

ATTACHMENT F
RCRA CONTINGENCY PLAN
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1 Introduction

2 This Contingency Plan was prepared in accordance with the Resource Conservation and
3 Recovery Act (**RCRA**) requirements codified in Title 20 of the New Mexico Administrative Code,
4 Chapter 4.1.500 (20.4.1.500 NMAC, incorporating 40 CFR §264.50 to §264.56, "Contingency
5 Plan and Emergency Procedures," and submitted in compliance with 20.4.1.900 NMAC
6 (incorporating 40 CFR §270.14(b)(7)). The purpose of this document is to define
7 responsibilities, to describe coordination of activities, and to minimize hazards to human health
8 and the environment from fires, explosions, or any sudden or nonsudden release of hazardous
9 waste, or hazardous waste constituents to air, soil, or surface water (20.4.1.500 NMAC
10 (incorporating 40 CFR §264.51 (a)). This plan consists of descriptions of processes and
11 emergency responses specific to hazardous substances, contact-handled (**CH**) and remote-
12 handled (RH) transuranic (**TRU**) mixed waste, and other hazardous waste handled at the WIPP
13 facility. ~~This permit does not authorize the disposal of remote-handled (RH) waste.~~

14 F-1 General Information

15 As a geologic facility for the management of TRU mixed waste, the WIPP repository is
16 regulated as a "miscellaneous unit," as defined under 20.4.1.500 NMAC (incorporating 40 CFR
17 §264.601 to §264.603). The areas at the WIPP facility subject to conditions in this permit
18 ~~RCRA permitting~~ include the surface container staging areas in the WHB and TRUPACT
19 Maintenance Facility (TMF), surface container storage areas in the Waste Handling Building
20 Container Storage Unit (**WHB Unit**) the Parking Area Staging Area, and the Parking Area
21 Container Storage Unit (**Parking Area Unit**), located south of the WHB Unit, and the areas
22 below ground in which waste will be emplaced.

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

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

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

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

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

8 ~~Transuranic Package Transporter-II (TRUPACT -II) Maintenance Facility~~ - is located
9 west of the CH bay. ~~No TRU mixed waste management activities will occur in this~~
10 ~~facility.~~ This facility may house the equipment which will be used for waste verification
11 and examination activities at WIPP.

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

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

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

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

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

28 Disposal Phase Overview

29 The Disposal Phase will consist of receiving GH TRU mixed waste shipping containers,
30 unloading and transporting the waste containers to the underground HWDUs, emplacing the
31 waste in the underground HWDUs, and subsequently achieving closure of the underground
32 HWDUs in compliance with applicable State and Federal regulations. In addition, TRU mixed
33 waste containers will be verified and examined by the Permittees as described in Permit

1 Attachment B7, either on-site or at the generator/storage facility.

2 Waste Description

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

14 Containers

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

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

20 Liquid waste, including "derived waste" containing liquids, will not be emplaced in the WIPP.
21 TRU mixed waste for emplacement in the WIPP shall contain as little residual liquid as is
22 reasonably achievable. All internal containers (e.g., bottles, cans, etc.) will be well-drained, but
23 may contain residual liquids. As a guideline, residual liquids in well-drained containers will be
24 restricted to approximately one percent of the volume of the internal container. In no case shall
25 / he total liquid 0equal or exceed one volume percent of the waste container (e.g. i.e., drum,
26 ~~or~~ standard waste box [SWB], ten-drum overpack or canister).

27 Special requirements for ignitable, reactive, and incompatible waste are addressed in
28 20.4.1.500 NMAC (incorporating 40 CFR §§264.176 and 177). The RCRA Permit Treatment,
29 Storage, and Disposal Facility Waste Acceptance Criteria (TSDF-WAC) precludes ignitable,
30 reactive, or incompatible TRU mixed waste from being placed into storage or disposed of at the

1 WIPP. Seven (7) percent of the containers in each waste stream in each shipment will undergo
2 waste verification and examination either via radiography, visual examination (VE) or inspection
3 of the VE records as described in Attachment B7 to assure that no corrosive, ignitable or
4 reactive waste is stored or disposed at WIPP.

