ATTACHMENT D

CONTINGENCY PLAN

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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 (*General Facility Conditions*) 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' Security and Emergency Operations 3 - Emergency Management Group (SEO-3:EM). During an emergency situation, line management (*i.e.*, the Line Manager of the affected area) works with an Emergency Manager serving as the SEO-3:EM Duty Officer from the SEO-3:-EM Group. The Emergency Manager has primary responsibility for managing emergency response operations, directing the Emergency Operations Support Center (EOSC) to make appropriate notifications, and activating the emergency response organizations. 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 Fire Department [LAFD], 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 Attachment 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 LAFD. 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 Police Department (LAPD) and the Los Alamos Medical Center (LAMC). The LAPD 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 response structure protocols of the National Incident Management System (NIMS). The NIMS is a national standard that provides a solid foundation for an effective and integrated emergency response both locally and nationally, if necessary.

4. The IC (*e.g.*, SEO-3:EM Duty Officer) coordinates all groups and agencies responding to the emergency and personnel operating at the scene using the ICS. The General Hazardous Waste Emergency Notification Structure, illustrated on Figure D-1, is designed to expand and contract, as appropriate, to include the response groups/agencies needed to address any particular emergency. The EOSC provides notification to on-site and off-site groups and agencies for both response requests and information.

5. The IC may appoint and utilize a network of support personnel to assess, plan for, and mitigate emergencies. These personnel can include, but are not limited to, a Safety Officer, a Public Information Officer, and a Liaison Officer that report directly to the IC and are responsible for issues related to safety, information, and the interaction of various groups associated with the overall emergency. Also reporting directly to the IC are an Operations Section Chief, Logistics Section Chief, Planning Section Chief, and an Administrative Section Chief. The Operations Section Chief oversees the Fire Branch, the Emergency Medical Services Branch, and the Hazardous Material Group, and is responsible for mitigating the emergency response. The Logistics Section Chief is responsible for providing support personnel and equipment necessary for the emergency response. The Planning Section Chief is responsible for planning the mitigation and recovery activities for the emergency. The Administrative Section Chief is responsible for keeping records of expenditures. These ICS positions are listed in Figure D-1. The appropriate ICS positions will be activated as the emergency warrants. During an emergency at the Facility, assistance may be provided to the IC and the IC's appointees by a large variety of response groups/agencies. The responsibilities and/or assistance available from the various response groups/agencies are discussed briefly in Attachment Sections D.1.2 through D.1.7 and the appropriate representatives will be contacted during an emergency as appropriate.

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

D.1.1 Emergency Operations-Emergency Management Group

1. The Permittees shall delegate the authority and responsibility for administering and implementing the Facility's emergency management program to the Security and Emergency Operations (SEO) Division, which includes SEO-3:EM. SEO Division personnel shall coordinate and issue the Facility's Los Alamos National Laboratory and Los Alamos Field Office Hazardous Materials Program Plan; SEO-3:EM provides response coordination for emergencies. SEO-3:EM provides a 24-hour Emergency Operations Support Center (EOSC) for the Facility and an Emergency Manager serving as the 24-hour Duty Officer to respond to emergencies, including hazardous and mixed waste releases. The Facility Emergency Manager (*i.e.,* the SEO-3:EM Duty Officer) is the functional equivalent of the Emergency Coordinator (40 CFR § 264.55). The SEO-3:EM maintains an Emergency Operations Center (EOC) in a ready condition, should a center be required. The primary EOC is located at TA-69, Building 33 (TA-69-33). An alternate mobile EOC is equipped and ready for immediate deployment. Should an

EOC be activated during an emergency, additional emergency personnel can be requested by the IC through the EOC.

2. Assignment as the SEO-3:EM Duty Officer is rotated. The Duty Officer can be reached 24 hours a day by contacting the EOSC at 667-6211.

3. The SEO-3:EM Duty Officer will respond to emergency incidents involving the release of hazardous or mixed waste to the environment, including spills, fires, and explosions. With input from the appropriate Facility groups, the SEO-3:EM Duty Officer shall initially assess the possible hazards to human health or the environment and, if assuming incident command, shall use whatever response personnel and/or emergency equipment necessary to control and contain the waste. In the event of an emergency, the SEO-3:EM Duty Officer typically becomes the IC with full responsibility for field activities. As described previously, the exception to this is when on-site personnel can adequately address the emergency and maintain incident command internally.

4. The SEO-3:EM Duty Officer responding to an emergency shall have access to various tools to include Emergency Actions Levels with prescribed protective actions and ChemLog with a current chemical inventory of the appropriate building(s) in the area in which the incident is occurring. These tools shall be maintained by the EOC with assistance from the facility manager where a waste management unit is located and shall be available at the EOC at TA-69; located on-site for use by emergency response personnel; and available to SEO-3:EM Duty Officers by computer. The various response groups shall obtain specific information relating to the facilities involved (including the layout of all affected buildings; the location of evacuation routes, equipment, and personnel; properties of the materials/wastes managed at the facility; and the hazards associated with these materials/wastes) from other site-specific information.

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

Primary:

Brenda Andersen
3926 A Alabama
Los Alamos, NM
(H) 505-662-4173
(W) 505-667-6211
(C) 505-699-1144

Alternates:

Ron Huerta
P.O. Box 923
Alcalde, NM
(H) 505-852-0286
(W) 505-667-6211
(C) 505-412-8434

Peter Salazar
912 Calle Quintana
Espanola, NM
(H) 505-747-1399
(W) 505-667-6211
(C) 505-500-2594

Dave McClard
23 Ojito Drive
Espanola, NM
(H) 505-412-8945
(W) 505-667-6211
(C) 505-699-0803

6. To assure timely notifications and immediate response during an emergency, the Permittees shall ensure that the telephone numbers 911 or 667-6211 are contacted to obtain the on-call SEO-3:EM Duty Officer.

