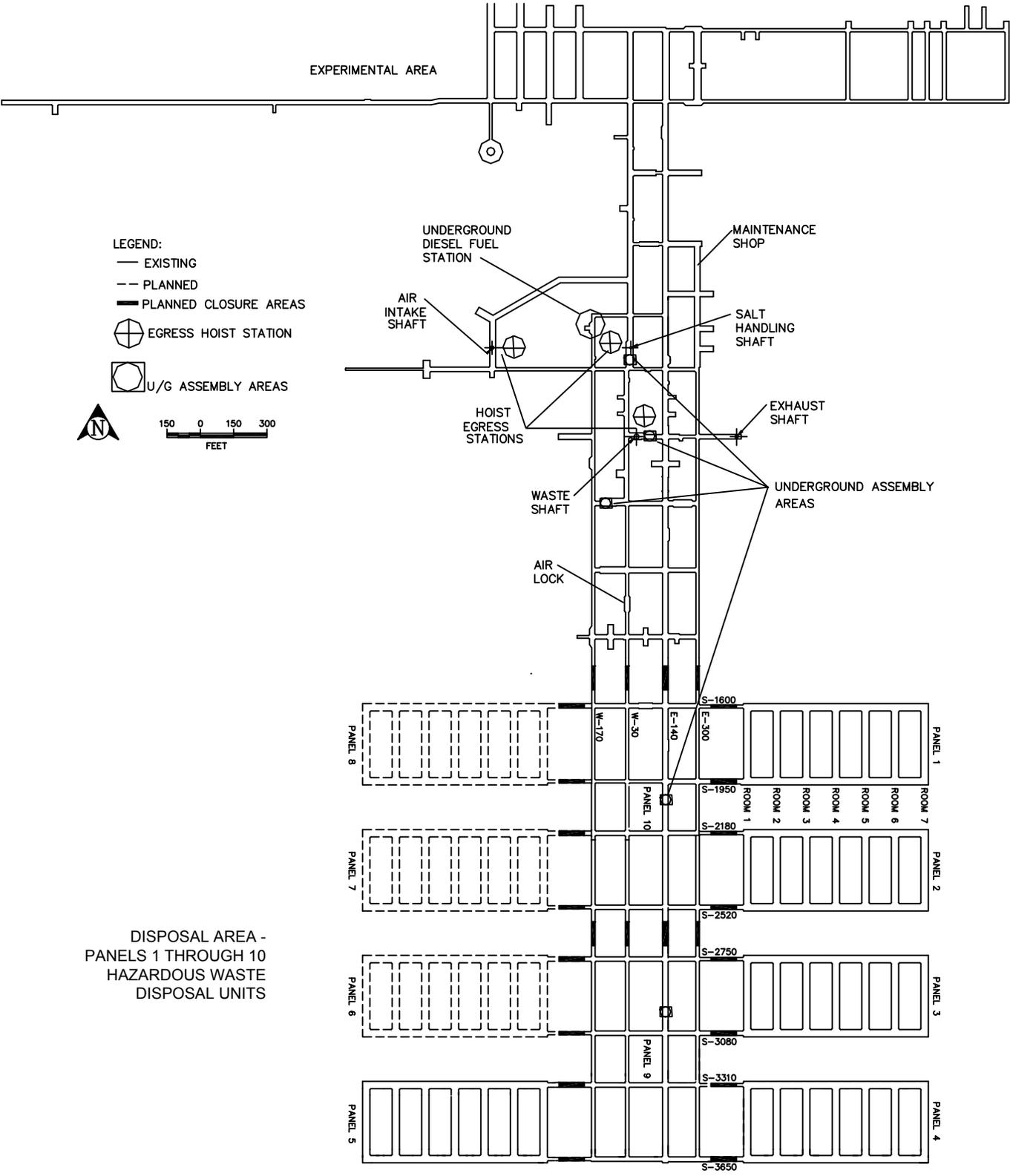


Figure F-12
 Designated Underground Assembly Areas

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DRAWINGS

1

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