5 Description of Containers

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

10 RH TRU mixed waste containers are either canisters or drums. Canisters will be loaded singly
11 in an RH-TRU 72-B cask and drums will be loaded in a CNS 10-160B cask. Drums in the CNS
12 10-160B cask will be arranged singly or in drum carriage units containing up to five drums each.
13 Canisters and drums are described in Permit Attachment M1.

14 Description of Surface Hazardous Waste Management Units

15 The WHB Unit is the surface facility where waste handling activities will take place. The WHB
16 Unit has a total area of approximately 84,000 square feet (ft²) (7,803 square meters (m²)) of
17 which ~~33,175~~ 38,317.5 square feet (3,562.7 square meters) ~~is~~ are designated as the WHB
18 Container Storage Unit (WHB Unit) for TRU mixed waste management. Within the WHB Unit,
19 ~~33,175~~ 20,914.5 ft² (3,082 1,945.7 m²) are designated for the waste handling and container
20 storage of CH TRU mixed waste and 17,403 ft² (1,617 m²) are designated for the handling and
21 storage of RH TRU mixed waste. These ~~is~~ are ~~is~~ being permitted as a container storage
22 units. The concrete floors within the WHB Unit are sealed with an impermeable coating that has
23 excellent resistance to the chemicals in TRU mixed waste and, consequently, provide
24 secondary containment for TRU mixed waste. In addition, a Parking Area Unit south of the
25 WHB will be used for storage of waste in sealed shipping containers awaiting unloading. This
26 area is also being permitted as a container storage unit. The sealed shipping containers provide
27 secondary containment in this hazardous waste management unit (HWMU).

28 There are four indoor Staging Areas where waste will be staged until the waste verification and
29 examination requirements of Attachment B7 have been met. These areas are the CH Bay
30 Staging Area, the TRUDOCK Staging Area, Room 108 and Airlock 107 Staging Area and the
31 TMF Staging Area. The floor of the WHB and the TMF provide secondary containment for

1 these areas.

2 There is one outdoor Staging Area within the Parking Area. This area is shown in Figure M1-2.
3 This area is used to stage CH TRU or RH TRU Packages until the waste verification and
4 examination requirements of Attachment B7 have been met. Secondary containment in these
5 areas is provided by the Packages.

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

11 CH Bay and RH Complex Operations

12 CH Bay Operations

13 The typical processing rate for CH waste is 14 Contact Handled Packages per day, and the
14 maximum is 28 per day. Two shifts per day are planned; four days per week. The fifth day is for
15 equipment maintenance with weekends available for more extensive maintenance, when
16 necessary.

17 Once unloaded from the Contact-Handled Package, CH-TRU mixed waste containers (7-packs
18 of 55-gal drums, 3-packs of 100-gal drums, 4-packs of 85-gal drums, SWBs, or TDOPs) are
19 placed in one of two positions on the facility pallet. Waste containers destined for verification
20 and examination may be placed one-high on containment pallets. The waste containers are
21 stacked on the facility pallets (one- or two-high, depending on weight considerations). The use
22 of facility pallets will elevate the waste approximately 9.5 inches (in.) (24 centimeters [cm]) from
23 the floor surface. Pallets of waste will then be relocated to ~~the northeast area of the CH bay for~~
24 ~~normal storage. This storage area will be clearly marked to indicate the lateral limits of the~~
25 ~~storage area. This storage area will have a maximum capacity of seven facility pallets of waste~~
26 ~~during normal operations. These pallets will typically be staged in this area for a period of up to~~
27 ~~five days.~~ the CH Bay Staging Area, Room 108 and Airlock 107 Staging Area or the TMF
28 Staging Area until the requirements of Attachment B7 have been completed but for no longer
29 than ten (10) days. These areas are shown in Figure M1-1.

30 During this time period seven percent of the containers in each waste stream in each shipment

1 will undergo verification and examination to show that there are no corrosive, ignitable or
2 reactive wastes. Verification and examination of CH-TRU mixed waste will occur either via
3 radiography, VE or through a review of the VE records.

4 Each unverified and unexamined container assembly will be tagged to indicate that verification
5 and examination has not occurred. No containers from an unverified and unexamined waste
6 stream in an unverified and unexamined shipment can be placed in the repository.