D.1.2 Hazardous Materials Response

1. The Hazardous Materials (HAZMAT) Group is responsible for the aggressive mitigation of chemical, radiological, hazardous waste, and mixed waste emergencies, including field decontamination of responders and response equipment. At the request of the IC, the HAZMAT Group may provide limited field decontamination support for victims. The HAZMAT Group is capable of providing a decontamination station at the scene of a hazardous material incident to process people working in a contaminated area and is prepared to perform decontamination of personnel. The HAZMAT Group shall meet the training criteria for emergency response personnel specified in the Code of Federal Regulations, Title 29, §1910.120(q)(6)(iii), (iv), and (v). The HAZMAT Group acts as part of the ICS reporting directly to IC, or the Operations Section Chief if the position is staffed.

2. During an emergency response, the HAZMAT Group may also provide site field monitoring to determine the nature and extent of contamination, provide information on correct handling of chemicals, make recommendations on protective clothing and equipment, and provide exposure and treatment information to responders. The field monitoring team leader supervises field

monitoring activities to determine the boundaries of the potential release. The HAZMAT Group may obtain resources from environmental monitoring groups, such as health physics and industrial hygiene personnel.

D.1.3 Environmental Protection Division and Waste Management Division Response

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

D.1.3.1 Ecology Personnel

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

D.1.3.2 Meteorology and Air Quality Personnel

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

D.1.3.3 Hazardous Waste Compliance Personnel

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

D.1.3.4 Water Quality and Hydrology Personnel

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

D.1.4 Other Facility Response Resources

Emergency response personnel from the Plutonium Manufacturing and Technology Division at TA-55 are trained to respond to emergencies at that facility. Personnel from the Los Alamos National Laboratory (LANL) Transuranic Program may provide guidance on proper treatment, storage, and transportation of hazardous and mixed waste at TA-50 and TA-54.

D.1.5 Contracted Response

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

D.1.5.1 Security Services

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

D.1.5.2 Maintenance Site Services

Maintenance Site Services (MSS) provides a maintenance support force to the Facility. This support force is under the Permittees' direction in an emergency. MSS also provides a representative to the Facility in the event of an emergency and participates, as necessary, in post-emergency cleanup under the direction of a Recovery Manager designated by the IC. The duties of the Recovery Manager are discussed in Attachment Section D.10.

D.1.5.3 Los Alamos Fire Department

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

D.1.6 Facility Support

D.1.6.1 Health Physics Operations

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

D.1.6.2 Occupational Medicine Personnel

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

2. Although occupational medicine personnel are not routinely involved with on-scene emergency response, the group maintains a central medical facility with a fully equipped emergency room and decontamination facilities at TA-3, Building 1411. The location of this and other emergency facilities are shown on Figure 49 in Attachment N (*Figures)*. Medical staff at these facilities includes physicians, physician assistants, nurse practitioners, nurses, technicians, psychologists and counselors. All full-time medical providers and nurses receive radiation accident training. Occupational medicine personnel also maintain access to a database that provides the clinical staff with timely toxic exposure and treatment information.

D.1.6.3 Industrial Hygiene and Safety Personnel

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

D.1.6.4 Performance Assurance Office

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

D.1.7 Outside Response Agencies

During an emergency, outside response agencies report directly to the IC. A Liaison Officer or an Operations Section Chief, designated by the IC, may aid in coordinating and directing the groups responding to an emergency.

D.1.7.1 Los Alamos Police Department

The Los Alamos Police Department (LAPD) may assume IC under unique circumstances, but usually has only minimal interaction with the Facility in an on-site emergency. This interaction normally involves traffic control on DOE roads with public access, handling criminal activity, and criminal investigations.

D.1.7.2 Los Alamos County Emergency Management Coordinator

Los Alamos County has an agreement with the Facility's SEO-3:EM to provide assistance in certain emergency situations. If an emergency occurs on Facility property that may affect the communities of Los Alamos and White Rock, SEO-3:EM personnel will notify the Los Alamos County Consolidated Dispatch Center which in turn will notify the Los Alamos County

Emergency Management Coordinator, who will coordinate necessary emergency actions throughout the county.

D.1.7.3 Los Alamos Medical Center

The Facility maintains a fully equipped decontamination room adjacent to the emergency room at LAMC. In the event that a case is sent to LAMC, support for the emergency room staff is provided by Facility occupational medical personnel. Radiation protection, industrial hygiene, and HAZMAT personnel also provide assistance to the emergency room staff; assistance from additional Facility resources is provided, as necessary. Assistance is coordinated through SEO-3:EM personnel.

D.2 EMERGENCY EQUIPMENT AND COMMUNICATIONS

D.2.1 Emergency Equipment

The Permittees shall make available the lists of emergency equipment listed in Table D-1 for use at any of Permittees' hazardous or mixed waste management units. The list includes emergency equipment available in the HAZMAT vehicles and trailers as well as supplemental emergency equipment maintained by the LAFD, Maintenance Site Services, and occupational medicine personnel. A list of emergency equipment available for use at specific hazardous and/or mixed waste management units is identified in Attachment Tables TA-3, D-1; TA-50, D-1; TA-54, Area L, D-1; TA-54, Area G, D-2; TA-54 West, D-3; TA-55 Building 4 First Floor, D-1; TA-55 Building 4 Basement, D-2; TA-55 Container Storage Pad, D-3; D-4; and TA-63 Transuranic Waste Facility, D-5. Emergency equipment listed in these tables may be replaced and/or upgraded with functionally equivalent components and equipment, as necessary, for routine maintenance and repair.

