

ATTACHMENT D
CONTINGENCY PLAN

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LIST OF FIGURES

<u>FIGURE NO.</u>	<u>TITLE</u>
D-1	General Hazardous and Mixed Waste Emergency Notification Structure

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ATTACHMENT D
GENERAL CONTINGENCY PLAN

This Attachment presents contingency measures applicable to all permitted hazardous or mixed waste management units. The Permittees shall implement the provisions of this Plan and the applicable provisions of Permit Part 2 immediately to minimize hazards whenever there is a fire, explosion, or release of hazardous or mixed waste or hazardous or mixed waste constituents that could threaten human health or the environment.

D.1 HAZARDOUS AND MIXED WASTE EMERGENCY RESPONSE RESOURCES

1. The management of hazardous and mixed waste emergency incidents at the Facility resides within Permittees' Emergency Management and Response (EM&R) Office. During an emergency situation, line management (i.e., the Group Leader of the affected area) works with the Duty Emergency Manager from the EM&R Office. The Emergency Manager has primary responsibility for managing emergency response operations, making appropriate notifications, activating the emergency response organizations, and proceeding to the scene. The Emergency Manager has authority to assume the role of Incident Commander (IC) during an emergency and typically assumes full responsibility for management of the emergency response operations at the scene. (Personnel from other organizations, such as the Federal Bureau of Investigation or the Los Alamos County Fire Department [LACFD], may also assume the role of IC, depending upon the type of emergency and responding organizations.) Additional Facility resources that may provide assistance in an emergency include personnel from health physics, industrial hygiene, environment compliance, emergency response, and radiation protection personnel at the Facility. These personnel as well as other resources are discussed in Sections D.1.2, D.1.3, and D.1.6 of this Attachment.

2. Laboratory-contracted support services and other agencies shall also be available for assistance during emergencies. These are discussed in Attachment Section D.1.5 and include the contracted services for security and the LACFD. These contracted services, if changed, shall be replaced and/or supplemented with functionally equivalent contracted services required to assume the same duties and responsibilities described in this section. Other outside response agencies are discussed in Section D.1.7 and include the Los Alamos County Police Department (LACPD) and the Los Alamos Medical Center (LAMC). The LACPD and the LAMC each provide assistance under a memorandum of understanding with the U.S. Department of Energy (DOE).

3. The Permittees shall use the Incident Command System (ICS) in response to all emergencies. The ICS is based on the on-scene management structure protocols of the National Interagency Incident Management System (NIIMS). The NIIMS is a national standard that provides consistency in terminology/methodology and allows for an integrated emergency response both locally and nationally, if necessary. Consequently, this Contingency Plan may undergo modification.

1 4. The IC (e.g., Duty Emergency Manager) coordinates all groups and agencies responding to
2 the emergency and personnel operating at the scene using the ICS. The general emergency
3 notification structure, illustrated on Figure D-1, is designed to expand and contract, as
4 appropriate, to include the response groups/agencies needed to address any particular emergency.

5 5. The IC may appoint and utilize a network of support personnel to assess, plan for, and
6 mitigate emergencies. These personnel can include, but are not limited to, a Safety Officer, a
7 Public Information Officer, and a Liaison Officer that report directly to the IC and are
8 responsible for issues related to safety, information, and the interaction of various groups
9 associated with the overall emergency. Also reporting directly to the IC are an Operations
10 Section Chief, Logistics Section Chief, Planning Section Chief, and an Administrative Section
11 Chief. The Operations Section Chief oversees the Fire Branch and the Emergency Medical
12 Services Branch, and is responsible for the actual emergency response. The Logistics Section
13 Chief is responsible for providing support personnel and equipment necessary for the emergency
14 response. The Planning Section Chief is responsible for planning the active mitigation and
15 recovery for the emergency. The Administrative Section Chief is responsible for keeping
16 records of expenditures. In some instances, some or all of these positions may be activated, as
17 the emergency warrants. During an emergency at the Facility, assistance may be provided to the
18 IC and the IC's appointees by a large variety of response groups/agencies. The responsibilities
19 and/or assistance available from the various response groups/agencies are listed in Attachment
20 Table D-1 and discussed briefly in Attachment Sections D.1.2 through D.1.7.

21 6. The Permittees shall provide a copy of this Contingency Plan and any revisions to each of the
22 emergency response groups/agencies (including the LACPD, LACFD, LAMC, and the State of
23 New Mexico's Department of Homeland Security and Emergency Management (DHSEM) Area
24 3 Emergency Management Coordinator).

25 **D.1.1 Emergency Management and Response Office**

26 1. The Permittees shall delegate the authority and responsibility for administering and
27 implementing the Facility's emergency management program to the Emergency Response
28 Division, which includes EM&R personnel. EM&R personnel shall coordinate and issue the
29 Facility's Emergency Management Plan (EMP) and provide response coordination for
30 emergencies. The EM&R Office also provides a 24-hour Duty Emergency Manager to respond
31 to emergencies, including hazardous and mixed waste releases. The Facility Emergency
32 Manager is the functional equivalent of the Emergency Coordinator (40 CFR § 264.55). The
33 EM&R Office maintains an Emergency Operations Center (EOC) in a ready condition, should a
34 center be required. The primary EOC is located at TA-69, Building 33 (TA-69-33). An alternate
35 EOC is located at TA-49-113. Should an EOC be activated during an emergency, additional
36 emergency personnel can be requested by the IC through the EOC.

37 2. Assignment as the Duty (*i.e.*, primary) Emergency Manager is rotated. The Duty Emergency
38 Manager can be reached 24 hours a day by contacting the EM&R Office at 667-6211 or the
39 Central Alarm Station (CAS) operator (911).

1 3. The Duty Emergency Manager will respond to emergency incidents involving the release of
2 hazardous or mixed waste to the environment, including spills, fires, and explosions. With input
3 from the appropriate Facility groups, the Duty Emergency Manager shall initially assess the
4 possible hazards to human health or the environment and, if assuming incident command, shall
5 use whatever response personnel and/or emergency equipment necessary to control and contain
6 the waste. In the event of an emergency, the Emergency Manager typically becomes the IC with
7 full responsibility for field activities (including safety, operations, and planning, or establishing
8 these positions within the ICS). As described previously, the exception to this is when on-site
9 personnel can adequately address the emergency and maintain incident command internally. At
10 the scene of the emergency, the IC shall assemble the ICS, as required, for response to the
11 emergency.

12 4. The Duty Emergency Manager responding to an emergency shall have access to a copy of the
13 appropriate building emergency plan(s) (BEP) for the area in which the incident is occurring.
14 These plans shall be maintained by the facility manager where a waste management unit is
15 located and shall be available at the EOC at TA-69; they are also located on site for use by
16 emergency response personnel. The various response groups shall obtain specific information
17 relating to the facilities involved (including the layout of all affected buildings; the location of
18 evacuation routes, equipment, and personnel; properties of the materials/wastes managed at the
19 facility; and the hazards associated with these materials/wastes) from the BEP(s) and other site-
20 specific information.

21 5. The Permittees shall ensure that the names, addresses, and telephone numbers listed below are
22 the current Primary and Alternate Emergency Manager.

23 Primary:

24 Brenda Anderson
25 3926 A Alabama
26 Los Alamos, NM 87544
27 (H) 505-662-4173
28 (W) 505-667-6211

1 Alternates:

2 Manny L'Esperance
3 13 Pasel Paltron
4 Los Alamos, NM 87544
5 (H) 505-455-9138
6 (W) 505-667-6211

7 Roy Van Tiem
8 114 Azure Drive
9 Los Alamos, NM 87544
10 (H) 505-672-6296
11 (W) 505-667-6211

12 Ruth Larkin
13 315 Joya Loop
14 Los Alamos, NM 87544
15 (H) 505-672-9860
16 (W) 505-667-6211

17 6. To assure timely notifications and immediate response during an emergency, the Permittees
18 shall ensure that the telephone numbers 911 or 667-6211 obtain the on-call Duty Emergency
19 Manager.

20 **D.1.2 Hazardous Materials Response**

21 1. The Hazardous Materials (HAZMAT) Team is responsible for the aggressive mitigation of
22 chemical, radiological, hazardous waste, and mixed waste emergencies, including field
23 decontamination of responders and response equipment. At the request of the IC, the HAZMAT
24 Team may provide limited field decontamination support for victims. The HAZMAT Team is
25 capable of providing a decontamination station at the scene of a hazardous material incident to
26 process people working in a contaminated area and is prepared to perform decontamination of
27 personnel. The HAZMAT Team shall meet the training criteria for emergency response
28 personnel specified in the Code of Federal Regulations, Title 29, §1910.120(q)(6)(iii), (iv), and
29 (v). The HAZMAT Team acts as part of the ICS reporting through the HAZMAT Supervisor via
30 the Operations Section Chief. The HAZMAT Supervisor shall coordinate the HAZMAT Team
31 and radiological field monitoring activities.

32 2. During an emergency response, the HAZMAT Team may also provide site field monitoring
33 to determine the nature and extent of contamination, provide information on correct handling of
34 chemicals, make recommendations on protective clothing and equipment, and provide exposure
35 and treatment information to responders. The HAZMAT Team may obtain resources from
36 environmental monitoring groups, such as health physics and industrial hygiene personnel.

1 **D.1.3 Environmental Protection Division Response**

2 At the scene, representatives and technical advisors from Environmental Protection Division
3 (ENV) and other response personnel are coordinated by the IC. In addition to their post-
4 emergency duties, they may also be responsible for on-scene emergency operations such as
5 planning. Depending on the type of emergency and the associated hazards, an individual from
6 the most relevant group in the ENV shall assume the position of the Environmental Safety and
7 Health Advisor, shall provide technical support, and shall ensure the Permittees' compliance
8 with applicable federal, state, and local regulations.

9 **D.1.3.1 Ecology Personnel**

10 Ecology personnel provide field surveys of soil, foodstuffs, and biota to determine environmental
11 effects of exposure after an emergency.

12 **D.1.3.2 Meteorology and Air Quality Personnel**

13 Meteorology and air quality personnel provide field surveys of air to determine environmental
14 impacts and dose equivalent to members of the public after a radiological emergency. In
15 addition, they provide expertise in meteorology to project short- and long-term environmental
16 effects of emergency conditions.

17 **D.1.3.3 Hazardous Waste Compliance Personnel**

18 Hazardous waste compliance personnel provide guidance on regulatory requirements for proper
19 treatment, storage, and transportation of hazardous and mixed wastes to other Facility groups.
20 After an emergency, hazardous waste compliance personnel may provide field sampling (e.g., of
21 soil, spills, or potentially hazardous waste) to determine environmental effects of exposure.

22 **D.1.3.4 Water Quality and Hydrology Personnel**

23 After an emergency, water quality and hydrology personnel provide sampling of surface water
24 runoff and sediments to determine the environmental effects of an emergency and perform
25 assessments for regulatory reporting requirements. They also provide expertise in hydrogeology
26 to establish short- and long-term environmental effects of emergency conditions.

27 **D.1.4 Other Facility Response Resources**

28 Emergency response personnel from the Plutonium Manufacturing and Technology Division at
29 TA-55 are trained to respond to emergencies at that facility. Dynamic and Energetic Materials
30 Division personnel are responsible for the hazardous waste management units at TA-14, TA-36,
31 and TA-39. Dynamic and Energetic personnel responsible for these units are trained in
32 emergency procedures and may provide information and/or assistance during emergencies
33 involving high explosive waste. High Explosives Engineering personnel are responsible for
34 hazardous waste management units at TA-16. These personnel are also trained in emergency
35 procedures so that they are able to provide information and/or assistance during emergencies

1 involving units at TA-16. Personnel from the Waste Disposition Project may provide guidance
2 on proper treatment, storage, and transportation of hazardous and mixed waste at TA-50 and TA-
3 54.

4 **D.1.5 Contracted Response**

5 Contracted response groups' representatives may report directly to the IC Post, if requested. If
6 the IC deems it necessary, the IC may designate an Operations Section Chief to aid in the
7 coordination and direction of these groups. In addition, contracted response groups may report
8 to a staging area, with a representative going either to the IC Post or, if activated, to the EOC.

9 **D.1.5.1 Security Services**

10 Security personnel provide security service to the Facility. During an emergency, these activities
11 include maintaining security, directing traffic within the Facility, and controlling access to the
12 emergency scene. Security personnel maintain the necessary equipment (such as crowd-control
13 equipment and patrol vehicles) to perform these functions.

14 **D.1.5.2 Reserved**

15 **D.1.5.3 Los Alamos County Fire Department**

16 The LACFD provides fire protection and ambulance coverage for the residential communities of
17 Los Alamos and White Rock and for the Facility. In the case of an emergency within the
18 Facility, the LACFD coordinates fire suppression and Emergency Medical Services. The IC
19 retains overall responsibility for the emergency response effort.

20 **D.1.6 Facility Support**

21 **D.1.6.1 Health Physics Operations**

22 Radiation protection personnel perform routine site evaluation and monitoring to determine
23 radiological conditions in facilities. They also provide guidance on radiological
24 decontamination. In addition, this group augments the assessment and monitoring functions of
25 the HAZMAT Team.