7 Containers will be randomly selected from each waste stream in each shipment to undergo
8 verification and examination. The selected containers will be located and, if verification and
9 examination is to be performed via radiography the selected container will be placed on a
10 facility or containment pallet for transport to the radiography equipment. After verification and
11 examination is complete the container will be returned to the appropriate staging location and
12 the tag removed to indicate that the containers from that waste stream in that shipment are
13 ready for storage and emplacement. Waste stream shipments may not be disposed until the
14 verification and examination data are approved in accordance with Attachment B7 of this
15 HWFP.

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

21 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
26 stored at one time. A minimum of 44 inches (1.1 m) will be maintained between loaded casks in
27 the RH Bay. The cask serves as secondary containment in the RH Bay for the RH TRU mixed
28 waste payload container. In addition, the RH Bay has a concrete floor.

29 Single RH TRU mixed waste canisters are unloaded from the RH-TRU 72-B casks in the
30 Transfer Cell of the RH Complex where they are transferred to facility casks. Drums of RH
31 TRU mixed waste will be transferred remotely from the CNS 10-160B cask, into the Hot Cell.

1 and loaded into a canister. Storage in the Hot Cell occurs in either drums or canisters. A
2 maximum of 10 drums and 6 loaded canisters (262.02 ft³ (7.42 m³)) may be stored in the Hot
3 Cell.

4 The Transfer Cell houses the Transfer Cell Shuttle Car, which is used to facilitate transferring
5 the canister to the facility cask. Storage in this area typically occurs at the end of a shift or in an
6 off-normal event that results in the suspension of waste handling. A maximum of one canister
7 (31.43 ft³ (0.89 m³)) may be stored in the Transfer Cell in a shielded insert in the Transfer Cell
8 Shuttle Car or in a RH-TRU 72-B cask.

9 The Facility Cask Loading Room provides for transfer of a canister to the facility cask for
10 subsequent transfer to the waste hoist and to the Underground Hazardous Waste Disposal
11 Unit. The Facility Cask Loading Room also functions as an air lock between the waste shaft and
12 the Transfer Cell. Storage in this area typically occurs at the end of a shift or in an off-normal
13 event that results in the suspension of waste handling . A maximum of one canister (31.43 ft³
14 (0.89 m³)) may be stored in the Facility Cask in the Facility Cask Loading Room.

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

16 Parking Area Container Storage Unit and Staging Area (Parking Area Unit)

17 The area extending south from the WHB within the fenced enclosure identified as the Controlled
18 Area Parking Area Storage Area on Figure M1-2 is defined as the Parking Area Container
19 Storage Unit. This area provides space for storage for up to 7,160 ft³ (202.5 m³) of CH and/or RH
20 TRU mixed waste contained in up to 12 loaded Contact Handled Packages corresponding to
21 1,591 ft³ (45 m³) of CH TRU mixed waste, 50 Contact Handled Packages and 14 Remote-Handled
22 Packages. Secondary containment and protection of the waste containers from standing
23 rainwater are provided by the transportation containers.

24 The staging area is shown in Figure M1-2. This area may be used to stage verified and
25 examined and unverified and unexamined CH TRU and RH TRU Packages for up to ten (10)
26 days while the waste verification and examination requirements of Attachment B7 are being met.
27 Once these requirements have been met the Packages may be moved to permitted storage
28 areas.

29 ~~Twelve Contact Handled Packages containing a maximum of 1,591 ft³ (45 m³) of CH TRU mixed~~
30 ~~waste can be stored in the Parking Area Unit. The safety criteria for Contact- or Remote- Handled~~

1 Packages require that they be opened and vented at a frequency of at least once every 60 days.
2 During normal operations ~~the maximum residence time of any one container in the Parking Area~~
3 ~~Unit is typically five days. Therefore, during normal waste handling operations, Contact- or~~
4 Remote- Handled Packages will not require venting while located in the Parking Area Unit. Any
5 off-normal event which results in the need to store a waste container in the Parking Area Unit for
6 a period of time approaching fifty-nine (59) days shall be mitigated by returning the shipment to
7 the generator prior to the expiration of the 60 day NRC venting period or by moving the Contact-
8 or Remote- Handled Package inside the WHB Unit where the waste will be removed and placed
9 in one of the permitted storage areas or in the underground hazardous waste disposal unit.