D.2.2 Emergency Communications

The initial phase of an emergency may involve a small number of individuals at the affected area and that requires notification of the SEO-3:EM Duty Officer, utilizing local communication equipment and/or systems. When responding to hazardous and/or mixed waste emergencies, the Permittees shall ensure that SEO-3:EM personnel can provide communications between response units and emergency organizations.

D.2.2.1 Fire Alarms

Fire alarms are monitored 24 hours per day by trained personnel in the EOSC. Both the primary and backup buildings where the monitoring takes place have emergency power systems. The SEO-3:EM Duty Officer is notified when there is confirmed fire or smoke via the Los Alamos County Consolidated Dispatch Center.

D.2.2.2 Power Dispatch

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

D.2.2.3 Additional Communication Systems

Internal communication systems at the Facility include:

1. Preprogrammed telephone system
2. Private telephone lines
3. A variety of frequency modulated very high frequency simplex repeater systems, including:
   - Multiple base stations
   - Mobile and hand-held units
   - Links to New Mexico public safety agencies
4. An ultrahigh frequency radio system, including:
   - Multiple antenna sites
   - Mobile and base units
   - Links with the LAPD, the LAFD, and the State Medical System
5. A 400-megahertz trunked radio system that includes a link with the LAFD
6. Transmission and reception (through the EOC) for:
   - Secure telephone
   - Secure fax
   - Secure still video
   - Secure videoconference system (to all DOE EOCs and DOE Headquarters)
7. Access to all radio systems outlined above (through the EOC).
8. Mass Notification System

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

1. A preprogrammed telephone system
2. Private telephone lines
3. Two NAWAS stations
4. Mass Notification System

3. The Permittees' EOC, maintained by SEO-3:EM personnel, operates radio systems on key Facility and off-site channels. Emergency personnel responding to on-site incidents have the benefit of wide-area radio coverage using EOC facilities. The SEO-3:EM Duty Officer is responsible for activating whatever support personnel, equipment, or services are needed 24 hours a day.

D.3 CONTINGENCY PLAN IMPLEMENTATION

The following sections discuss requirements used to implement this Plan, emergency notification, SEO-3:EM Duty Officer activities and actions to be taken in response to fires, explosions, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents into the environment at the Facility.

D.3.1 Requirements for Implementation

1. The decision to implement this Plan depends upon whether an emergency exists, which for the purposes of this section is defined as an imminent or actual incident arising from fires, explosions, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents that could threaten human health or the environment. The SEO-3:EM Duty Officer or IC will use the guidelines listed below to decide whether to implement this Plan. The Permittees shall investigate all adverse environmental, safety, health, and operational occurrences (on-site and off-site) resulting in implementation of the contingency plan to determine causal factors and identify the appropriate corrective actions.

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

1. Spills:
   - If a hazardous or mixed waste spill cannot be contained with secondary containment or application of sorbents
   - If a hazardous or mixed waste spill causes the release of flammable material, creating a fire or explosion hazard
   - If a hazardous or mixed waste spill results in toxic fumes that threaten human health
2. Explosions:
   - If an unplanned explosion involving hazardous or mixed waste occurs
   - If an imminent danger of an explosion involving hazardous or mixed waste exists.
3. Fires:
   - If a fire involving hazardous or mixed waste occurs
   - If any building, grass, forest, or nonhazardous waste fire exists that threatens to volatilize or ignite hazardous or mixed waste.
4. Other Acts of Force Majeure
   - If an earthquake or other natural disaster threatens containment integrity, including precipitation that threatens to move spilled material off site.

D.3.2 Emergency Notification

1. Emergency notification requires immediate notification of 667-6211 or SEO-3:EM personnel upon discovery of an imminent or actual incident involving hazardous and/or mixed waste. During nonworking hours, personnel will report all imminent or actual incidents involving hazardous and/or mixed waste to the Emergency Manager at 667-6211. In the case of fire, notification of these individuals is superseded by the Facility fire alarm system. A fire is reported by dialing 911, activating automatic alarms, or activating a fire alarm pull box. All fire

alarms alert EOSC who alerts the SEO-3:EM Duty Officer and the Los Alamos County Consolidated Dispatch Center, who contacts the LAFD.

2. Upon recognition of a hazardous or mixed waste emergency, the first arriving emergency-trained person will become the Facility Command Leader. Once SEO-3:EM personnel are notified of the emergency, the SEO-3:EM Duty Officer will proceed to the scene and be briefed by the Facility Command Leader, building/area personnel, and/or other emergency units/teams. The SEO-3:EM Duty Officer will then assume the position of IC. If necessary, the IC may recommend activation of the EOC and the emergency management team. The IC will assign ICS positions and update the EOSC and request necessary resources. The EOSC will notify the appropriate emergency response groups. The IC may determine from the list of response groups described in Attachment Sections D.1.2 through D.1.7 which groups to contact in an emergency. Each response group maintains an on-call person and/or a call-down procedure to respond to emergencies.