26 **D.1.6.2 Occupational Medicine Personnel**

27 1. The Facility maintains its own medical facility operated by occupational medicine personnel.
28 Occupational medicine personnel provide appropriate medical treatment for occupation-related
29 illnesses and injuries and monitors employees to assess the effectiveness of health protection
30 programs.

31 2. Although occupational medicine personnel are not routinely involved with on-scene
32 emergency response, the group maintains a central medical facility with a fully equipped
33 emergency room and decontamination facilities at TA-3, Building 1411. The location of this and
34 other emergency facilities are shown on Figure 48 in Permit Attachment N (*Figures*). Medical

1 staff at these facilities includes physicians, physician's assistants, nurses, technicians, and
2 counselors. All full-time physicians and nurses receive radiation accident training. Occupational
3 medicine personnel also maintain access to a database that provides the clinical staff with timely
4 toxic exposure and treatment information.

5 **D.1.6.3 Industrial Hygiene and Safety Personnel**

6 Industrial hygiene and safety personnel assist occupational medicine personnel with their ability
7 to obtain additional exposure and treatment information. In addition, they maintain computer
8 access to the National Institute of Occupational Safety and Health Technical Information Center
9 and the Registry of Toxic Effects of Chemical Substances. During routine operations, these
10 personnel perform site evaluations and field testing to determine the nature and extent of
11 chemical contamination and specify protective clothing and equipment.

12 **D.1.6.4 Contract Assurance Office**

13 The Contract Assurance Office assists the facility manager in investigating all adverse
14 environmental, safety, health, and operational occurrences (on-site and off-site), determining the
15 causal factors, identifying the appropriate corrective actions, and assisting in the preparation of
16 reports documenting the occurrence to DOE. This group tracks corrective actions associated
17 with such occurrences and maintains the information in an on-site database.

18 **D.1.7 Outside Response Agencies**

19 During an emergency, outside response agencies report directly to the IC. An Operations
20 Section Chief, designated by the IC, may aid in coordinating and directing the groups responding
21 to an emergency.

22 **D.1.7.1 Los Alamos County Police Department**

23 The LACPD may assume IC under unique circumstances, but usually has only minimal
24 interaction with the Facility in an on-site emergency. This interaction normally involves traffic
25 control on DOE roads with public access, handling criminal activity, and criminal investigations.

26 **D.1.7.2 Los Alamos County Emergency Management Coordinator**

27 Los Alamos County has an agreement with the Facility's EM&R to provide assistance in certain
28 emergency situations. If an emergency occurs on Facility property that may affect the
29 communities of Los Alamos and White Rock, EM&R personnel will notify the Los Alamos
30 County Emergency Management Coordinator, who will coordinate necessary emergency actions
31 throughout the county.

32 **D.1.7.3 Los Alamos Medical Center**

33 The Facility maintains a fully equipped decontamination room adjacent to the emergency room
34 at LAMC. In the event that a case is sent to LAMC, support for the emergency room staff is

1 provided by Facility occupational medical personnel. Radiation protection, industrial hygiene,
2 and HAZMAT personnel also provide assistance to the emergency room staff; assistance from
3 additional Facility resources is provided, as necessary. Assistance is coordinated through EM&R
4 personnel.

5 **D.2 EMERGENCY EQUIPMENT AND COMMUNICATIONS**

6 **D.2.1 Emergency Equipment**

7 The Permittees shall make available the lists of emergency equipment listed in Table D-2 for use
8 at any of Permittees' hazardous or mixed waste management units. The list includes emergency
9 equipment available in the HAZMAT vehicles and trailers as well as supplemental emergency
10 equipment maintained by the LACFD, KSL, and occupational medicine personnel. A list of
11 emergency equipment available for use at specific hazardous and/or mixed waste management
12 units is identified in Attachment Tables TA-3, D-1; TA-16, D-1; TA-50, D-1; TA-54, Area L, D-
13 1; TA-54, Area G, D-2; TA-54 West, D-3, TA-55 Vault, D-1; TA-55 Building 4 Basement, D-2;
14 TA-55 Container Storage Pad, D-3, and TA-55 Building 185, D-4 . Emergency equipment listed
15 in these tables may be replaced and/or upgraded with functionally equivalent components and
16 equipment, as necessary, for routine maintenance and repair.

17 **D.2.2 Emergency Communications**

18 The initial phase of an emergency may involve a small number of individuals at the affected
19 area, require notification of the Duty Emergency Manager, and utilize local communication
20 equipment and/or systems. When responding to hazardous and/or mixed waste emergencies, the
21 Permittees shall ensure that EM&R personnel can provide communications between response
22 units and emergency organizations.

23 **D.2.2.1 Central Alarm Station (CAS)**

24 1. The CAS is manned by security personnel 24 hours a day and is equipped with telephones
25 (including direct-line telephones), medium- and short-range radios, a National Warning System
26 (NAWAS) station, and an emergency power system. The fire alarm board at the control room
27 gives the location of automatic and manual fire alarm equipment. The CAS receives alarms from
28 several sources and, in turn, notifies the Duty Emergency Manager of a hazardous or mixed
29 waste emergency. Sources include:

- 30 1. Telephone communication (911)
- 31 2. Automatic fire alarms
- 32 3. Manual pull alarms
- 33 4. Computer interface (to warn of critical events at selected facilities)
- 34 5. Security alarms
- 35 6. Radio communications.

36 2. Upon receipt of an alarm, the CAS operator notifies the LACFD and the Duty
37 Emergency Manager. The Emergency Manager, the EOC communicator, and/or the CAS

1 operator may request emergency response groups to respond. Should the Facility 911 system
2 fail, the Los Alamos County System, located at the LACPD Station, shall be used to activate
3 emergency response groups.

4 **D.2.2.2 Power Dispatch**

5 The Permittees shall maintain the Power Dispatch facility 24 hours a day. Alarms at this facility
6 are connected to Facility experiments, equipment, and/or buildings to record outages and
7 hazardous conditions. Any conditions that activate these alarms shall be reported immediately to
8 the building management or to the CAS operator for notification and response.

9 **D.2.2.3 Additional Communication Systems**

10 Internal communication systems at the Facility include:

- 11 1. The Centrex telephone system
- 12 2. A telephone paging system
- 13 3. A variety of frequency modulated very high frequency simplex repeater systems,
14 including:
 - 15 - Multiple base stations
 - 16 - Mobile and hand-held units
 - 17 - Links to New Mexico public safety agencies
- 18 4. An ultrahigh frequency radio system, including:
 - 19 - Multiple antenna sites
 - 20 - Mobile and base units
 - 21 - Links with the LACPD, the LACFD, and the State Medical System
- 22 5. A 400-megahertz trunked radio system that includes a link with the LACFD
- 23 6. Transmission and reception (through the EOC) for:
 - 24 - Secure telephone
 - 25 - Secure fax
 - 26 - Secure still video
 - 27 - Secure videoconference system (to all DOE EOCs and DOE Headquarters)
- 28 7. Access to all radio systems outlined above (through the EOC).

29 2. Off-site communications with federal, state, tribal, county, and other agencies are available
30 through the following:

- 31 1. A Centrex telephone system
- 32 2. Private telephone lines (if Centrex fails)
- 33 3. Two NAWAS stations
- 34 4. A link to KRSN radio (local radio station)
- 35 5. The local cable television
- 36 6. The Community Alert Network.

37 3. The Permittees' EOC, maintained by EM&R personnel, operates radio systems on key
38 Facility and off-site channels. Emergency personnel responding to on-site incidents have the

1 benefit of wide-area radio coverage using EOC facilities. The Duty Emergency Manager is
2 responsible for activating whatever support personnel, equipment, or services are needed 24
3 hours a day.

4 **D.3 CONTINGENCY PLAN IMPLEMENTATION**

5 The following sections discuss requirements used to implement this Plan, emergency
6 notification, emergency manager actions, and actions to be taken in response to fires, explosions,
7 or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste
8 constituents into the environment at the Facility.

9 **D.3.1 Requirements for Implementation**

10 1. The decision to implement this Plan depends upon whether an emergency exists, which for
11 the purposes of this section is defined as an imminent or actual incident arising from fires,
12 explosions, or any unplanned sudden or non-sudden release of hazardous waste or hazardous
13 waste constituents that could threaten human health or the environment. The Duty Emergency
14 Manager or IC will use the guidelines listed below to decide whether to implement this Plan.
15 The Permittees shall investigate all adverse environmental, safety, health, and operational
16 occurrences (on-site and off-site) resulting in implementation of the contingency plan to
17 determine to causal factors and identify the appropriate corrective actions.

18 2. This Plan shall be implemented immediately in the following situations involving releases or
19 potential releases of hazardous or mixed waste:

20 1. Spills:

- 21 - If a hazardous or mixed waste spill cannot be contained with secondary containment
- 22 or application of sorbents
- 23 - If a hazardous or mixed waste spill causes the release of flammable material, creating
- 24 a fire or explosion hazard
- 25 - If a hazardous or mixed waste spill results in toxic fumes that threaten human health

26 2. Explosions:

- 27 - If an unplanned explosion involving hazardous or mixed waste occurs
- 28 - If an imminent danger of an explosion involving hazardous or mixed waste exists.

29 3. Fires:

- 30 - If a fire involving hazardous or mixed waste occurs
- 31 - If any building, grass, forest, or nonhazardous waste fire exists that threatens to
- 32 volatilize or ignite hazardous or mixed waste.

33 4. Other Acts of Force Majeure

- 34 - If an earthquake or other natural disaster threatens containment integrity, including
- 35 precipitation that threatens to move spilled material off site.

36 **D.3.2 Emergency Notification**

37 1. Emergency notification requires immediate notification of 911 or EM&R personnel upon
38 discovery of an imminent or actual incident involving hazardous and/or mixed waste. During

1 nonworking hours, personnel will report all imminent or actual incidents involving hazardous
2 and/or mixed waste to the Emergency Manager or the CAS operator at 667-6211. In the case of
3 fire, notification of these individuals is superseded by the Facility fire alarm system. A fire is
4 reported by dialing 911 (from telephone exchanges 667 and 665) or 667-7080 (from all
5 exchanges, including cellular phones), activating automatic alarms, or activating a fire alarm pull
6 box. All fire alarms alert the CAS operator, the LACFD, and security personnel, who in turn
7 notify the Duty Emergency Manager.

8 2. Upon recognition of a hazardous or mixed waste emergency, the first arriving
9 emergency-trained person will become the Facility Command Leader. Once EM&R personnel
10 are notified of the emergency, the Duty Emergency Manager will proceed to the scene and be
11 briefed by the Facility Command Leader, building/area personnel, and/or other emergency
12 units/teams. The Emergency Manager will then assume the position of IC. If necessary, the IC
13 may recommend that the EOC be activated and that the necessary members of the emergency
14 management team be determined. The IC will form an ICS and contact the HAZMAT
15 Supervisor. The HAZMAT Supervisor will notify the appropriate emergency response groups.
16 The IC may determine from the list of response groups described in Table D-1 which groups to
17 contact in an emergency. Each response group maintains an on-call person and/or a call-down
18 procedure to respond to emergencies.

19 3. EM&R personnel shall be notified of any potential hazardous or mixed waste emergency.
20 The IC and the HAZMAT Supervisor will use whatever means are available (including the
21 assistance of other response groups, computer data searches, and sampling) to determine if a
22 hazardous or mixed waste emergency exists.

23 4. The Facility Emergency Manager or his or her designee shall make best efforts to timely
24 communicate the nature or the emergency and the hazards that may be present to any outside
25 response agency whose assistance may be provided.

26 **D.3.3 Emergency Manager Actions**

27 1. Upon notification of an emergency incident, the Duty Emergency Manager may:

- 28 1. Make an initial assessment of the incident and, in conjunction with the IC, obtain
29 resources to determine the source, quantities, and types of hazardous and/or mixed waste
30 involved and the areal extent of any released materials.
- 31 2. Request resources needed and have EOC staff begin notifications.
- 32 3. Proceed directly to the scene.
- 33 4. Assess the nature of the incident (e.g., through communication with the IC).
- 34 5. Assume incident command after a direct briefing with the Facility Command Leader.
- 35 6. Based on the guidelines in Section D.3.1 of this Plan, determine if implementation of
36 this Plan is warranted.
- 37 7. Activate the EOC, if necessary.