10 Containment

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

15 When verification and examination of TRU mixed waste involves radiography this function may
16 occur in the TMF which encompasses an area of 9,081 square feet, There is sufficient floor
17 space in the TMF to allow containment of liquids from waste containers which have been brought
18 into the TMF.

19 During normal operations, the floor of the ~~normal~~ storage and staging areas within the TMF, CH
20 Bay and RH Complex shall be visually inspected on a weekly basis to verify that it is in good
21 condition and free of obvious cracks and gaps. When a RH TRU mixed waste container is
22 present in the RH Complex, inspections will be conducted visually and/or using a closed-circuit
23 television camera in order to manage worker dose and minimize radiation exposures. More
24 extensive inspections of the areas are performed at least annually during routine maintenance
25 periods when waste is not present.

26 Floor areas of the WHB used during off-normal events will be inspected prior to use and weekly
27 while in use. Containers located in the staging or permitted storage areas shall be elevated from
28 the surface of the floor. Facility pallets provide about 9.5 in (24 centimeters (cm)): of elevation
29 from the surface of the floor. TRU mixed waste containers that have been removed from Contact-
30 or Remote-Handled Packages shall be ~~stored~~ placed at a designated staging or storage area
31 inside the WHB so as to preclude exposure to the elements.

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

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

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

26 All Emergencies

27 The established procedures are based upon the incident level and a graded approach for
28 nonradioactive or CH, or RH TRU mixed waste emergencies and initiated to:

29 Control of Spills or Leaking or Punctured Containers of CH or RH TRU Mixed Waste

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

1 CH TRU Mixed Waste

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

6 During the re-entry phase, a Radiological Work Permit (**RWP**) is written for personnel to enter
7 with protective clothing to assess the conditions, take surveys and samples, and mitigate
8 problems that could compound the hazards in the area (cover up spilled material with plastic
9 material sheeting and or any approved fixatives such as polyvinyl alcohol (**PVA**) or paint, place
10 equipment in a safe configuration, etc.). Smears and air sample filters are counted. This
11 information is used by cognizant managers, RC personnel, and As Low As Reasonably
12 Achievable (**ALARA**) Committee representatives to determine an appropriate course of action to
13 recover the area. A plan to decontaminate and recover affected areas and equipment will be
14 approved with a RWP written to establish the radiological controls required for the recovery.

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

27
28 Should a breach of a waste container occur at the WIPP that results in external contamination
29 exceeding the small area "spot" decontamination levels, the affected container(s) (e.g., breached
30 and contaminated) will be placed into an available overpack container (e.g., 85-gal drum, SWB,
31 TDOP), except that TDOP's will be decontaminated, repaired/patched in accordance with 49 CFR
32 §173 and §178 (e.g., 49 CFR §173.28), or returned to the generator. The decontamination of
33 equipment and the overpacking of contaminated/damaged waste containers will be performed in

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

5 Equipment used during a spill cleanup or overpacking operation could include: cloths, brushes,
6 scoops, absorbents, squeegees, tape, bags, pails, slings, hand tools, and others as needed for a
7 given incident.

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

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

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

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

26 When decontamination is deemed by the recovery team to be complete, RC personnel will
27 conduct one final, intensive radcon survey of the area and components in the area to release it
28 for uncontrolled use. The free release criteria for items, equipment, and areas is < 20 dpm/100
29 cm² for alpha radioactivity and < 200 dpm/100 cm² for beta-gamma radioactivity. Personnel will
30 then perform hazardous material sampling after decontamination efforts are complete to **confirm**
31 **verify** the removal of hazardous waste substances. After cleanup is complete, facility personnel