3. SEO-3:EM personnel shall be notified of any potential hazardous or mixed waste emergency. The IC will use whatever means are available (including the assistance of other response groups, computer data searches, and sampling) to determine if a hazardous or mixed waste emergency exists.

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

D.3.3 Emergency Manager Actions

1. Upon notification of an emergency incident, the SEO-3:EM Duty Officer may:

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

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

    1. Assess the hazards to human health and the environment, including both direct and indirect effects, such as generation of toxic, irritating, or asphyxiating gases and/or hazards of runoff of water or chemicals used for fire suppression. An individual designated by the IC will use the guidelines in Section D.3.1 to assess the hazards to human health and the environment. If any of the criteria under Section D.3.1 are met

and if the responsible Line Manager (or his/her designee) has not already accomplished evacuation of the area, the IC will initiate shelter in place or evacuation of the immediate area.

2. Direct the EOSC staff to initiate protective actions and immediately notify appropriate response groups and personnel as per the SEO-3:EM Guidelines. The Los Alamos County Emergency Coordinator may activate one or more of the following community alert mechanisms: reverse 911, the AM 1490 KRSN radio, or the cable television capture system, site wide area network radios, and public radio and television channels.
3. In the case of fire or release of any type, make reasonable efforts to confirm that all response personnel at the scene are aware of actual or imminent special hazards associated with hazardous or mixed waste.
4. In emergency situations, contact the appropriate ENV representative to notify the Department's Hazardous Waste Bureau and the National Response Center at (800) 424-8802, reporting:
   - The name and telephone number of the ENV representative
   - The name and address of the facility
   - The time and type of incident
   - The name and quantity of material involved, to the extent known
   - The extent of injuries, if any
   - The possible hazards to human health or the environment outside the facility.
5. When an emergency occurs at hazardous or mixed waste treatment units, ensure that appropriate Facility personnel monitor for leaks, pressure buildup, gas generation, or equipment ruptures.

3. Once control of the emergency is established, the IC will take all reasonable measures to minimize the occurrence, recurrence, or spread of fires, explosions, or releases. In addition, the IC will delegate cleanup and decontamination responsibilities to the Recovery Manager. These responsibilities may include:

1. Arranging for site cleanup.
2. Assisting with arrangements for proper handling of recovered waste, contaminated soil, or contaminated surface/groundwater.
3. Assisting with arrangements for decontamination of equipment, as needed.
4. Arranging for replacement and/or repair of equipment, as needed.
5. Requesting that testing is conducted to verify successful cleanup.

4. The Permittees shall report implementation of this Plan in accordance with Permit Sections 1.9.12, 1.9.13, and 2.11.6.3.

D.4 SPILLS

1. Sudden releases may include spills of hazardous or mixed waste that pose a significant threat to human health or the environment. Spill incidents resulting in a sudden release of hazardous or

mixed waste that present a potential threat to human health or the environment, as listed in Attachment Section D.3.1, require implementation of this Plan.

2. Hazardous and mixed wastes are stored on site at the Facility in a variety of containers. The general steps in handling hazardous and/or mixed waste spills are as follows:

1. Isolate the immediate area and deny entry to all unauthorized personnel;
2. Contain the spill by spreading sorbents or forming temporary dikes to prevent further migration (performed by properly trained personnel, if safe);
3. Monitor the spill area and sample the spilled waste and contaminated media.
4. Package the waste and contaminated media in sound containers;
5. Decontaminate the area and all involved equipment and personnel (followed by testing to assure adequate cleanup); and
6. Remove the waste and contaminated media (performed by appropriate waste management personnel).

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

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

D.4.1 Spill Control Procedures

When a flammable organic solvent spill, a highly acidic spill, or a highly caustic spill has been stabilized with the contents of an organic solvent spill kit, an acid spill kit, or a caustic spill kit, respectively, the resulting material may be sorbed using a nonbiodegradable sorbent. Nonbiodegradable sorbent can be used to control any spill if it is known to be compatible with the spilled material. Appropriate containers or packaging shall be used to collect all spilled material and contaminated sorbent. Attachment Tables TA-3, D-1; TA-50, D-1; TA-54, Area L, D-1; TA-54, Area G, D-2; TA-54 West, D-3; TA-55 Building 4 First Floor, D-1; TA-55 Building 4 Basement, D-2; TA-55 Container Storage Pad, D-3; D-4; and TA-63 Transuranic Waste Facility, D-5 list emergency equipment available for spill control at specific units. The ultimate disposition of any contaminated sorbent or waste material shall be determined by appropriate

waste management personnel, and in accordance with hazardous waste management regulatory requirements.

D.4.1.1 Tank System Spill Control and Reporting

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

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

D.4.1.2 Tank System/Secondary Containment Repair and Closure

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

D.4.1.3 Certification of Major Repairs

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

D.4.2 Decontamination Verification

1. Decontamination will be accomplished at the spill site by removal of all contaminated material. After the spilled material has been sorbed, the material will be containerized. If the spill occurs on a concrete or asphaltic-concrete area, water or an appropriate solvent will be used to clean the area. Liquids (*i.e.*, spilled material and cleaning water or solvents used to clean a spill) may be sorbed with a compatible, nonbiodegradable sorbent and containerized. If a spill is

from an identifiable source, the spilled material may be characterized as a newly-generated waste using acceptable knowledge or may be analyzed, as applicable, for the hazardous waste constituents known to be components of the waste managed at that unit. Analytical method(s) given in Table D-3 will be utilized, as appropriate. If the spill is from other than an identifiable source, the spilled material will be analyzed for the appropriate parameters listed in Table D-3. All personnel conducting decontamination verification will wear appropriate PPE. Radiation protection personnel will conduct health physics monitoring whenever mixed waste is involved to ensure that radiation exposure is maintained as low as reasonably achievable. Any hazardous or mixed waste collected from decontamination activities will be handled appropriately.