38 2. Upon deciding to implement this Plan, the IC will, when appropriate:

- 1 1. Assess the hazards to human health and the environment, including both direct and
2 indirect effects, such as generation of toxic, irritating, or asphyxiating gases and/or
3 hazards of runoff of water or chemicals used for fire suppression. An individual
4 designated by the IC will use the guidelines in Section D.3.1 to assess the hazards to
5 human health and the environment. If any of the criteria under Section D.3.1 are met
6 and if the responsible Group Leader (or his/her designee) has not already accomplished
7 evacuation of the area, the IC will initiate shelter in place or evacuation of the immediate
8 area.
- 9 2. Direct the EOC staff to initiate protective actions and immediately notify appropriate
10 response groups and personnel as per the EM&R Guidelines. The IC may activate one
11 or more of the following community alert mechanisms: the Community Alert
12 (telephone) Network, the KRSN radio remote input system, or the cable television
13 capture system, site wide area network radios, and public radio and television channels.
- 14 3. In the case of fire or release of any type, make reasonable efforts to confirm that all
15 response personnel at the scene are aware of actual or imminent special hazards
16 associated with hazardous or mixed waste.
- 17 4. In emergency situations, contact the appropriate ENV representative to notify the
18 Department's Hazardous Waste Bureau and the National Response Center at (800) 424-
19 8802, reporting:
 - 20 - The name and telephone number of the ENV representative
 - 21 - The name and address of the facility
 - 22 - The time and type of incident
 - 23 - The name and quantity of material involved, to the extent known
 - 24 - The extent of injuries, if any
 - 25 - The possible hazards to human health or the environment outside the facility.
- 26 5. When an emergency occurs at hazardous or mixed waste treatment units, ensure that
27 appropriate Facility personnel monitor for leaks, pressure buildup, gas generation, or
28 equipment ruptures.
- 29 3. Once control of the emergency is established, the IC will take all reasonable measures to
30 minimize the occurrence, recurrence, or spread of fires, explosions, or releases. In addition, the
31 IC will delegate cleanup and decontamination responsibilities to the Recovery Manager. These
32 responsibilities may include:
 - 33 1. Arranging for site cleanup.
 - 34 2. Assisting with arrangements for proper handling of recovered waste, contaminated soil,
35 or contaminated surface/groundwater.
 - 36 3. Assisting with arrangements for decontamination of equipment, as needed.
 - 37 4. Arranging for replacement and/or repair of equipment, as needed.
 - 38 5. Requesting that testing is conducted to verify successful cleanup.
- 39 4. The Permittees shall report implementation of this Plan in accordance with Permit Sections
40 1.9.12, 1.9.13, and 2.11.6.3.

1 **D.4 SPILLS**

- 2 1. Sudden releases may include spills of hazardous or mixed waste that pose a significant threat
3 to human health or the environment. Spill incidents resulting in a sudden release of hazardous or
4 mixed waste that present a potential threat to human health or the environment, as listed in
5 Attachment Section D.3.1, require implementation of this Plan.

- 6 2. Hazardous and mixed wastes are stored on site at the Facility in a variety of containers. The
7 general steps in handling hazardous and/or mixed waste spills are as follows:
 - 8 1. Isolate the immediate area and deny entry to all unauthorized personnel;
 - 9 2. Contain the spill by spreading sorbents or forming temporary dikes to prevent further
10 migration (performed by properly trained personnel, if safe);
 - 11 3. Monitor the spill area and sample the spilled waste and contaminated media.
 - 12 4. Package the waste and contaminated media in sound containers;
 - 13 5. Decontaminate the area and all involved equipment and personnel (followed by testing
14 to assure adequate cleanup); and
 - 15 6. Remove the waste and contaminated media (performed by appropriate waste
16 management personnel).

- 17 3. The IC will determine the steps to be taken for spill mitigation. If initial mitigation of the
18 spill is necessary and can be accomplished safely (by appropriately trained personnel) before the
19 Emergency Manager arrives, a qualified member of the affected area's operating group will serve
20 as the Facility Command Leader.

- 21 4. The Permittees shall ensure that hazardous and/or mixed waste spills are stabilized and
22 cleaned up. During spill control and cleanup, all personnel shall wear appropriate personal
23 protective equipment (PPE). Monitoring will be conducted to ensure that chemical and, as
24 appropriate, radiological exposure is minimized. The collected material may be treated as
25 hazardous or mixed waste, depending on the components present. Runoff from spills of listed
26 hazardous or mixed waste that have migrated outside hazardous waste management areas must
27 be contained and managed as hazardous or mixed waste, as appropriate. If the spill was from a
28 characteristic hazardous or mixed waste and if it is determined by analysis that the runoff does
29 not exhibit the characteristic (i.e., ignitability, corrosivity, reactivity, and/or toxicity), the runoff
30 need not be managed as characteristic waste. Temporary dikes may be constructed to contain
31 runoff.

32 **D.4.1 Spill Control Procedures**

33 When a flammable organic solvent spill, a highly acidic spill, or a highly caustic spill has been
34 stabilized with the contents of an organic solvent spill kit, an acid spill kit, or a caustic spill kit,
35 respectively, the resulting material may be sorbed using a nonbiodegradable sorbent.
36 Nonbiodegradable sorbent can be used to control any spill if it is known to be compatible with
37 the spilled material. Appropriate containers or packaging shall be used to collect all spilled
38 material and contaminated sorbent. Attachment Tables TA-3, D-1; TA-16, D-1; TA-50, D-1;
39 TA-54, Area L, D-1; TA-54, Area G, D-2; TA-54 West, D-3, TA-55 Vault, D-1; TA-55 Building

1 4 Basement, D-2; TA-55 Container Storage Pad, D-3, and TA-55 Building 185, D-4 list
2 emergency equipment available for spill control at specific units. The ultimate disposition of any
3 contaminated sorbent or waste material shall be determined by appropriate waste management
4 personnel, and in accordance with hazardous waste management regulatory requirements.

5 **D.4.1.1 Tank System Spill Control and Reporting**

6 1. The Permittees shall remove a tank system from service immediately using approved
7 shutdown procedures if a leak or spill occurs from the tank system or its secondary containment
8 system or if the system is determined to be unfit for use. Further addition of waste to the tank
9 system or containment system will cease and the system shall be visually inspected to determine
10 the cause of the leak or spill. If a leak occurs from a tank system, as much of the waste as is
11 necessary to prevent further release of waste will be removed within 24 hours after detection or
12 as early as practicable, and the system will be inspected and repaired. All released waste will be
13 removed within 24 hours or as soon as possible if a leak occurs to a tank's containment system.

14 2. If a spill from a tank is not immediately contained and cleaned up and exceeds a quantity of
15 1 pound, the release will be reported to the Department within 24 hours of its detection in
16 accordance with the requirements of 40 CFR § 264.196(d)(1). In addition, the Permittees shall
17 report in accordance with Permit Section 1.9.12 and 2.11.6.3. That report shall describe the
18 likely migration route of the release; soil characteristics at the site; monitoring and sampling data
19 relevant to the release; proximity to down gradient drinking water, surface water, and populated
20 areas; and response actions taken or planned.

21 **D.4.1.2 Tank System/Secondary Containment Repair and Closure**

22 If the integrity of a tank system, including its secondary containment, has not been damaged by a
23 spill, the system may be returned to service. Service may not resume until after all released
24 waste is removed and repairs, if necessary, are made. Any tank system that cannot satisfy the
25 criteria described above shall undergo closure in accordance with the requirements of 40 CFR §
26 264.197.

27 **D.4.1.3 Certification of Major Repairs**

28 If a tank system undergoes extensive repairs (e.g., installation of an internal liner, tank system
29 piping retrofit), the tank system will not be returned to service until a certification by an
30 independent, qualified registered professional engineer is obtained, verifying that the repaired
31 system is capable of handling wastes without release for the intended life of the system. This
32 certification will be submitted to the Department within seven days after returning the tank
33 system to use.

34 **D.4.2 Decontamination Verification**

35 1. Decontamination will be accomplished at the spill site by removal of all contaminated
36 material. After the spilled material has been sorbed, the material will be containerized. If the
37 spill occurs on a concrete or asphaltic-concrete area, water or an appropriate solvent will be used

1 to clean the area. Liquids (i.e., spilled material and cleaning water or solvents used to clean a
2 spill) may be sorbed with a compatible, nonbiodegradable sorbent and containerized. If a spill is
3 from an identifiable source, the spilled material may be characterized as a newly-generated waste
4 using acceptable knowledge or may be analyzed, as applicable, for the hazardous waste
5 constituents known to be components of the waste managed at that unit. Analytical method(s)
6 given in Table D-3 will be utilized, as appropriate. If the spill is from other than an identifiable
7 source, the spilled material will be analyzed for the appropriate parameters listed in Table D-3.
8 All personnel conducting decontamination verification will wear appropriate PPE. Radiation
9 protection personnel will conduct health physics monitoring whenever mixed waste is involved
10 to ensure that radiation exposure is maintained as low as reasonably achievable. Any hazardous
11 or mixed waste collected from decontamination activities will be handled appropriately.

12 2. In order to establish baseline data, a sample of decontamination water or solvent (and
13 nonbiodegradable sorbent material, as applicable) will be taken prior to the start of the
14 decontamination effort. A sample of the final washwater (or the used sorbent) will then be taken.
15 The baseline samples and final washwater/used sorbent samples will be analyzed for the
16 applicable parameters given in Attachment Table D-3. If the decontamination samples contain
17 hazardous constituents that are not present in the baseline samples the decontamination
18 procedure shall be repeated. An alternative demonstration of decontamination may be proposed
19 and justified to the Department, who will evaluate the proposed alternative in accordance with
20 the standards and guidance currently in effect. If the proposed alternative is accepted,
21 decontamination levels will meet the levels approved by the Department. Each sample will be
22 collected with an appropriate sampling device (e.g., a thief or trier) as specified in "Test Methods
23 for Evaluating Solid Waste, Physical/Chemical Methods" (EPA, 1986), and approved updates, as
24 applicable.

25 3. If a hazardous/mixed waste spill occurs on soil, any free liquid present will be collected and
26 containerized. Liquids may be sorbed with a compatible nonbiodegradable sorbent prior to
27 containerization. For such a spill, contaminated soil will either be excavated and containerized
28 or remediated in situ. Industrial health and safety personnel will conduct industrial hygiene
29 monitoring and, if mixed waste is involved, radiation protection personnel will conduct health
30 physics monitoring, if deemed necessary, to minimize exposure during soil removal or
31 remediation operations. Excavation or remediation will continue until soil contaminant
32 concentrations are at a level approved by the Department.

33 4. If a hazardous/mixed waste spill occurs in an area with flooring, the floor will either be
34 removed in lieu of decontamination, or the floor will be decontaminated. If the decision is made
35 to decontaminate the floor, swipe samples or other types of sampling appropriate for the
36 contaminant will be collected at random and characterized for decontamination verification. If,
37 after several decontamination efforts, it is subsequently determined that the affected floor area
38 cannot be decontaminated, the floor material will be removed. In all cases, wastes generated
39 during the decontamination and/or removal process will be managed appropriately.

1 **D.5 EXPLOSION**

2 1. Explosions and resultant releases may result in a significant threat to human health or the
3 environment. The potential exists for hazardous or mixed waste to be released during an
4 explosion. Implementation of this Plan is required whenever there is an explosion at a permitted
5 unit.

6 2. In the event of an explosion at the Facility, all personnel will immediately evacuate the area.
7 Any injured personnel will be decontaminated at the site, if required and if time allows. An
8 LACFD ambulance will transport these personnel to LAMC for treatment. If an injury is severe
9 and requires immediate medical evacuation, the injured person will be wrapped to contain
10 contamination, if necessary. In the case of an actual or potential explosion, on-site personnel
11 will contact EM&R personnel immediately so that the Emergency Manager can ensure that all
12 necessary emergency response personnel are alerted. The LACFD is notified automatically upon
13 central alarm system activation. The Emergency Manager assumes incident command and will
14 remain near but at a safe distance from the site in order to inform personnel responding to the
15 explosion of the known hazards.

16 3. If a fire results from an explosion, the LACFD Senior Officer will, upon arrival at the scene,
17 evaluate all available information and determine the appropriate firefighting methods and tactics.
18 The LACFD Senior Officer will direct firefighting operations as the acting IC until EM&R
19 formally assumes command.

20 **D.6 FIRE**

21 1. Fires and resultant releases of hazardous or mixed waste may result in a significant threat to
22 human health or the environment. Implementation of this Plan is required whenever there is a
23 fire at a permitted unit.

24 2. Fire alarms will be sounded automatically or manually to alert personnel that a fire hazard
25 exists and to evacuate the area immediately if in the vicinity. Information related to the various
26 fire alarms at the specific units is included in Attachment Tables TA-3, D-1; TA-16, D-1; TA-50,
27 D-1; TA-54, Area L, D-1; TA-54, Area G, D-2; TA-54 West, D-3, TA-55 Vault, D-1; TA-55
28 Building 4 Basement, D-2; TA-55 Container Storage Pad, D-3, and TA-55 Building 185, D-4.

29 3. Depending on the size of the fire and the fuel source, portable fire extinguishers may be used.
30 However, Facility policy does not encourage the use of portable fire extinguishers by employees
31 unless they are properly trained. Instead, Facility policy encourages immediate evacuation of the
32 area and notification of the CAS operator by dialing 911. For any fire, including a fire that
33 involves hazardous or mixed waste, the responsible Group Leader and EM&R personnel must be
34 contacted immediately. The Emergency Manager will alert the LACFD and all other necessary
35 emergency response personnel. If the fire spreads or increases in intensity, all personnel must
36 follow protective actions as designated by the Emergency Manager. The Emergency Manager
37 assumes incident command and will remain near the scene to advise personnel responding to the
38 fire of the known hazards.