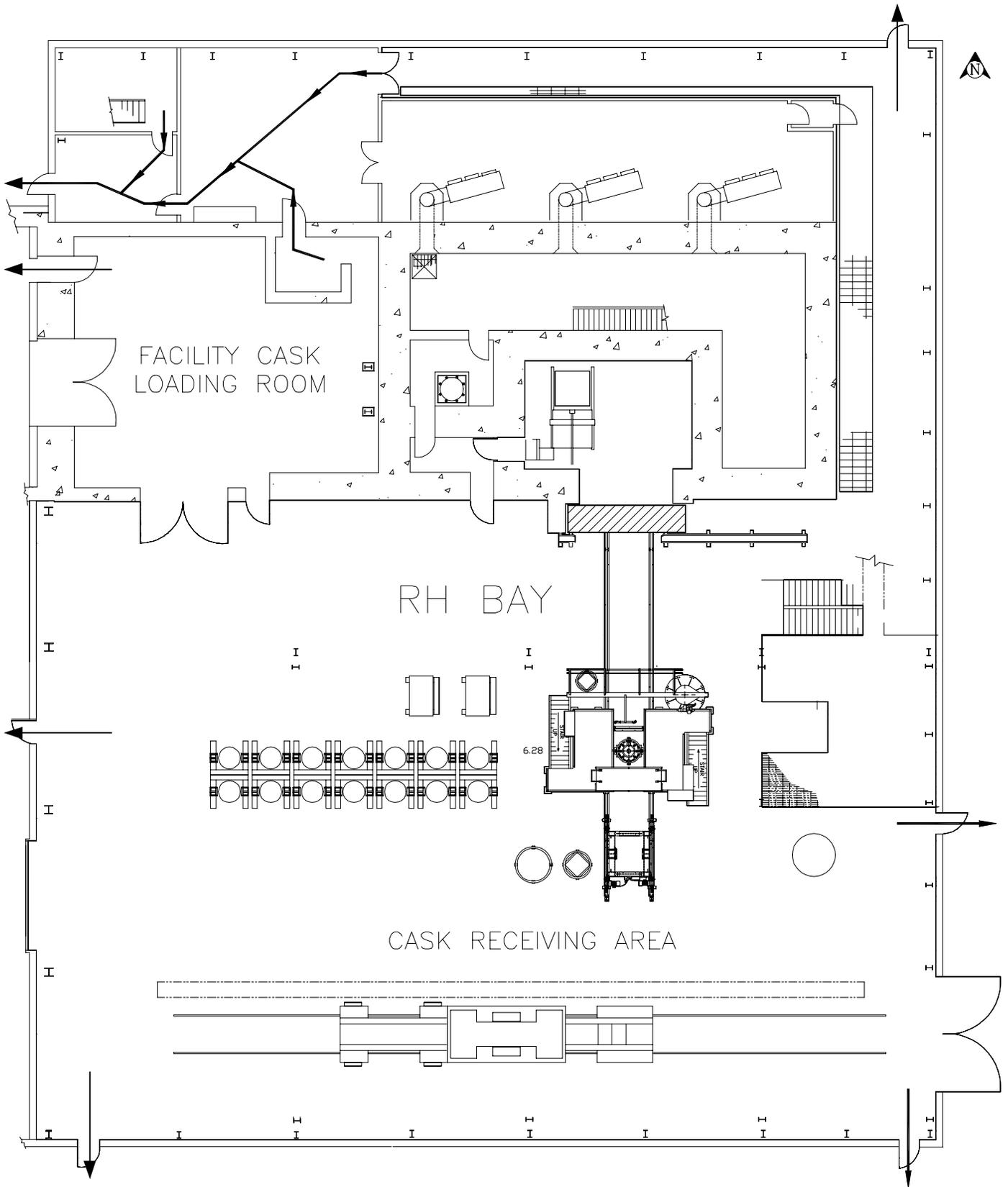
1 will complete an inspection and include the details of the spill and cleanup in the log.

2 RH TRU Mixed Waste

3 During the event, operations in the RH Complex are immediately halted, the Central Monitoring
4 Room operator is notified, and any personnel present in the RH Complex will be evacuated to
5 minimize exposure.

6 During the re-entry phase, an evaluation of the incident, including the nature of the release,
7 amount, location, and other appropriate factors, will be performed. A Radioactive Work Permit
8 (RWP) will be written for personnel who may enter with the appropriate protective clothing to
9 further assess the situation, perform surveys and take samples, and, if possible, mitigate
10 problems that could compound the hazards in the area. Based on the results of the evaluation, a
11 determination will be made by cognizant managers, the RCRA Emergency Coordinator,
12 radiological control personnel, and As Low As Reasonably Achievable Committee representatives
13 whether to implement the Contingency Plan and to determine the appropriate course of action to
14 recover from the event. An action response plan to decontaminate and recover affected areas
15 and equipment, together with an RWP establishing the radiological controls required for the
16 recovery will be developed.