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

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

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

D.5 EXPLOSION

1. Explosions and resultant releases may result in a significant threat to human health or the environment. The potential exists for hazardous or mixed waste to be released during an

explosion. Implementation of this Plan is required whenever there is an explosion at a permitted unit.

2. In the event of an explosion at the Facility, all personnel will immediately evacuate the area. Any injured personnel will be decontaminated at the site, if required and if time allows. An LAFD ambulance will transport these personnel to LAMC for treatment. If an injury is severe and requires immediate medical evacuation, the injured person will be wrapped to contain contamination, if necessary. In the case of an actual or potential explosion, on-site personnel will contact SEO-3:EM personnel immediately so that the Emergency Manager can ensure that all necessary emergency response personnel are alerted. The LAFD is notified automatically upon fire alarm activation. The Emergency Manager assumes incident command and will remain near but at a safe distance from the site in order to inform personnel responding to the explosion of the known hazards.

3. If a fire results from an explosion, the LAFD Senior Officer will, upon arrival at the scene, evaluate all available information and determine the appropriate firefighting methods and tactics. The LAFD Senior Officer will direct firefighting operations as the acting IC until SEO-3:EM formally assumes command.

D.6 FIRE

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

2. Fire alarms will be sounded automatically or manually to alert personnel that a fire hazard exists and to evacuate the area immediately if in the vicinity. Information related to the various fire alarms at the specific units is included in Attachment Tables TA-3, D-1; TA-50, D-1; TA-54, Area L, D-1; TA-54, Area G, D-2; TA-54 West, D-3; TA-55 Building 4 First Floor, D-1; TA-55 Building 4 Basement, D-2; TA-55 Container Storage Pad, D-3; D-4; and TA-63 Transuranic Waste Facility, D-5.

3. Depending on the size of the fire and the fuel source, portable fire extinguishers may be used. However, Facility policy does not encourage the use of portable fire extinguishers by employees unless they are properly trained. Instead, Facility policy encourages immediate evacuation of the area and notification of the Los Alamos County Emergency Coordinator by dialing 911. For any fire, including a fire that involves hazardous or mixed waste, the responsible Line Manager and SEO-3:EM personnel must be contacted immediately. The Emergency Manager will alert the LAFD and all other necessary emergency response personnel. If the fire spreads or increases in intensity, all personnel must follow protective actions as designated by the Emergency Manager. The Emergency Manager assumes incident command and will remain near the scene to advise personnel responding to the fire of the known hazards.

4. Upon arrival at the scene, the LAFD Senior Officer will evaluate all available information and determine the appropriate firefighting methods and tactics. The LAFD Senior Officer will direct

firefighting operations as the acting IC until the SEO-3:EM Duty Officer formally assumes command.

D.7 UNPLANNED NONSUDDEN RELEASES

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

D.7.1 Responsibility

Appropriate Facility personnel are responsible for correction of a nonsudden release from a hazardous or mixed waste unit if the correction can be performed safely with normal maintenance and management procedures. Personnel from SEO-3:EM 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 Department.

D.7.2 Nonsudden Releases

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

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

D.7.3 Nonsudden Release Surveillance

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

2. Different types of surveillance sampling conducted at these stations include measuring radiation and collecting samples of air particulates, surface waters, groundwater, soil, sediment, and foodstuffs for subsequent analysis. Additional samples provide information about particular

events, such as major runoff events and nonroutine releases. Data from these efforts are used for comparison with standards, for determining background levels, and for radiation dose calculations.

D.8 EXPOSURE TO HAZARDOUS OR MIXED WASTE

1. If a person is exposed to hazardous or mixed waste, the affected person, a co-worker, or line management will notify SEO-3:EM personnel. Appropriate first aid should be administered immediately. An SEO-3:EM representative will make appropriate notifications as soon as possible so that exposure levels and decontamination requirements can be established. The affected person will then be transported to the occupational medical facility or to LAMC for evaluation. If possible, the material involved in the exposure will be ascertained, and the information will be given to the medical staff.

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

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

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

D.9 EVACUATION

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

D.9.1 Emergency Process Shutdown Prior To Evacuation

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

D.9.2 Evacuation Plan

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

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

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

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

1. The person discovering the accident or emergency will call 911 if the event is life-threatening or LAFD is required, or 667-6211 for all other evacuations. The person will then notify line management.
2. Site-specific BEPs and/or emergency action procedures will be followed concerning evacuation, sweep, personnel accountability, and equipment shutdown procedures.

5. A responsible on-site person may direct the initial evacuation and the fire alarm system may be activated. SEO-3:EM personnel will be notified and dispatched immediately. A responsible on-site person may implement and direct the evacuation process until the SEO-3:EM Duty Officer or LAFD arrives at the scene to assume that responsibility.

D.10 SALVAGE AND CLEANUP

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

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

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

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

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

D.11 EMERGENCY RESPONSE RECORDS AND REPORTS

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

D.12 CONTINGENCY PLAN AMENDMENT

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

1. The facility permit is revised;

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

D.13 REFERENCES

EPA, 1986 and all approved updates, "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," *EPA-SW-846*, U.S. Environmental Protection Agency, Office of Solid Waste and Emergency Response, U.S. Government Printing Office, Washington, D.C.