1 4. Upon arrival at the scene, the LACFD Senior Officer will evaluate all available information
2 and determine the appropriate firefighting methods and tactics. The LACFD Senior Officer will
3 direct firefighting operations as the acting IC until EM&R formally assumes command.

4 **D.7 UNPLANNED NONSUDDEN RELEASES**

5 Nonsudden releases include those incidents that, if uncontrolled, impact the environment over a
6 long period of time. Such incidents include minor leaks from containers and loss of secondary
7 containment integrity.

8 **D.7.1 Responsibility**

9 Appropriate Facility personnel are responsible for correction of a nonsudden release from a
10 hazardous or mixed waste unit if the correction can be performed safely with normal
11 maintenance and management procedures. Personnel from EM&R may provide assistance in
12 mitigating releases. Any correction methods for nonsudden releases that have resulted in an
13 impact to the environment will be coordinated with the Department.

14 **D.7.2 Nonsudden Releases**

15 1. In general, the response to a nonsudden release will be to contain the release, to correct the
16 cause of the release, and to clean up any release to a level that protects human health and the
17 environment.

18 2. Appropriate Facility personnel shall conduct regularly scheduled inspections to detect failure
19 of containment at the unit(s) addressed in this Permit. Secondary containment systems shall be
20 inspected regularly to ensure that the integrity of the containment systems has not deteriorated.
21 If an inspection reveals that containers are leaking or that secondary containment has
22 deteriorated, Facility personnel shall ensure that maintenance or replacement of containment is
23 performed, as appropriate. Inspections will be conducted in accordance with the facility's
24 inspection plan.

25 **D.7.3 Nonsudden Release Surveillance**

26 1. In addition to routine inspection and site-specific sampling and testing, the Permittees shall
27 maintain an area-wide environmental monitoring network. Monitoring and sampling locations
28 for various types of measurements are organized into three main groups. Regional monitoring
29 stations located within the counties surrounding Los Alamos County are placed up to
30 80 kilometers (50 miles) from the Facility. These stations serve to determine background
31 conditions. Perimeter stations are generally located within 4 kilometers (2.5 miles) of the
32 Facility boundary and document conditions in residential areas surrounding the Facility. On-site
33 stations, most of which are accessible only to employees during normal working hours, are
34 within the Facility boundary.

35 2. Different types of surveillance sampling conducted at these stations include measuring
36 radiation and collecting samples of air particulates, surface waters, groundwater, soil, sediment,

1 and foodstuffs for subsequent analysis. Additional samples provide information about particular
2 events, such as major runoff events and nonroutine releases. Data from these efforts are used for
3 comparison with standards, for determining background levels, and for radiation dose
4 calculations.

5 **D.8 EXPOSURE TO HAZARDOUS OR MIXED WASTE**

6 1. If a person is exposed to hazardous or mixed waste, the affected person, a co-worker, or line
7 management will notify EM&R personnel. Appropriate first aid should be administered
8 immediately. An EM&R representative will make appropriate notifications as soon as possible
9 so that exposure levels and decontamination requirements can be established. The affected
10 person will then be transported to the occupational medical facility or to LAMC for evaluation.
11 If possible, the material involved in the exposure will be ascertained, and the information will be
12 given to the medical staff.

13 2. Other potential exposures will necessitate evacuation of the area, if appropriate, or under any
14 of the following conditions:

- 15 1. Irritation of the eyes, breathing passages, or skin
- 16 2. Difficulty in breathing
- 17 3. Nausea, lightheadedness, vertigo, or blurred vision.

18 3. The affected person will be transferred to the occupational medical facility or to LAMC. An
19 industrial health and safety, radiation protection, or HAZMAT representative will attempt to
20 ascertain what, if any, exposure occurred and what corrective measure is appropriate.

21 **D.9 EVACUATION**

22 A permitted unit shall be evacuated upon the voice command to evacuate the area or upon the
23 sounding of the evacuation or fire alarm. The IC may call for sheltering in place when
24 evacuation is impractical due to significant airborne hazards. Shelter in place may be possible in
25 a designated area or in a building where all exterior windows and doors may be closed and
26 outdoor air ventilation equipment turned off. Once the airborne hazard has decreased, personnel
27 would then be evacuated.

28 **D.9.1 Emergency Process Shutdown Prior To Evacuation**

29 Personnel are instructed to shut down equipment prior to evacuating a building/area unless an
30 immediate building/area evacuation is announced or signaled. To ensure efficient shutdown,
31 training and exercises addressing the shutdown process are performed. In the case of an
32 immediate evacuation, a selected team may shut down designated equipment in an evacuated
33 area. The team will be equipped with proper equipment and PPE. If they are on location,
34 radiation protection, industrial health and safety, and/or HAZMAT personnel will provide advice
35 and assistance.

1 **D.9.2 Evacuation Plan**

2 1. Emergency situations may warrant the shutdown and evacuation of areas or buildings in order
3 to protect personnel and property, to anticipate the emergency condition, or to enhance the
4 appropriate response. Attachment Table D-4 lists the criteria for evacuation, persons responsible
5 for initiating evacuations, and reentry conditions.

6 2. To initiate the evacuation of a building/area, the evacuation or fire alarm is sounded and/or
7 the public address (PA) system may be used. Evacuation alarms cannot be silenced and reset by
8 site personnel. Only the Fire Alarm Maintenance Section and the LACFD Battalion Chief can
9 silence and reset alarms. To evacuate a portion of a building or area, use of the PA system may
10 be more appropriate. The PA system will notify the occupants of the area to be evacuated and
11 will advise personnel throughout the building of the existence of a problem in a specific area.
12 Once evacuation has been initiated and if conditions allow, personnel will turn off all equipment
13 that could contribute to the hazard if left unattended. All personnel will then proceed from the
14 affected area to the assembly/muster area.

15 3. In the event of evacuation of a building, an outbuilding, or an outlying work area, the
16 responsible Group Leader (or his/her designee) will determine a control point at the closest safe
17 location (e.g., considering wind direction). The designated area will be outside the affected area
18 and will serve as an assembly/muster area where the Group Leader (or designee) can oversee
19 evacuation operations and work to prevent further spread of the hazard.

20 4. As personnel exit an affected building/area, a primary sweep of the building/area will be
21 performed to ensure that all personnel have evacuated. If the building/area is evacuated, a Group
22 Leader designee will take attendance at the assembly/muster area and report personnel
23 accountability to the IC. The evacuation procedure is as follows:

- 24 1. The person discovering the accident or emergency will call 911 to ensure that line
25 management and EM&R personnel are notified.
- 26 2. Site-specific BEPs and/or emergency action procedures will be followed concerning
27 evacuation, sweep, personnel accountability, and equipment shutdown procedures.

28 5. A responsible on-site person may direct the initial evacuation and the central alarm system
29 may be activated. EM&R personnel will be notified immediately and will dispatch the Duty
30 Emergency Manager. A responsible on-site person may implement the evacuation process until
31 the Duty Emergency Manager arrives at the scene to assume that responsibility.

32 **D.10 SALVAGE AND CLEANUP**

33 1. Appropriate representatives from the ENV groups will survey the affected area before salvage
34 and cleanup begin. They will conduct visual inspections and sampling, as appropriate, of the
35 affected area to determine whether cleanup is complete. If gases or fumes, electrical or
36 radiological problems, or other conditions present a hazardous situation, personnel or selected
37 teams equipped with proper PPE will reenter the area to perform designated decontamination

1 tasks, repairs, and salvage to allow the return to normal operations. After an emergency, the IC
2 will turn the operation over to a designated Recovery Manager, who will:

- 3 1. Provide for proper handling of recovered waste, contaminated soil or surface water, or
4 any other material that results from a spill, fire, or explosion. Contaminated material
5 will be managed appropriately and temporarily stored at one of the hazardous or mixed
6 waste storage areas at the Facility. Waste management personnel will be responsible for
7 determining the final disposition of the waste. This determination will be made in
8 compliance with hazardous waste management regulations.
- 9 2. Arrange to monitor for damage or improper operation of the unit and associated
10 equipment as a result of the emergency or of plant shutdown in response to the
11 emergency.
- 12 3. Arrange for site cleanup procedures to be completed and ensure that no waste that may
13 be incompatible with the released material is treated or stored in the same area.
- 14 4. Ensure that emergency equipment is cleaned, decontaminated, and fit for its intended use
15 before operations are resumed. Equipment will be inspected visually and then sampled,
16 if necessary, to determine the type and degree of contamination and to determine
17 appropriate cleanup measures.

18 2. Prior to resuming operations, the Permittees shall verify that the previously mentioned tasks
19 have been performed. The Permittees shall notify appropriate state and local authorities that
20 cleanup procedures are completed and that emergency equipment is clean and fit for its intended
21 use.

22 3. The IC assumes the coordination of post-emergency actions (particularly during the time
23 period immediately following the emergency) until a Recovery Manager is appointed. The
24 Recovery Manager then assumes this coordination role. The Recovery Manager is the functional
25 equivalent of the Emergency Coordinator for post-emergency actions. The post-emergency
26 actions include cleanup operations, vital equipment repair, or interim hazard-removal operations
27 (such as arranging for demolition of unstable walls). The services of affected operational
28 organizations, ENV groups, KSL, and other on-site resources will also be used to estimate
29 cleanup costs and operational impact.

30 **D.11 EMERGENCY RESPONSE RECORDS AND REPORTS**

31 The Permittees shall ensure that any emergency that requires implementation of this Plan will be
32 documented and reported in accordance with Permit Section 1.9.12, 1.9.13, and 2.11.6.3. This
33 information will be maintained in the facility operating record.

34 **D.12 CONTINGENCY PLAN AMENDMENT**

35 The Permittees shall review this Plan at a minimum annually. The Plan will be amended
36 immediately if determined to be inadequate to handle releases (spills, explosions, and/or fires)
37 and whenever:

- 38 1. The facility permit is revised;

- 1 2. There is change in the design or operation of the facility (e.g., quantities of waste
- 2 handled and handling techniques) that increases the likelihood of an emergency and
- 3 requires changes in emergency response;
- 4 3. The Primary Emergency Manager changes; and
- 5 4. The list of emergency equipment changes significantly.

6 **D.13 REFERENCES**

- 7 EPA, 1986 and all approved updates, "Test Methods for Evaluating Solid Waste,
- 8 Physical/Chemical Methods," *EPA-SW-846*, U.S. Environmental Protection Agency, Office
- 9 of Solid Waste and Emergency Response, U.S. Government Printing Office, Washington,
- 10 D.C.
- 11 LANL, 2002, "Los Alamos National Laboratory Emergency Management Plan," LIR 403-00-
- 12 01.0, Los Alamos National Laboratory, Emergency Management and Response Office, Los
- 13 Alamos, New Mexico.
- 14 LANL, 2002a, "Los Alamos National Laboratory General Part B Permit Renewal Application",
- 15 Revision 2.0, August 2002, LA-UR-03-5923, Los Alamos National Laboratory, Los Alamos,
- 16 New Mexico.

17

Table D-1
Response Groups and Agencies Available to the
Emergency Management and Response Office for
Guidance and/or Emergency Assistance

Facility^a-Controlled Response Group	Telephone	Responsibilities
Health Physics Personnel	667-7797	Provides routine guidance on radiological decontamination. Provides routine site evaluation and monitoring to determine the nature and extent of contamination (radiological).
Occupational Medicine	667-0660	Provides emergency medical treatment.
Industrial Hygiene and Safety Personnel	606-0295 667-5231	Provides guidance on industrial hygiene equipment and operational safety. Provides routine site evaluation/support field testing to determine the nature and extent of contamination (chemical).
Contractor Assurance Office	6658206	Reports occurrences and tracks follow-up actions.
Hazardous Materials Response (HAZMAT)	665-5237	Provides emergency site evaluation/field monitoring (chemical and radiological). Specifies protective clothing and equipment. Dispatches Hazardous Materials Response Team. Provides support for chemical, radiological, hazardous, and mixed waste incidents and decontamination of responders and response equipment.
Meteorology & Air Quality Personnel	667-6952	Provides information on meteorological conditions.
Water Quality and Hydrology Personnel	667-0666 or 665-0453	Provides information on hydrologic conditions.
Hazardous Waste Compliance Personnel	667-0666 or 665-	Provides guidance on regulatory requirements.

Facility ^a -Controlled	Telephone	Responsibilities
Response Group		
	0453	Provide guidance on proper treatment, storage, and off-site shipment of hazardous and mixed waste. Conducts field surveys to determine spread of contamination and adequacy of cleanup.
Ecology Personnel	667-6952	Provide information on biotic conditions.
Security Personnel	667-4531	Provide traffic control and security.
TA-55 Operations Division	667-3030	Provides initial emergency site evaluation at Technical Area (TA) 55 and conducts activities related to the prevention, notification, and control of emergencies at TA-55. In the event of an emergency at TA-55, monitors for leaks, pressure buildup, gas generation, or equipment ruptures, if necessary. Maintains and operates TA-55 Emergency Response Team. Writes TA-55 emergency plans and procedures.
Dynamic and Energetic Materials Division	667-5653	Provides information and/or assistance during emergencies at TA-14, TA-15, TA-36, and TA-39.
High Explosives Area Access Control	667-6844	Provides information and/or assistance during emergencies involving units at TA-16.
Los Alamos County Fire Department	911 662-8301	Dispatches firefighting personnel and equipment and provides Emergency Medical Services.
Los Alamos County Police Department	662-8222	Provides traffic control on public access roads.