17 During the recovery phase, the plan will be executed using the necessary resources to perform
18 decontamination. This phase will include activities to minimize the spread of contamination to
19 other areas and decontaminating the affected area. Every reasonable effort will be made to
20 minimize the amount of derived waste while providing for the health and safety of personnel. The
21 recovery phase must be completed before the affected area and/or equipment are returned to
22 service.



This illustration for information purposes only.

Figure F-8a
RH Bay Evacuation Routes

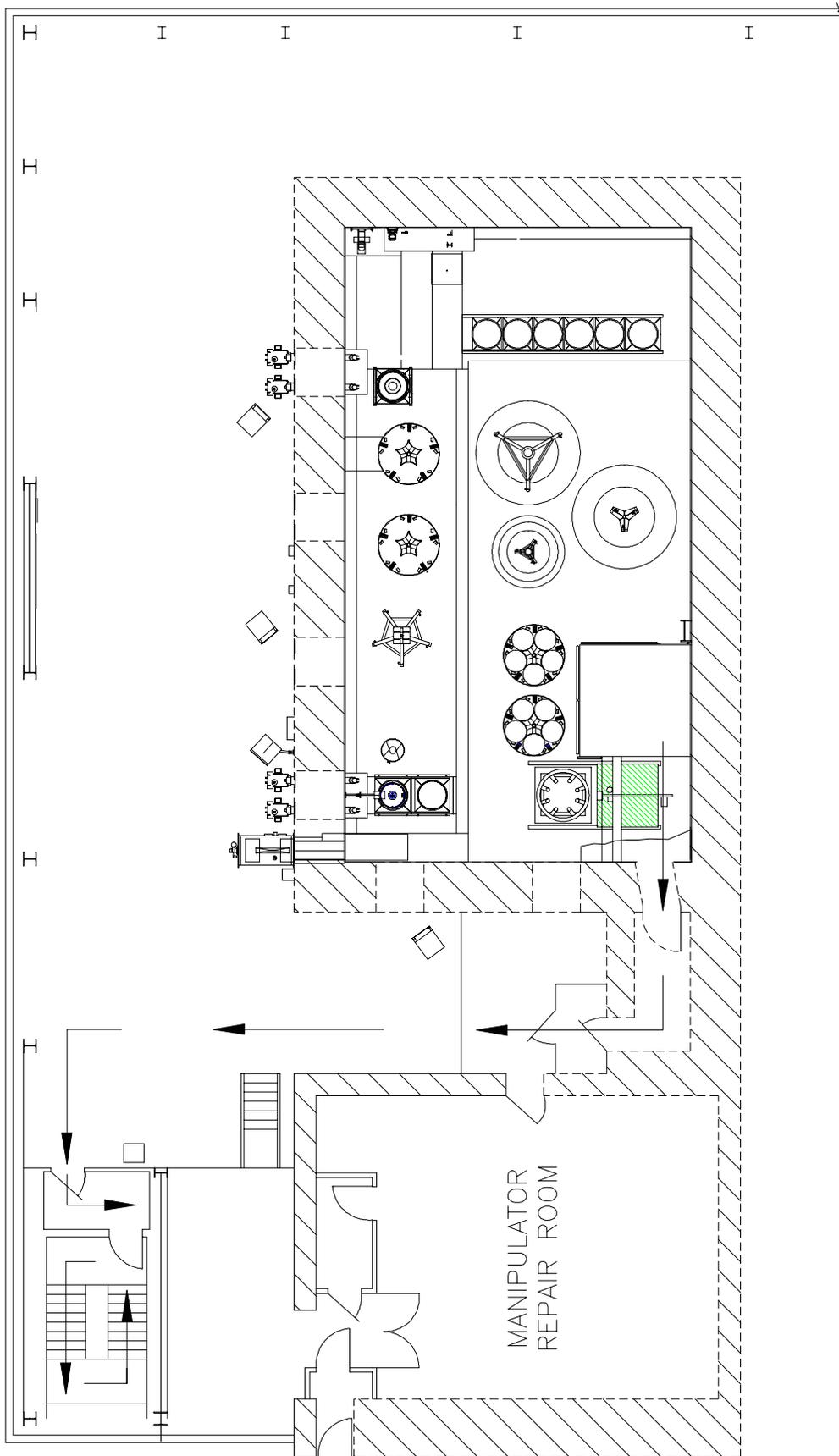


Figure F-8b
RH Bay Hot Cell Evacuation Route

This illustration for Information
 Purposes only.