LANL, 2014. *LANL Emergency Procedures and Protective Actions, P1201-4, R2.* Los Alamos National Laboratory, Security and Emergency Operations Division, Los Alamos, New Mexico

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.

Table D-1

Los Alamos National Laboratory-Wide Emergency Equipment

Hazardous Materials (HAZMAT) Vehicles and Associated Emergency Equipment

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HAZMAT vehicles and trailers are located at Technical Area (TA) 64, Building 39 (TA-64-39). They are available to the Security and Emergency Operations Division's Emergency Response Group (SEO-1:ER) for emergency response to all of the TAs at the Facility. SEO-1:ER 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 Fire Department (LAFD)

Supplemental emergency equipment available from the LAFD 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 from Maintenance and Site Services (MSS)

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 (OM)

At TA-3 (SM-1411) Central Clinic

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

PERSONNEL

Physicians
Physician Assistants
Nurse Practitioners
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 (O_2)
Portable physicians' bag with medications
Portable suction unit
Portable stretchers (ambulance, gurney, folding)
Wheelchairs
O_2 tanks
Manual resuscitators
Intravenous (IV) stands
IV solutions
Otoscopes/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 (portable)

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 Fire Department trunked radio system.

Table D-2

Waste Analysis Parameters and Test Methods[a]

Parameter	Test Method	Reference[b]
Ignitability	Pensky-Martens closed-cup method	(L, S) SW1010, SW1020A
	Setaflash closed-cup method	(S) SW1030
	Ignitability of solids	(L, S) ASTM D93-02a
Reactivity	Test method to determine hydrogen cyanide released from waste	(L, S) SW, Section 7.3
	Test method to determine hydrogen sulfide released from waste	
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)	(L, S) SW8260B
	GC/MS capillary column technique	
Semivolatile organics	GC/MS	(L, S) SW8270C[c]
	GC/MS capillary column technique	(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-2 (Continued)

Parameter	Test Method	Reference[b]
Total RCRA metals[c,d]	Acid digestion	(L) SW3010A, (S) SW3050B
	Inductively coupled plasma atomic emission spectroscopy	(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-3

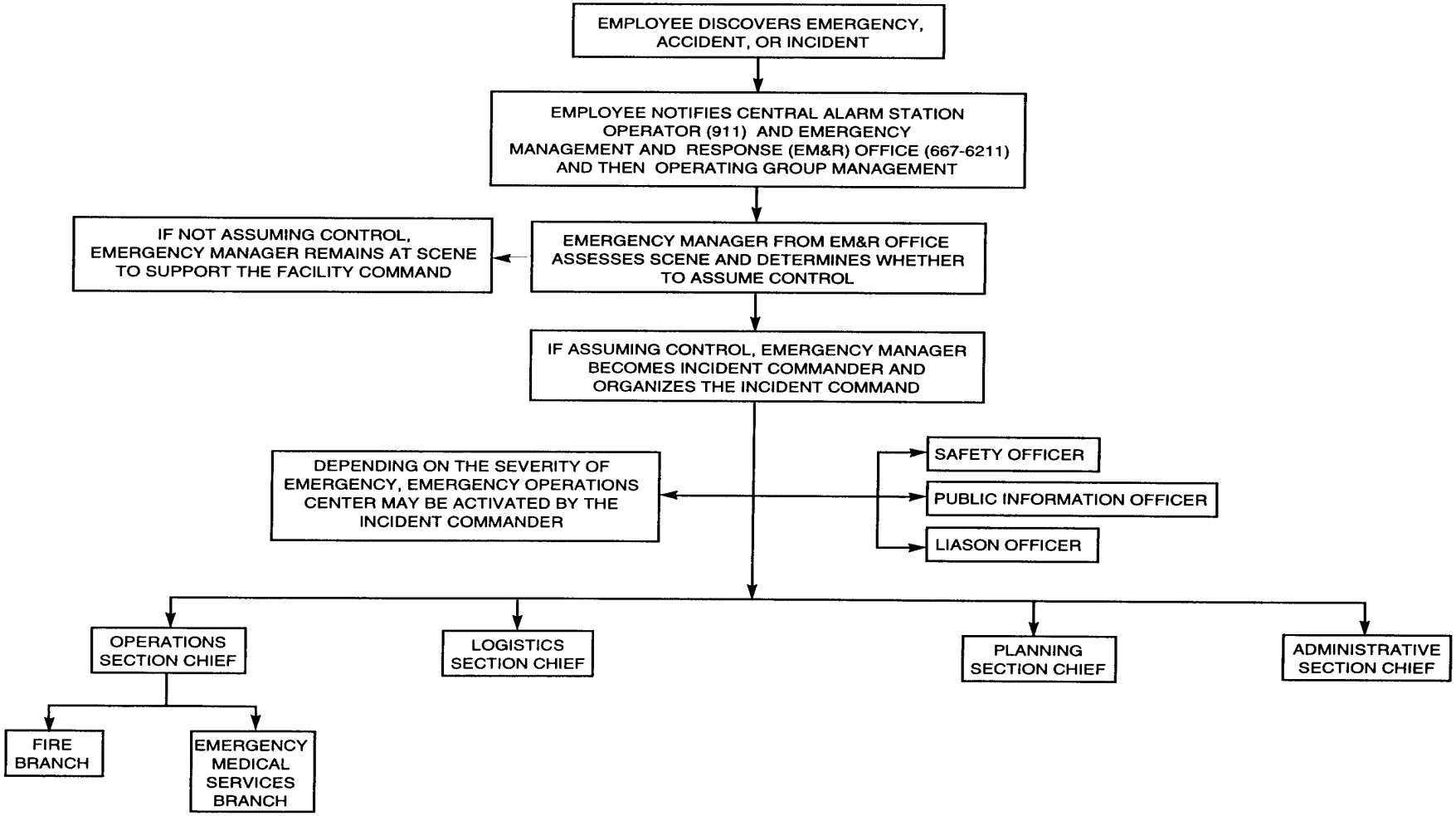
Evacuation Determination and Re-Entry Conditions