Facility^a-Controlled Response Group	Telephone	Responsibilities
Los Alamos Medical Center ^c	662-4201	Provides medical services. Provides and maintains Emergency Room.

^a Los Alamos National Laboratory.

^c Medical services related to hazardous and mixed waste injuries are provided under the direction of HSR-2.

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Table D-2

**Los Alamos National Laboratory-Wide Emergency Equipment
Hazardous Materials (HAZMAT) Vehicles and Associated Emergency Equipment**

HAZMAT vehicles and trailers are located at Technical Area (TA) 64, Building 39 (TA-64-39). They are available to the Security and Safeguards (S) Hazardous Materials Response Group (S-10) for emergency response to all of the TAs at the Facility. S-10 is responsible for maintaining the supplies of appropriate emergency equipment in each vehicle and trailer.

The HAZMAT vehicles and trailers are equipped with safety and emergency equipment, personal protective clothing, and other supplies, which may include, but are not limited to, some or all of the following:

- Assorted personal protective equipment, T-shirts, and gloves
- Safety goggles, safety glasses, and face shields
- Boots and booties
- Totally encapsulating suits and boots
- Level A and B suits
- Flash suits
- Self-contained breathing apparatus (SCBA) and SCBA bottles
- Respirators and cartridges
- Hazardous chemical reference books and other reference materials
- Shovels
- Siphon pumps
- Assorted spill kits and sorbents
- Neutralizing solutions: acids, bases, and caustics
- Two-way radios, cellular phones, facsimile, and other communication equipment
- Bottles of leak detector and leak repair kits
- Emergency repair packs
- HAZMAT bags
- Gas detectors and chemical monitoring equipment
- Radiological monitoring equipment
- Sponges and cleaners
- Warning signs and barricade tape
- Traffic control barriers
- Flashlights
- Cameras and film
- Knives
- Portable power supplies
- Warning and signal horns
- Harnesses and belts

Decontamination equipment
Sampling equipment
Lifting equipment and vetter bags
Assorted tools, tape, and other supplies
Non-sparking tools
Biological detection equipment
Chemical vacuums
Sandia foam
Plugging and diking equipment
Sample van equipped with a glovebox and analysis equipment
Environmental continuous air monitoring equipment
Robot
National Atmospheric Release Advisory Center-Internet Client (NARAC Client)
Hotspot plume modeling program
Mass decontamination trailer with tent and supplies
Portable decontamination trailer
Portable structures
Tents
Trucks
Trailers
International Shipping Units
Portable hot water heater
Forklift
Automated external defibrillators.

**Supplemental Emergency Equipment and Personnel Available From the Los Alamos
County Fire Department (LACFD)**

Supplemental emergency equipment available from the LACFD may include, but is not limited to, some or all of the following:

Fire engines
Mini-tankers with compressed air foam capability
Modular ambulances
Rescue vehicles
Crash-Fire-Rescue (CFR) unit
Water tankers with compressed air foam capability
Incident Command vehicles
SCBA units
SCBA air tanks
Remote air system for confined space rescue
Ladder truck with pump

Personnel with Hazardous Material First Response Operational Level training
Personnel with Basic Emergency Medical Technician training
Personnel with Advanced Life Support training

Supplemental Emergency Equipment and Personnel

Supplemental emergency equipment may include, but is not limited to, some or all of the following:

TRANSPORTATION EQUIPMENT

Pickups, 1/2 through 3/4 ton
Trucks, 1 through 3 ton
Vans, panels, and carryalls
Buses

SPECIAL EQUIPMENT

Graders
Loaders
Snowplows and snow blowers
Bulldozers
Scrapers
Semitrailers
Chain saws
Street flushers
Mobile transceivers
Generators
Handsets (2-way)
Pageboys (1-way)
Welders
Mobile site logistics support equipment/associated heavy equipment
Fully equipped spill response unit
Utilities equipment and emergency utility support
Fuel trucks
Light banks
Dump trucks
Backhoes
Potable water trucks
Cranes
Forklifts

TRAINED PERSONNEL

Heavy equipment operators
Dispatchers
Mechanics
Power saw operators
Radio and telephone operators
Truck drivers
Rodent/Pest Control personnel
HAZMAT response/cleanup personnel
Welders
Electricians

Emergency Equipment and Personnel at the Occupational Medicine Clinic Occupational Medicine Group (HSR-2)

At TA-3 (SM-1411) Central Clinic

Emergency equipment and supplies available from HSR-2 may include, but are not limited to, some or all of the following:

PERSONNEL

Physicians
Physician's Assistants
Nurses
X-ray Technician
Clinical Laboratory Technicians
Clinical Testing Technicians
Clinical Psychologist
Counselors

SPECIAL EQUIPMENT-PORTABLE

Multichannel emergency receiver-base station
Two-way radio on the State Med Net, the Facility Emergency Management channel, and the Facility Health-Safety Net
Cardiac monitors and defibrillators
Crash cart emergency equipment with E-tank oxygen (O₂)
Portable physicians' bag with medications
Portable suction unit
Portable stretchers (ambulance, gurney, folding)
Wheelchairs
O₂ tanks
Manual resuscitators

Intravenous (IV) stands
IV solutions
Otosopes/ophthalmoscopes
Portable sphygmomanometers
Stethoscopes
Anticontamination apparel
Eye irrigation solution
First-aid kits
Extrication and cervical collars, crutches, canes
Suture sets
Protective apparel
Morgan lens irrigation sets
Decontamination equipment (portabl

SUPPLIES-GENERAL

Bedding/pillows
Rescue blankets
Burn blankets
Thermal/icing pouches
Multitrauma dressings, surgical and first aid supplies
Disposable ice bags

SPECIAL FACILITIES - NONPORTABLE

Fully equipped decontamination room at the Occupational Medicine Clinic
Completely equipped emergency room with ambulance entrance
Emergency lighting system
Complete X-ray suite
Protective clothing and wound counters
12-lead electrocardiograph
Fully equipped crash cart with Life Pak defibrillator/external pacer, intubation equipment, emergency medications
Fully equipped decontamination room at Los Alamos Medical Center (LAMC) adjacent to the LAMC emergency room

TRANSPORTATION

Full ambulance service is available within minutes to the central facility.

COMMUNICATION

Base station on State Medical Net and Los Alamos County Fire Department trunked radio system.

Table D-3
Waste Analysis Parameters and Test Methods^a

Parameter	Test Method	Reference ^b
Ignitability	Pensky-Martens closed-cup method Setaflash closed-cup method Ignitability of solids	(L, S) SW1010, SW1020A (S) SW1030 (L, S) ASTM D93-02a
Reactivity	Test method to determine hydrogen cyanide released from waste Test method to determine hydrogen sulfide released from waste	(L, S) SW, Section 7.3
Corrosivity	Electrometric (pH of aqueous solution)	(L) SW9040B
Toxicity characteristic (TC)	Toxicity characteristic leaching procedure (TCLP) extraction	(S) SW1311
TC Metals:	Graphite furnace atomic absorption (AA) spectroscopy, gaseous hydride AA, or direct aspiration AA, manual cold-vapor technique	
Arsenic		(L, S) SW7060A, SW7061A
Barium		(L, S) SW7080A, SW7081
Cadmium		(L, S) SW7130, SW7131A
Chromium		(L, S) SW7190, SW7191
Lead		(L, S) SW7420, SW7421
Selenium		(L, S) SW7740, SW7741A
Silver		(L, S) SW7760A, SW7761
Mercury	Manual cold-vapor technique	(L) SW7470A, (S) SW7471A
Volatile organics	Gas chromatography (GC)/mass spectrometry (MS) GC/MS capillary column technique	(L, S) SW8260B
Semivolatile organics	GC/MS GC/MS capillary column technique	(L, S) SW8270C ^c (S) SW8275A
Organochlorine Pesticides	Thermal extraction/GC/MS	(L, S) SW8081A
Chlorinated Herbicides	GC	(L, S) SW8151A
Cyanide, free and total	Distillation and colorimetric ultraviolet	(L, S) SW9010B, SW9012A
Total chromium	Colorimetric method for hexavalent chromium	(L, S) SW7196A
Sulfide	Colorimetric titration	(L, S) SW9030B

Table D-3 (Continued)

Parameter	Test Method	Reference ^b
Total RCRA metals ^{c,d}	Acid digestion Inductively coupled plasma atomic emission spectroscopy	(L) SW3010A, (S) SW3050B (L, S) SW6010B
Arsenic		(L, S) SW6010B
Barium		(L, S) SW6010B
Cadmium		(L, S) SW6010B
Chromium		(L, S) SW6010B
Lead		(L, S) SW6010B
Selenium		(L, S) SW6010B
Silver		(L, S) SW6010B
Mercury	Manual cold-vapor technique	(L) SW7470A, (S) SW7471A
Free liquids	Paint Filter Liquids Test	(L, S) SW9095A

^a At Los Alamos National Laboratory, current analytical capabilities include limited analyses of mixed waste samples. These analyses include gross alpha, beta, and gamma screening.

^b "A" (e.g., A006) refers to U.S. Environmental Protection Agency, 1984, "Sampling and Analysis Methods for Hazardous Waste Combustion," *EPA-600/8-84-002*.

"ASTM" refers to American Society for Testing and Materials standards.

"SW" refers to U.S. Environmental Protection Agency, 1986 and all approved updates, "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," *SW-846*.

(L) refers to liquid waste.

(S) refers to solid waste.

^c See also atomic absorption methods. Total metals may be substituted for TCLP metals, if appropriate.

^d RCRA = Resource Conservation and Recovery Act.

Table D-4
Evacuation Determination and Re-Entry Conditions

Reason for Evacuation	Evacuation Determination Made by	Reentry Conditions^a
Fire	¹ Fire or evacuation alarm, Group Leader or alternate, Lead Engineer, Senior Staff Member present, Senior Technician, or Emergency Manager	Following survey by the person designated by the IC ^b
Explosion	Same as 1 above	Same as above
Loss of ventilation	² Group Leader or alternate, Senior Staff Member, Lead Engineer, or Senior Technician	Same as above
Loss of electric power	Same as 2 above	Same as above
Extensive contamination	Same as 2 above or health physics representative	Same as above
Airborne contamination	Same as 2 above or Radiation Monitor	Same as above
Escape or release of toxic or hazardous gas or fumes	Group Leader or alternate, Senior Staff Member, Lead Engineer, Senior Technician, or Emergency Manager	Same as above
Bomb or bomb threat	EM&R ^c or security personnel , R&D ^d Section Leader or alternate, Senior Staff Member, or Lead Engineer	Same as above

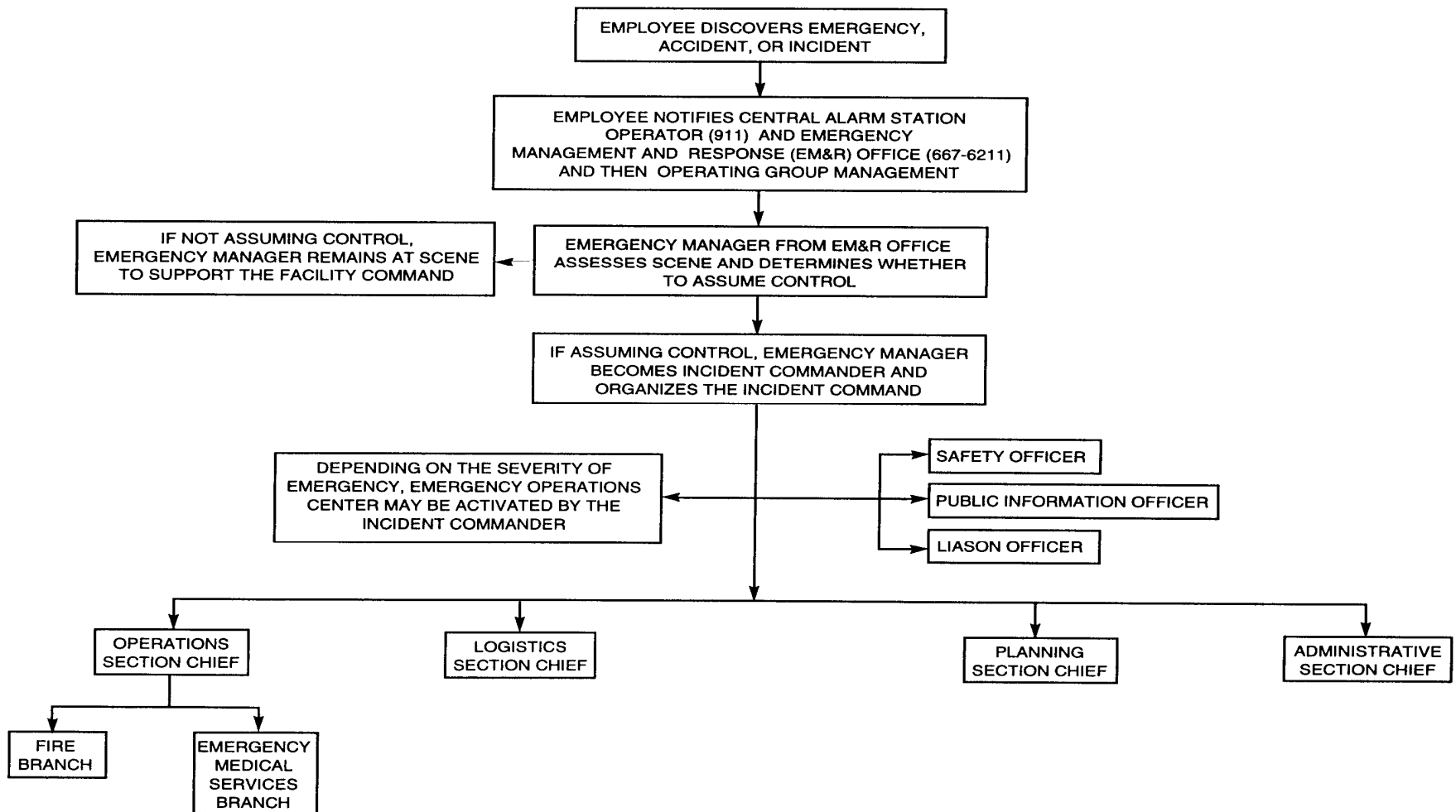
^a All reentries are authorized by the EM&R Incident Commander.