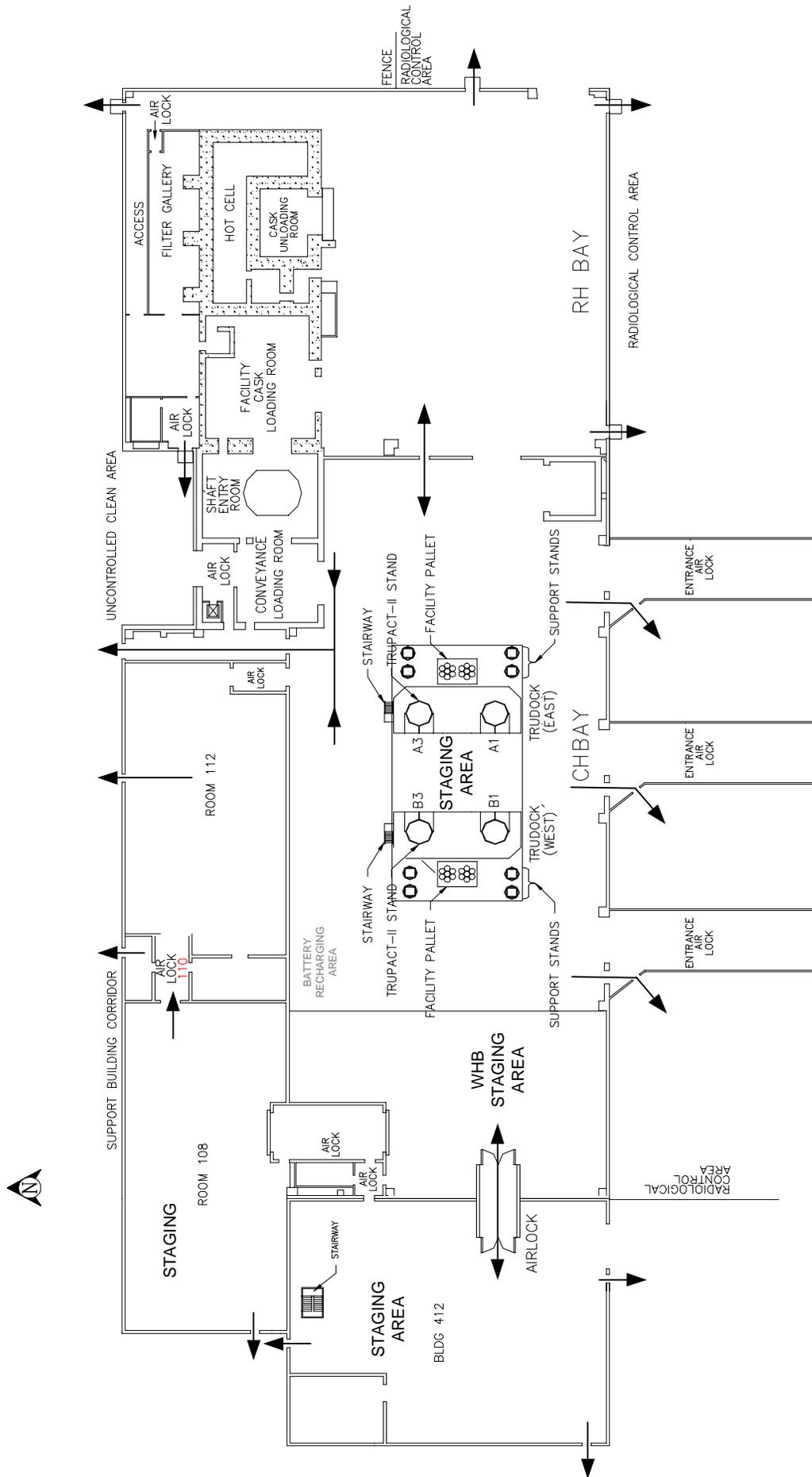


Figure F-8c
Evacuation Routes in Waste Handling Building