Reason for Evacuation	Evacuation Determination Made by	Reentry Conditions[a]
Fire	[1]Fire or evacuation alarm, Line Manager 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]Line Manager or alternate, Senior Staff Member, Lead Engineer, or Senior Technician, or Emergency Manager	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	Line Manager or alternate, Senior Staff Member, Lead Engineer, Senior Technician, or Emergency Manager	Same as above
Bomb or bomb threat	EO-EM[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 SEO-3:EM Incident Commander.
[b] "IC" refers to the Incident Commander as defined in 29 CFR § 1910.120.
[c] "EO-EM" refers to the Emergency Management Group.
[d] "R&D" refers to the Research and Development Section

Figure D-1

General Hazardous 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 Alarm/Emergency Response Instruction (AERI) 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 Alarm/Emergency Response Instruction (AERI)establishes the CMR Facility Emergency Response, which is comprised of a Facility Incident Command (FIC), and the CMR Operations Center. 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 during 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. When mitigation of the emergency is beyond the capabilities of CMR or when injuries occur or could potentially occur due to the emergency, EO-EM and the EO-EM Duty Officer is required to respond.

The EMP has been superseded by the AERI which includes information on emergency equipment (*see* Table TA-3, 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

Table D-1

TA-3

Emergency Equipment

FIRE CONTROL EQUIPMENT

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.

Twelve 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 Fire Department (LAFD) 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 LAFD 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.

Safety data sheets (SDS) 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 SDSs 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 made available if necessary in the event of an emergency by HAZMAT Personnel.

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-1 of this Contingency Plan for equipment available in the Hazardous Materials Response Group vehicles and trailers.

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 the permitted units at TA-50-69 are included in Table D-1 below. A list of emergency equipment (including spill equipment) available from the SEO-3:EM and SEO-1:ER 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 Commander evaluates the type and severity of the spill and determines if assistance from SEO-3:EM 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 Unit (Room 102)

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

- **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.

  Locations
  Three fire alarm pull stations are located in the TA-50-69, Indoor Unit. Personnel working at the TA-50-69, Outdoor Unit 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 SEO-3:EM or SEO-1:ER 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 Unit

COMMUNICATION EQUIPMENT

Description of General Capabilities
Telephones for internal and external communication are available for use by employees. Alphanumeric pagers or cellular phones with page/text capabilities are also utilized by employees. Employees can be notified of an emergency situation and appropriate response actions through the use of a text message sent to the pagers, phones, or via two-way radios that may also be utilized for communication. Employees can reach emergency personnel in the time of an emergency through cellular telephones and two-way radios. Fire alarms are activated in the event of a fire. The fire alarm is a double slow whoop sound. When working at the permitted units, personnel will have immediate access to emergency communication equipment either directly or through visual or voice contact with another employee.

Location of Communication Equipment
Personnel working at the permitted units at TA-50-69, will carry cellular phones, pagers, or two-way radios, 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 SDSs 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 Safety Data Sheets
An eyewash is located in the TA-50-69, Indoor Unit (Room 102). A portable eyewash station will be available during active waste management operations at the Outdoor Unit 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 Fire Department (LAFD) 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 LAFD 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, cellular telephones with page/text capabilities, and/or two-way radios are given to employees working in the area. Personnel will carry cellular telephones, pagers or two-way radios or will have immediate access to communication equipment through visual or voice contact with another employee.

A fire alarm pull box is located 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.

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 LAFD 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 or cellular telephones with page/text capabilities.
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-54-39, and outside TA-54-39.

Safety Data Sheets (SDSs) 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 SDSs 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.

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-54-229, TA-54-230, TA-54-231, TA-54-232, TA-54-283, TA-54-375, and TA-54-412, and on Pads 1, 9 and 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 Fire Department (LAFD) are alerted.

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

Ultra-violet detectors, smoke and audible devices are located within structure TA-54-153.

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-54-229, 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 LAFD and security personnel. Security personnel and LAFD 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-54-229, 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. Additional equipment includes portable two-way radios and cellular telephones. Personnel will carry cellular telephones, pagers, to two-way radios or will have immediate access to communication equipment through visual or voice contact with another employee.

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-54-229, TA-54-230, TA-54-231, TA-54-232, TA-54-283, TA-54-375, TA-54-412, Pads 1, 9 and 10 and at various muster stations.

Description of General Capabilities:
Loud speakers, paging telephones equipped with public address capabilities, and alarms located throughout Area G can be used to notify personnel of an emergency. The emergency paging system can also be utilized to alert workers of appropriate response actions. Evacuation alarms have horns mounted on telephone poles throughout Area G that emit an audible alarm that can be heard throughout Area G. Employees can also be notified of an emergency situation and appropriate response action through the use of a text message sent on the emergency alpha-numeric pagers or cellular telephone, or by two-way radio.