^b "IC" refers to the Incident Commander as defined in 29 CFR § 1910.120.

^c "EM&R" refers to the Emergency Management and Response Office.

^d "R&D" refers to the Research and Development Section

Figure D-1
General Hazardous and Mixed Waste Emergency Notification Structure



TA-3
ATTACHMENT D
CONTINGENCY PLAN

TA-3
ATTACHMENT D
CONTINGENCY PLAN

Specific information on emergency response resources and release prevention/mitigation at TA-3 is provided below.

The CMR Building at the Facility has a facility-specific Emergency Management Plan (EMP) to ensure that emergency planning and preparedness for the CMR Building are commensurate with the facility and the nature of work performed there and to provide sufficient subject matter experts at the facility, should an emergency occur.

The EMP establishes the CMR Facility Emergency Response Organization, which is comprised of a facility Emergency Response Team (ERT), Facility Incident Command (FIC), and the CMR Operations Center. The CMR ERT is a 15 - 20 member group of volunteer facility personnel trained to provide initial response to emergencies. The FIC is comprised of division and line managers and key personnel who respond to pre-designated locations for the purpose of initial command and control of events that occur at CMR Building emergencies. The CMR Operations Center is the emergency communications focal point and has the responsibility of development and maintenance of alarm response instructions, notification lists, and call-out lists.

“The CMR Facility Emergency Management Plan Training for CMR Workers” (LANL, 1999), includes information on emergency equipment (see Table D-1 of this Attachment Section); evacuation routes and primary and secondary evacuation assembly areas; and evacuation procedures for the FIC, persons wearing anti-C clothing, and persons in non-anti-C clothing. The CMR EMP also includes emergency categorization, lists of potential facility emergencies, their associated alarms, and the appropriate response to the emergency and/or the alarms. Evacuation routes, evacuation area locations, and emergency equipment are subject to change.

REFERENCES

LANL, 1999, “The CMR Facility Emergency Management Plan Training for CMR Workers,” Los Alamos National Laboratory, Los Alamos, New Mexico.

LANL, 1998, “Los Alamos National Laboratory General Part B Permit Application,” Revision 1.0, Los Alamos National Laboratory, Los Alamos, New Mexico.

Table D-1
TA-3
Emergency Equipment

FIRE CONTROL EQUIPMENT

Dry chemical fire extinguishers are available in Rooms 9010, 9020, and 9030.

Description of General Capabilities:

Each fire extinguisher has a 10-pound minimum capacity and may be used by any qualified employee in the event of a small fire.

Nine fire hydrants are located around the outside perimeter of Technical Area (TA) 3, Building 29 (TA-3-29). The nearest fire hydrants to Rooms 9010, 9020, and 9030 are located on the south side of Wing 9 and west of Wing 5.

Description of General Capabilities:

The fire hydrants supply water at an adequate volume and pressure to satisfy the requirements of 40 CFR § 264.32(d).

Fire alarm pull boxes are located in Rooms 9010 and 9020.

Description of General Capabilities:

Manually-operated fire alarms may be activated by any employee in the event of fire to notify the Los Alamos County Fire Department (LACFD) and security personnel.

Sprinkler systems are located in Rooms 9010, 9020, and 9030.

Automatic thermal alarm systems are located in Rooms 9010, 9020, and 9030.

Description of General Capabilities:

The sprinkler systems and thermal alarm systems are heat activated. Security personnel and the LACFD are alerted when a system has been activated.

SPILL CONTROL EQUIPMENT

Spill control kits are located in Rooms 9010, 9020, and 9030. Spill kits include (but are not limited to) sorbent pillows, and/or absorbent.

Description of General Capabilities:

Sorbent is used in the event of a small spill.

COMMUNICATION EQUIPMENT

Telephones are located in the north enclosure of Room 9010, in Room 9020, and in Room 9030.

Paging phones and evacuation alarms are located in Rooms 9010, 9020, and 9030.

Description of General Capabilities:

Telephones are used for internal and external communication and have paging capabilities. The evacuation alarm is a pulsating sound that can be heard over the public address system. The fire alarm is a double slow-whoop sound.

DECONTAMINATION EQUIPMENT

Emergency shower and eyewash stations are located in the two enclosures in Rooms 9010, 9020, and in Room 9030.

Material safety data sheets (MSDS) are available hard copy or via online database.

Description of General Capabilities:

Emergency shower and eyewash stations are used by personnel who receive a chemical splash to the skin or eyes. Specific MSDSs for the chemicals should be obtained prior to working with hazardous or mixed waste to determine if the application of water is indicated for decontamination.

PERSONAL PROTECTIVE EQUIPMENT

Personnel at TA-3-29 are required to use appropriate personal protective equipment (PPE) to protect themselves from hazards found in the workplace under normal conditions. This PPE may include gloves, steel-toed shoes, and safety glasses. Additional PPE may be required during an unusual hazardous situation or during sampling activities.

Self-contained breathing apparatus are available in hallway outside of Room A130 (Administrative Wing).

Room 9102 is a change room with protective clothing available.

Full-mask negative pressure respirators are available as needed; radioactive particulate filters are available.

OTHER

See Table D-2 of this Contingency Plan for equipment available in the Hazardous Materials Response Group vehicles and trailers.

TA-16
ATTACHMENT D
CONTINGENCY PLAN

TA-16
ATTACHMENT D
CONTINGENCY PLAN

Specific information on emergency response resources and release prevention/mitigation at TA-16 is provided below. Emergency equipment currently available for use at the TA-16 Burn Ground is included as Table D-1 below.

D.1 EMERGENCY RESPONSE RESOURCES

The High Explosives Engineering personnel are responsible for the TA-16 OB units. Appropriate personnel have been trained in emergency procedures.

D.2 RESPONSIBILITY

At TA-16, High Explosives Engineering personnel are responsible for correction of a nonsudden release from the TA-16 OB units if the correction can be performed safely with normal maintenance and management procedures. Personnel from the Emergency Management and Response Office may provide assistance in mitigating releases. Any correction methods for nonsudden releases that have resulted in an impact to the environment will be coordinated with the New Mexico Environment Department.

D.3 REMEDIAL ACTION

Contingency or emergency measures are unanticipated "fires, explosions, or any unplanned sudden or non-sudden release of hazardous waste . . ." for which a schedule of remedial actions cannot be reasonably ascertained. Any remedial actions carried out under the provisions of the Contingency Plan will be performed as soon as possible to ensure protection of human health and the environment, as described in Attachment D. These remedial actions may include site cleanup; proper handling of recovered waste, contaminated soil, or contaminated surface water; decontaminating equipment, as needed; replacing or repairing equipment, as needed; and testing to verify successful cleanup.

High Explosives Engineering personnel conduct regularly scheduled inspections at TA-16 to detect deterioration and/or failure of containment at the TA-16 OB units. If an inspection reveals deterioration or failure, personnel ensure that maintenance or replacement is performed, as appropriate.

D.4 REFERENCES

LANL, 2002, "Los Alamos National Laboratory General Part B Permit Renewal Application", Revision 2.0, August 2002, LA-UR-03-5923, Los Alamos National Laboratory, Los Alamos, New Mexico.

LANL, 2003, “Los Alamos National Laboratory Technical Area 16 Part B Permit Renewal Application”, Revision 4.0, June 2003, LA-UR-03-3903, Los Alamos National Laboratory, Los Alamos, New Mexico.

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TABLE D-1
TA-16
Emergency Equipment

FIRE CONTROL EQUIPMENT

Fire extinguishers are located at or in:

Tank-truck garage (TA-16-1507)

Control Building (TA-16-389)

High Explosives Wastewater Treatment Facility (HEWTF) (TA-16-1508)

Each truck used to transport high explosives

General Capabilities

These portable units may be used by any properly trained employee in the event of fire.

Seven fire hydrants are located at the TA-16 Burn Ground.

General Capabilities

The fire hydrants will supply water at adequate volume and pressure to satisfy the requirements of 40 CFR § 264.32(d).

Water spigots are located at TA-16-388 and TA-16-399.

A fire alarm pull station is located at the HEWTF.

The Central Alarm Station is notified before all open burning operations. In dry conditions, when operations may result in a grass fire, the Los Alamos County Fire Department is notified and requested to prepare to respond.

SPILL CONTROL

Portable berms to contain spills are stored in an all-weather cabinet near the center of the TA-16 Burn Ground, at the less-than-90-day storage area (TA-16-386), and beside the Control Building.

COMMUNICATION EQUIPMENT

Telephones are available at the Control Building, at the HEWTF, and at the railroad gate at the entrance to the Burn Ground.

General Capabilities

Telephones for internal and external communication are available for use by all employees.

DECONTAMINATION EQUIPMENT

Eyewash stations are located in the tank-truck garage and in the HEWTF.

Water spigots with hoses attached are available at the TA-16-388 Flash Pad/Burn Tray and the TA-16-399 HE Burn Tray for general wash down.

Material Safety Data Sheets (MSDS) are available at the Control Building.

General Capabilities

Eyewashes are used by personnel who receive a chemical splash to the eyes. MSDSs for the chemical(s) should be obtained prior to working with hazardous waste or hazardous material to determine if the application water is indicated for decontamination. The MSDSs are also maintained to provide information during emergency response.

PERSONNEL PROTECTION EQUIPMENT

Respirators, coveralls, and safety glasses are available for TA-16 personnel during waste-handling operations.

All vehicles are equipped with first-aid kits.

TA-50
ATTACHMENT D
CONTINGENCY PLAN

TA-50
ATTACHMENT D
CONTINGENCY PLAN

Specific information on emergency response resources and release prevention/mitigation at TA-50 is provided below.

Emergency equipment currently available for use at TA-50 CSUs are included in Table D-1 below. A list of emergency equipment (including spill equipment) available from the Hazardous Materials Response Group is presented in Table D-1 in this Attachment.

Hazardous and mixed waste spills are managed by type and severity of the incident. If a hazardous/mixed waste spill occurs, the Incident Command evaluates the type and severity of the spill and determines if assistance from the Facility's Emergency Management Response personnel is required. If not, the spill is managed internally by TA-50 personnel.

REFERENCES

LANL, 1998, "Los Alamos National Laboratory General Part B Permit Application," Revision 1.0, Los Alamos National Laboratory, Los Alamos, New Mexico.

LANL, 2002, "Los Alamos National Laboratory Technical Area 50 Part B Permit Renewal Application", Revision 3.0, August 2002, LA-UR-02-4739, Los Alamos National Laboratory, Los Alamos, New Mexico.

Table D-1
TA-50
EMERGENCY EQUIPMENT

FIRE CONTROL EQUIPMENT

- **FIRE EXTINGUISHERS**

Description of General Capabilities

The fire extinguishers are portable, manually operated units and may be used by any employee in case of fire. They consist of Class ABC or BC rated.

Locations

2 fire extinguishers are located in TA-50-69, Indoor Container Storage Unit (CSU) (Room—102)

1 fire extinguisher is located at the TA-50-69, Outdoor CSU

- **FIRE ALARM PULL BOXES CONNECTED TO THE CENTRAL ALARM STATION**

Description of General Capabilities

Fire alarms may be activated by any employee in the event of fire to notify the Central Alarm Station. Upon activation, fire alarm horns and strobes provide audible and visual signals for personnel notification. The fire alarm is a pulsing sound. The evacuation alarm is a wailing sound that can be heard throughout TA-50-69, Indoor CSU and at the TA-50-69, Outdoor CSU.

Locations

Three fire alarm pull stations are located in the TA-50-69, Indoor CSU. Personnel working at the TA-50-69, Outdoor CSU may use the pull stations at TA-50-69 in the event of a fire.

- **AUTOMATIC FIRE SUPPRESSION SYSTEM**

Description of General Capabilities

A wet-pipe automatic sprinkler system that is hydraulically designed for ordinary hazard Group II coverage is in place throughout TA-50-69. This system is activated at 100°C (212°F).

Locations

Throughout TA-50-69, as described above.

- **FIRE HYDRANT**

Description of General Capabilities

Fire hydrants provide water for fire fighting. All fire hydrants are supplied by an 8-inch (in.) water line connected to the 12-in. water main on Pecos Drive.

Location

A fire hydrant is located approximately 55 ft west of TA-50-69.

SPILL CONTROL EQUIPMENT

- **SPILL CONTROL EQUIPMENT**

Description of General Capabilities

The spill control kits may contain items such as absorbents (i.e., pillows and pigs) or weighted tarps. The Emergency Management and Response Group provides additional spill control and clean up equipment as needed.

Spill Control Kit Location

The spill kits are located in TA-50-69 and at the TA-50-69 Outdoor CSU

COMMUNICATION EQUIPMENT

Description of General Capabilities

Telephones with public address (PA) capabilities for internal and external communication are available for use by any employee. Fire and evacuation alarms are activated in the event of a fire or in case an evacuation is required. The fire alarm is a double slow whoop sound. The evacuation alarm is a high-pitched wailing sound. The PA system can be heard at the TA-50-69, Outdoor CSU. When working at the CSUs, personnel will have immediate access to emergency communication equipment either directly or through visual or voice contact with another employee.

Location of Communication Equipment

Telephones with PA capabilities are located in TA-50-69. Personnel working at the TA-50-69, Outdoor CSU have access to the phone outside Room 104, will carry cellular phones, or will have immediate access to communication equipment through visual or voice contact with another employee.

DECONTAMINATION EQUIPMENT

- **SAFETY SHOWERS**

Description of General Capabilities

Safety showers are available to personnel who receive a chemical splash to the skin.

Location of Safety Showers

A safety shower is located in TA-50-69, Room 102. One standard shower is located adjacent to the change room in TA-50-69.

- **EYEWASHES**

Description of General Capabilities

Eyewashes are available to personnel who receive a chemical splash to the eye(s). Specific MSDSs for the chemicals being managed are available hard copy or via online database to personnel working with hazardous or mixed waste to determine if the application of water is indicated for decontamination.

Location of Eyewashes and Material Safety Data Sheets

An eyewash is located in the TA-50-69, Indoor CSU (Room 102). A portable eyewash station will be available during active waste management operations at the Outdoor CSU if waste with free liquids is being managed.

- **PERSONAL PROTECTIVE EQUIPMENT**

Appropriate personal protective equipment (PPE) will be worn to protect from hazards found in the workplace under normal conditions. This PPE may include gloves, steel-toed shoes, and safety glasses. Additional PPE may be required during an unusual hazardous situation and may be found in the spill kits at various locations throughout the site.

- **OTHER**

Continuous air monitors, giraffe monitors, or other appropriated air monitoring equipment (as determine by health physics personnel) may be located in the container storage units for detection of airborne radioactive constituents.

TA-54
ATTACHMENT D
CONTINGENCY PLAN

TA-54
ATTACHMENT D
CONTINGENCY PLAN

Specific information on emergency response resources and release prevention/mitigation at TA-54 is provided below.

Listings of emergency equipment currently available for use at Area L, Area G, and TA-54 West are presented in Tables D-1 through D-3 below.

REFERENCES

LANL, 2002, “Los Alamos National Laboratory General Part B Permit Renewal Application”, Revision 2.0, August 2002, LA-UR-03-5923, Los Alamos National Laboratory, Los Alamos, New Mexico.

LANL, 2003, “Los Alamos National Laboratory Technical Area 54 Part B Permit Renewal Application”, Revision 3.0, June 2003, LA-UR-03-3579, Los Alamos National Laboratory, Los Alamos, New Mexico.

TABLE D-1
TA-54 AREA L
Emergency Equipment

FIRE CONTROL EQUIPMENT

Class ABC and BC rated fire extinguishers are located at Area L. Class D rated fire extinguishers are available at Area L if combustible metals are being managed. A dry-pipe sprinkler system is located at TA-54-215.

Dry chemical fire-suppression systems are located in storage sheds TA-54-68, TA-54-69, and TA-54-70.

Description of General Capabilities:

Fire extinguishers may be used by any qualified employee in the event of a small fire. The automatic dry-pipe sprinkler system is heat activated. Security personnel and the Los Alamos County Fire Department (LACFD) are alerted when this system has been activated.

Fire alarm pull boxes are located inside TA-54-37, TA-54-39, TA-54-51, TA-54-60, TA-54-117, TA-54-210, and TA-54-221.

Description of General Capabilities:

Fire alarms may be activated by any employee in the event of a fire to notify the LACFD and security personnel.

Fire hydrants are located near the main site entrance to Area L and at the southeast corner of TA-54-62 inside Area L. These fire hydrants supply water at an adequate volume and pressure to satisfy 40 CFR § 264.32(d).

Freeze-proof faucets are located east of TA-54-31.

SPILL CONTROL EQUIPMENT

Spill equipment at TA-54 Area L includes the following:

- Shovels
- Oversized drums
- Absorbent (various locations on site)
- Heavy equipment from Area G available for any emergencies at Area L

Spill kits are located throughout Area L. Each kit includes bags of absorbent, caustic neutralizer, acid neutralizer, and an inventory of tools and supplies.

COMMUNICATION EQUIPMENT

Alpha numeric emergency pagers are given to employees working in the area. Telephones are located in TA-54-32, TA-54-55, TA-54-62, and TA-54-1058.

Fire alarm pull boxes are locate at TA-54-215

Emergency paging system-loud speaker located throughout the site. Evacuation alarms are located adjacent to the fenceline crash gates at Area L, at the northeast end of TA-54-32, the exterior west end of TA-54-215 and at TA-54-62.

Additional equipment includes two-way radios and cellular telephones.

Description of General Capabilities:

External and internal Laboratory communications which may be used in emergency situations are listed.

Fire alarm may be activated by any employee in the event of a fire to notify the LACFD and security personnel.

Employees can be notified of an emergency situation and appropriate response actions through the use of a text message sent on the emergency alpha-numeric pagers.

The evacuation alarm is a pulsating sound that can be heard throughout Area L. The fire alarm is a double slow-whoop sound.

The emergency paging system can be utilized to alert workers of an emergency situation as well as appropriate response actions.

DECONTAMINATION EQUIPMENT

Emergency shower and eyewash stations are located immediately east of TA-54-31, at TA-54-215, at TA-54-35, and at TA-54-39.

Material Safety Data Sheets (MSDS) are available hard copy or via online database at the facility.

Description of General Capabilities:

Emergency shower and eyewash stations are used by personnel who receive a chemical splash to the skin or eyes. Specific MSDSs for the chemical(s) should be obtained prior to working with the chemical to determine if the application of water is indicated for decontamination.

PERSONAL PROTECTIVE EQUIPMENT

Personnel at Area L are required to use appropriate personal protective equipment (PPE) to protect themselves from the hazards found in the workplace under normal conditions. This PPE may include gloves, steel-toed shoes, and safety glasses. Additional PPE may be required during an unusual hazardous situation or during sampling activities.

Spill kits throughout Area L may contain PPE items such as: gloves, goggles, safety glasses, coveralls, and face shields.

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Table D-2
TA-54 AREA G
Emergency Equipment

FIRE CONTROL EQUIPMENT

ABC and/or BC rated fire extinguishers are available at TA-54-8, TA-54-33, TA-54-48, TA-54-49, TA-54-153, TA-54-224, TA-54-226, TA-54-229, TA-54-230, TA-54-231, TA-54-232, TA-54-283, TA-54-375, and TA-54-412, and on Pads 9 & 10.

Description of General Capabilities:

These portable, manually operated fire extinguishers may be used by any qualified employee in the event of a small fire. For larger fires, security personnel and the Los Alamos County Fire Department (LACFD) are alerted.

Flame or smoke detection equipment and fire alarm pull stations will be located within structures at TA-54-226, TA-54-229, TA-54-230, TA-54-231, and TA-54-232.

Dry-chemical fire suppression systems are available at TA-54-1027, TA-54-1028, TA-54-1030, and TA-54-1041.

A dry-pipe fire suppression system is available at TA-54-412.

Fire alarm pull stations are available at TA-54-33, TA-54-48, TA-54-49, TA-54-153, TA-54-224, TA-54-226, TA-54-229, TA-54-230, TA-54-231, TA-54-232, TA-54-283, TA-54-375, and TA-54-412.

Description of General Capabilities:

Fire alarms may be activated by any employee in the event of a fire to notify the LACFD and security personnel. Security personnel and LACFD are also notified upon activation of the flame or smoke detectors.

Several fire hydrants are located in Area G. These fire hydrants will supply water at an adequate volume and pressure to satisfy the requirements of 40 CFR 264.32(d)

SPILL CONTROL EQUIPMENT

Spill control stations and/or portable spill kits are located at TA-54-8, TA-54-33, TA-54-48, TA-54-49, TA-54-153, TA-54-224, TA-54-226, TA-54-229, TA-54-230, TA-54-231, TA-54-232, TA-54-283, TA-54-375, and TA-54-412.

Each spill kit generally includes bags of absorbent and an inventory of tools and supplies.

COMMUNICATION EQUIPMENT

Alpha-numeric emergency pagers are given to employees working in the area.

Emergency paging system- loud speakers located throughout the site.

Evacuation alarm buttons are located at or near TA-54-33, TA-54-48, TA-54-49, TA-54-153, TA-54-224, TA-54-226, TA-54-229, TA-54-230, TA-54-231, TA-54-232, TA-54-283, TA-54-375, TA-54-412, Pads 9 & 10 and at various muster stations.

Additional equipment includes portable two-way radios and cellular telephones.

Description of General Capabilities:

Loud speakers, telephones and alarms are located throughout Area G. Paging telephones are equipped with public address capabilities. Evacuation alarms have horns mounted on telephone poles throughout Area G. The evacuation alarm is a is an audible alarm that can be heard throughout Area G. Employees can be notified of an emergency situation and appropriate response action through the use of a text message sent on the emergency alpha-numeric pagers. The emergency paging system can be utilized to alert workers of an emergency situation as well as appropriate response actions.

DECONTAMINATION EQUIPMENT

Portable eyewash stations are located at TA-54 CSUs during waste management operations involving free liquids.

One permanent, hard-plumbed eyewash station and a safety shower is located in TA-54-33.

Material Safety Data Sheets (MSDS) are available hard copy or via online database.

Description of General Capabilities:

Emergency shower and eyewash stations are used by personnel who receive a chemical splash to the skin or eyes. Specific MSDSs for the chemical(s) being managed should be obtained prior to working with hazardous or mixed waste to determine if the application of water is indicated for decontamination.

PERSONAL PROTECTIVE EQUIPMENT

Personnel at Area G are required to use appropriate personal protective equipment (PPE) to protect themselves from the hazards found in the workplace under normal conditions. This PPE may include gloves, steel-toed shoes, and safety glasses. Additional PPE may be required during an unusual hazardous situation and can be found in the spill kits or at various locations throughout the site.

OTHER

Continuous air monitors and giraffe monitors (or other appropriate air monitoring equipment) are located in many of the container storage units for detection of airborne radioactive constituents.

Heavy equipment available on site includes:

- Scraper
- Back hoe
- Bulldozer
- Front-end loader

Vehicles available to evacuate personnel from Area G include:

- All-terrain vehicles
- Pickup truck
- Flat-bed truck
- Micro trucks
- Vans

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TABLE D-3
TA-54 WEST
Emergency Equipment

FIRE CONTROL EQUIPMENT

ABC and/or BC fire extinguishers are available at TA-54-38 in the high and low bays and at the outdoor container storage unit.

Description of General Capabilities:

Fire extinguishers may be used by any employee in the event of a small fire. Security personnel and the Los Alamos County Fire Department (LACFD) are alerted when the automatic dry-pipe sprinkler system has been activated.

A dry-pipe sprinkler system is available throughout TA-54-38, including the loading dock area. The dry-pipe sprinkler system is heat activated in the high bay and at the loading dock. It is smoke activated in the low bay.

Fire alarm pull boxes are available inside TA-54-38 at the main entrance, in the high bay, and in the low bay.

Description of General Capabilities:

Fire alarms may be activated by any employee in the event of a fire to notify the LACFD and security personnel.

A fire hydrant is located west of TA-54-38 near the entrance to TA-54 West. This fire hydrant supplies water at adequate volume and pressure to satisfy 40 CFR § 264.32(d).

A wall hydrant is located on the west side of TA-54-38.

Freeze-proof faucets are located on the west, south, and east sides of TA-54-38.

SPILL CONTROL EQUIPMENT

A mobile response kit is located at TA-54-38. The kit includes absorbent socks, pillows, and sheets; goggles; and large plastic bags.

COMMUNICATION EQUIPMENT

Evacuation alarm buttons are located at the high bay, the low bay, and the main entrance to TA-54-38.