DECONTAMINATION EQUIPMENT

Portable eyewash stations are located at permitted units located at TA-54 Area G during waste management operations involving free liquids.

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

Safety Data Sheets (SDSs) 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 SDSs 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

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 Fire Department (LAFD) are alerted when the automatic dry-pipe sprinkler system has been activated.

A pre-action sprinkler system is available throughout TA-54-38, including the loading dock area. The sprinkler system is activated by loss of nitrogen pressure (e.g., an open sprinkler) anywhere in the system or by heat detection in the high bay and at the loading dock and by smoke detection in the remainder of the building.

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 LAFD 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.

Public address (PA) capabilities are located in TA-54-38 in the high bay, in the low bay, and outside the main entrance.

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

Additional equipment includes portable two-way radios and cellular phones. Personnel will carry cellular telephones, pagers, or two-way radios or will have immediate access to communication equipment through visual or voice contact with another employee.

> Description of General Capabilities:
> PA capabilities for internal 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, cellular telephones, or by two-way radio. The evacuation alarm can be heard throughout TA-54-38. 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 PA 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.

Safety Data Sheets (SDSs) 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 SDSs 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 TA-55 Emergency Management Team is presented in Table D-1 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 facility line management evaluates the type and severity of the spill and determines if assistance from SEO-3:EM and the SEO-3:EM Duty Officer 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 Building 4, First Floor

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 TA-55 Operations Center located at TA-55, Building 0004, Room 218, 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.

Electronic versions of Safety Data Sheets (SDSs) are available in Room 401 and at TA-55-4, the TA-55 Operations Center located at TA-55, Building 0004, Room 218, for personnel working in Room 401.

Specific SDSs 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 SEO-3:EM or SEO-1:ER.

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-55-4 Operations Center and allows the Operations Center to easily mobilize emergency response support.

Two-way radios are available from the TA-55 Operations Center located at TA-55, Building 0004, room 218, 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-55-4 Operations Center may be used to announce an evacuation.

A site-wide paging system activated from the TA-55-4 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.

Safety Data Sheets (SDSs) are available at TA-55-4. Specific SDSs 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 SEO-3:EM or SEO-1:ER.

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 TA-55 Operations Center located at TA-55, Building 0004, Room 218, 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-55-4 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-55-4 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.

Safety Data Sheets (SDSs) are available at TA-55-2. Specific SDSs 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 SEO-3:EM or SEO-1:ER. Two forklifts are available for NPI-7 use.

TABLE D-5

TA-63 Transuranic Waste Facility

Emergency Equipment

FIRE CONTROL EQUIPMENT

ABC and/or BC rated fire extinguishers are available at TA-63-145, TA-63-149, TA-63-150, TA-63-151, TA-63-152, TA-63-153, TA-63-154, TA-63-155, TA-63-156, and TA-63-157.

> 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 Fire Department (LAFD) must be alerted.

Flame or smoke detection equipment and fire alarm pull stations are located within structures at TA-63-149, TA-63-150, TA-63-151, TA-63-152, TA-63-153, and TA-63-154.

Dry-pipe fire suppression systems are available at TA-63-149, TA-63-150, TA-63-151, TA-63-152, TA-63-153, and TA-63-154.

Fire alarm pull stations are available at TA-63-145, TA-63-149, TA-63-150, TA-63-151, TA-63-152, TA-63-153, TA-63-154, TA-63-155, TA-63-156, and TA-63-157.

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

Two fire hydrants are located in TWF. These fire hydrants 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-63-145, TA-63-149, TA-63-150, TA-63-151, TA-63-152, TA-63-153, TA-63-154, TA-63-155, TA-63-156, and TA-63-157. Each spill kit generally includes bags of absorbent and an inventory of tools and supplies.

COMMUNICATION EQUIPMENT

Telephones and the public address system are located inside the Operations Support Building.

Description of General Capabilities:

Telephones for internal and external communication are available for use by any employee. Employees can be notified of an emergency situation and appropriate response action through the public address system.

Fire alarm pull stations are located in the storage buildings, the receiving canopy, and at operations support building.

Description of General Capabilities:

Manually-operated fire alarms may be activated by any employee in the event of a fire to alert TWF site personnel, LANL Emergency Response Personnel, and the LAFD.

Fire and public address system alarms

Description of General Capabilities:

The fire and public address system are activated or used to provide a sound signal to alert personnel of fires or the need to clear the area.

DECONTAMINATION EQUIPMENT

Eyewash/emergency shower stations and SDSs are available in the storage buildings and the Operation Support Building. SDS information is maintained where appropriate for personnel accessibility and are used for chemicals that will be needed to support operations or emergency activities.

Description of General Capabilities:

Eyewashes and emergency showers may be used by personnel who receive a chemical splash to the eyes or body. Specific SDSs should be reviewed prior to working with chemicals.

PERSONAL PROTECTIVE EQUIPMENT

Personnel at TWF are required to use appropriate personal protective equipment (PPE) protect themselves from hazards found under normal conditions. This PPE may include gloves, steel toe shoes, and eye protection, additional PPE may be required during unusual hazardous situations. First aid kits and hearing protection are also available.

Description of General Capabilities:

To prevent undue exposure of personnel to hazardous or mixed waste, personal protective equipment (PPE) appropriate for the waste containers being managed is worn by all on-site personnel at the TWF (see section 2.5.6). First aid kits may be used by personnel who sustain minor injuries at the unit in the course of operations. Hearing protection may be used by operations personnel to mitigate noise impacts.