Telephones with public address (PA) capabilities are located in TA-54-38 in the high bay, in the low bay, and outside the main entrance. An emergency telephone is also located outside the main entrance.

Alpha-numeric emergency pagers are given to employees working in the area.

Additional equipment includes cellular phones.

Description of General Capabilities:

Telephones with PA capabilities for internal and external communication are available for use by any employee. Employees can be notified of an emergency situation and appropriate response actions through the use of a text message sent on the emergency alpha-numeric pagers. The evacuation alarm can be heard throughout TA-54-38 and TA-54-34. The fire alarm is a double slow-whoop sound. Fire and evacuation alarms are activated in the event of a fire or evacuation. The emergency paging phone can be utilized to alert workers of an emergency situation as well as appropriate response actions.

DECONTAMINATION EQUIPMENT

Safety showers and portable eyewash stations are located in TA-54-38 in the high bay and on the loading dock. The portable eyewash stations will be present during active waste management operations involving free liquids at these locations.

Material Safety Data Sheets (MSDS) are available hard copy or via online database.

Description of General Capabilities:

Safety showers and eyewashes are used by personnel who receive a chemical splash to the skin or to the eyes. Specific MSDSs for the chemical(s) being managed should be obtained prior to working with mixed waste to determine if the application of water is indicated for decontamination.

PERSONAL PROTECTIVE EQUIPMENT

Personnel at TA-54 West are required to use appropriate personal protective equipment (PPE) to protect themselves from the hazards found in the workplace under normal conditions. This PPE includes gloves, steel-toed shoes, and safety glasses. Additional PPE may be required during an unusual hazardous situation and can be found in the spill kits or at various locations throughout the site or at adjacent TA-54 facilities.

Gloves and goggles are found in the spill kits located at TA-54-38.

All workers located within the operating limits of a crane (fixed or mobile) wear hard hats.

TA-55
ATTACHMENT D
CONTINGENCY PLAN

TA-55
ATTACHMENT D
CONTINGENCY PLAN

Specific information on emergency response resources and release prevention/mitigation at TA-55 is provided below.

Emergency equipment currently available for use at TA-55 are included as Tables D-1 through D-4 in this Attachment. A list of emergency equipment (including spill control equipment) available from the Hazardous Materials Response Group is presented in Table D-2 of this Attachment's General Section. Emergency equipment discussed in this Plan may be replaced and/or upgraded with functionally equivalent components and equipment as necessary for routine maintenance and repairs.

Hazardous waste spills are managed by type and severity of the incident. If a hazardous waste spill occurs, the Incident Command evaluates the type and severity of the spill and determines if assistance from the Facility's Emergency Management and Response Group is required. If not, the spill is managed internally by TA-55 personnel.

REFERENCES

LANL, 2002, "Los Alamos National Laboratory General Part B Permit Renewal Application", Revision 2.0, August 2002, LA-UR-03-5923, Los Alamos National Laboratory, Los Alamos, New Mexico.

LANL, 2003, "Los Alamos National Laboratory Technical Area 54 Part B Permit Renewal Application", Revision 3.0, June 2003, LA-UR-03-3579, Los Alamos National Laboratory, Los Alamos, New Mexico.

Table D-1
TA-55 VAULT
Emergency Equipment

FIRE CONTROL EQUIPMENT

Dry-chemical fire extinguishers are located in Room 401.

Description of General Capabilities:

The fire extinguishers are portable, manually-operated units and can be used by any employee in case of fire. The fire extinguishers in Room 401 are for use only in case of fire outside the gloveboxes.

Fire alarm pull boxes and push button stations are available in Room 401.

Description of General Capabilities:

Fire alarms can be activated by any employee in the event of fire to notify the Central Alarm Station.

An automatic fire suppression sprinkler system is located in Room 401.

Automatic thermal alarms are located in the gloveboxes in Room 401.

Fire hydrants are located outdoors on the north, south, and west sides of TA-55-4.

SPILL CONTROL EQUIPMENT

Room 401 provides secondary containment for the storage tank system and cementation unit.

COMMUNICATION EQUIPMENT

Telephones are located in Room 401. The telephones are capable of handling incoming/outgoing calls and paging.

A telephone is located at each of the two west exit doors of TA-55-4.

Two-way radios are available from the Nuclear Materials Technology Facility Incident Command located at TA-55-3, Room 179, for personnel working in Room 401.

Alarms at TA-55-4:

The fire alarm is a zone-wide whooping sound. If a drop-box pushbutton station is used, a zone-wide, high-pitched constant tone will be activated and then switch to the standard whooping sound.

The evacuation alarm is a facility-wide mid-range pulsating tone.

The continuous air monitor alarm is a local high-pitched pulsating tone.

The ventilation alarm is a local slow, repeating chime tone.

The public address system may also be used to announce an evacuation.

DECONTAMINATION EQUIPMENT

Safety showers and eyewash stations are located in Room 401.

Description of General Capabilities:

Safety showers and eyewashes are available for decontamination of personnel who receive a chemical splash to the skin or eyes.

Material Safety Data Sheets (MSDS) are available in Room 401 and at TA-55-4.

Specific MSDSs may be obtained prior to working with any hazardous waste to determine if the application of water is indicated for decontamination.

PERSONAL PROTECTIVE EQUIPMENT

Self-contained breathing apparatus (SCBA) are located in the southside hallway outside of Room 401, in the northside hallway of TA-55-4, and in TA-55-3, Room 179. The SCBAs are available for personnel working in or near Room 401.

Change/decontamination rooms with protective clothing available are located on the first floor of TA-55-4 and in TA-55-3. Protective clothing is also available in a locker located in the hallway near Room 401 for use by personnel working in or near Room 401.

Respirators located in TA-55-3 (Room 107) and in TA-55-4 (Room 515) are available for all personnel working in or near TA-55-4. Respirators are re-issued on a regular basis to TA-55-4 personnel for radiation work. These respirators are stored in the personnel's individual lockers. Combination gas canisters (particulate, organic, and acid) are available in TA-55-4 (Room 515).

OTHER:

If transportation is needed for evacuation, vehicles may be obtained through the Emergency Management and Response Group.

TABLE D-2
TA-55 Building 4 Basement
Emergency Equipment

FIRE CONTROL EQUIPMENT

Halon, dry chemical, and/or carbon dioxide fire extinguishers are available near B40, B05, K13, B45, and the Vault.

Description of General Capabilities:

The fire extinguishers are portable, manually-operated units and can be used by any employee in case of fire.

Fire alarm pull boxes are located at B05, K13, B45, the Vault, and on each side of the fire door.

Description of General Capabilities:

Fire alarms can be activated by any employee in the event of fire to notify the Central Alarm System.

An automatic fire suppression sprinkler system is located throughout the basement at TA-55-4, including the Vault and the office and corridor associated with the Vault.

Fire hydrants are located outdoors on the north, south, and west sides of TA-55-4.

SPILL CONTROL EQUIPMENT

Self-containment pallets or cabinets are provided for containers of liquid and/or potentially liquid-bearing wastes stored at B40, K13, and the Vault.

COMMUNICATION EQUIPMENT

Telephones and intercom stations are located throughout the basement of TA-55-4. The telephones are capable of handling both incoming and outgoing calls. The intercom system is connected to the TA-55-3 Operations Center and allows the Operations Center to easily mobilize emergency response support.

Two-way radios are available from the Nuclear Materials Technology Facility Incident Command located at TA-55-3, Room 179, for personnel working in the basement at TA-55-4.

Personal pagers are issued to and carried by assigned personnel working in the basement of TA-55-4. These pagers are accessed by telephone.

Alarms at TA-55-4:

The fire alarm is an area-wide whooping sound.

The evacuation alarm is a facility-wide mid-range pulsating tone.

The continuous air monitor alarm is a local high-pitched pulsating tone.

The ventilation alarm is a local slow, repeating chime tone.

The public address system activated from the TA-55-3 Operations Center may be used to announce an evacuation.

A site-wide paging system activated from the TA-55-3 Operations Center can be heard throughout TA-55-4.

DECONTAMINATION EQUIPMENT

Eyewashes are located throughout the basement of TA-55-4.

Description of General Capabilities:

The eyewash stations are available for decontamination of personnel who receive a chemical splash to the eyes.

Safety showers are located near B40, K13 and in the office for the Vault.

Description of General Capabilities:

The safety showers are available for decontamination of personnel who receive a chemical splash to the skin.

Material Safety Data Sheets (MSDSs) are available at TA-55-41. Specific MSDSs may be obtained prior to working with any hazardous waste to determine if the application of water is indicated for decontamination.

PERSONAL PROTECTIVE EQUIPMENT

Change/decontamination rooms with protective clothing available are located on the first floor of TA-55-4 and in TA-55-3.

Respirators located in TA-55-4 and in TA-55-3 are available for all personnel working in or near TA-55-4. Particulate and toxic gas canisters are available in TA-55-4.

Self-contained breathing apparatus are located in the TA-55, Basement.

OTHER:

If transportation is needed for evacuation, vehicles may be obtained through the Emergency Management and Response Group.

Forklifts stored in the basement are available for use in the basement and are stored near the north basement doorway.

TABLE D-3
TA-55 CONTAINER STORAGE PAD
Emergency Equipment

FIRE CONTROL EQUIPMENT

A dry chemical fire extinguisher is located on the Container Storage Pad.

Description of General Capabilities:

The fire extinguishers are portable, manually-operated units and can be used by any employee in case of fire.

Fire hydrants are located along the north, south, and west sides of TA-55-4.

One fire hydrant is located just south of the Container Storage Pad.

Fire alarm pull boxes are located in TA-55-42 at the northwest corner of TA-55-4.

One fire alarm pull box is located outside on the south side of TA-55-4.

COMMUNICATION EQUIPMENT

A telephone is located on the east side of TA-55-11, and additional phones are located in TA-55-185 and on the south side of TA-55-4.

Two-way radios are available from the Nuclear Materials Technology (NMT) Facility Incident Command located at TA-55-3, Room 179, for personnel working at the Container Storage Pad.

Personal pagers are issued to and carried by assigned personnel working at the Container Storage Pad. These pagers are accessed by telephone.

Alarms at TA-55:

The fire alarm is an area-wide whooping sound.

The evacuation alarm is a facility-wide mid-range pulsating tone.

The public address (PA) system activated from the TA-55-3 Operations Center may be used to announce an evacuation. PA speakers are located on the west side of TA-55-4.

Two intercom systems to the TA-55-3 Operations Center are located on the south and north sides of TA-55-4.

DECONTAMINATION EQUIPMENT

A safety shower and eyewash station are located outdoors on the Container Storage Pad.

Description of General Capabilities:

The safety shower and eyewash are available for personnel who receive a chemical splash to the skin or eyes.

Material Safety Data Sheets (MSDSs) are available at TA-55-2. Specific MSDSs may be obtained prior to working with any hazardous waste to determine if the application of water is indicated for decontamination.

PERSONAL PROTECTIVE EQUIPMENT

Change rooms with protective clothing available are located on the first floor of TA-55-4 and in TA-55-3.

Respirators are located in TA-55-4 and in TA-55-3 for all personnel working in or near TA-55-4.

OTHER:

If transportation is needed for evacuation, vehicles may be obtained through the Emergency Management and Response Group.

Two forklifts are available for NMT-7 use.

TABLE D-4
TA-55 BUILDING 185
Emergency Equipment

FIRE CONTROL EQUIPMENT:

Fire hydrants are located along the north, south, and west sides of TA-55, Building 4 (TA-55-4).

One fire alarm pull box is located inside TA-55-185.

Fire alarm pull boxes are located in TA-55, Building 42, at the northwest corner of TA-55-4.

One fire alarm pull box is located outside on the south side of TA-55-4.

COMMUNICATION EQUIPMENT:

One telephone is located inside TA-55-185.

A telephone is located on the east side of TA-55-11 and additional phones are located in TA-55-185 and on the south side of TA-55-4.

Two-way radios are available from the Nuclear Materials Technology (NMT) Facility Incident Command located at TA-55-3, Room 179, for personnel working at TA-55-185.

Personal pagers are issued to and carried by assigned personnel working at TA-55-185. These pagers are accessed by telephone.

Alarms at TA-55-4:

The fire alarm is an area-wide whooping sound.

The evacuation alarm is a facility-wide mid-range pulsating tone.

The public address (PA) system activated from the TA-55-3 Operations Center may be used to announce an evacuation.

PA speakers are located on the west side of TA-55-4 near TA-55-185. Intercom systems to the TA-55-3 Operations Center are located on the south and north sides of TA-55-4.

DECONTAMINATION EQUIPMENT:

TA-55-185 will be equipped with a portable safety shower and eyewash station before wastes are managed there.

PERSONAL PROTECTIVE EQUIPMENT:

Change rooms with protective clothing available are located in TA-55-3.

Respirators located in TA-55-4 and in TA-55-3 are available for all personnel working in or near TA-55-185.

OTHER:

If transportation is needed for evacuation, vehicles may be obtained through the Emergency Management and Response Group.

A forklift is available inside of TA-55-185.

Two forklifts are available to NMT-7.

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