



Permit
DEPARTMENT OF ENERGY
 National Nuclear Security Administration
 Los Alamos Site Office
 Los Alamos, New Mexico 87544



DEC 06 2006



John Kieling, Manager
 RCRA Permits Management Program
 Hazardous Waste Bureau
 2905 Rodeo Park Drive East, Building 1
 Santa Fe, NM 87505-6303

Subject: Transmittal of Class 1 Permit Modification to the Emergency Equipment Listing in the Contingency Plan of the Los Alamos National Laboratory (LANL) Hazardous Waste Facility Permit

Dear Mr. Kieling:

This letter transmits a Class 1 permit modification to the New Mexico Environment Department Hazardous Waste Bureau (NMED-HWB) for the Department of Energy (DOE) and Los Alamos National Security, LLC (LANS). The permit modification updates the emergency equipment listing in Appendix D-1 within the Attachment D Contingency Plan of the LANL Hazardous Waste Facility Permit. Appendix D-1 has been revised to reflect changes in locations and types of emergency equipment at the permitted hazardous waste storage units at Technical Areas 50 and 54.

This modification has been prepared in accordance with the New Mexico Administrative Code, Title 20, Chapter 4, Part 1 (20.4.1.900 NMAC) (incorporating Code of Federal Regulations [CFR], Title 40 § 270.42(a)(1)), revised October 1, 2003. The attached permit modification package includes a revised Appendix D-1 for insertion into the LANL Hazardous Waste Facility Permit. This revision replaces equipment with functionally equivalent equipment, upgrades equipment, or relocates emergency equipment listed in the permit as described in Appendix I, Section B.6.b of 20.4.1.900 NMAC (incorporating 40 CFR § 270.42). This modification does not change any emergency procedures at or remove equipment from the LANL permitted container storage units.

This modification is necessary to comply with 20.4.1.500 NMAC (incorporating 40 CFR § 264.52(e)) by ensuring that the emergency equipment listing is up to date and accurate. Notification of this modification will be sent to the NMED maintained LANL facility mailing list in accordance with 20.4.1.900 NMAC (incorporating 40 CFR § 270.42(a)(1)(ii)).



DEC 06 2006

Included herein are three hard copies and one electronic copy of this submittal. The submittal includes a version with editing marks as well as a clean version of Appendix D-1. If you have any comments or questions regarding this permit modification, please contact Gene Turner of my staff at (505) 667-5794, or Jack Ellvinger, LANS, at (505) 667-0633.

Sincerely,



Edwin L. Wilmot
Manager

EO: 2GT-026

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Introduction

The following submittal has been prepared to modify the Los Alamos National Laboratory (LANL) Hazardous Waste Facility Permit EPA ID #NM0890010515-1, Attachment D, Contingency Plan. Appendix D-1, located in Attachment D, has been modified to update or relocate emergency equipment that is available at the permitted container storage units at Technical Areas (TAs) 50 and 54. This modification has been prepared in accordance with the New Mexico Administrative Code, Title 20, Chapter 4, Part 1, Subpart IX (20.4.1.900 NMAC) (incorporating Code of Federal Regulations [CFR], Title 40 § 270.42(a)), revised October 1, 2003

Changes to the equipment lists included in this permit modification should replace equipment lists in the most recent versions of the permit renewal applications for the units at TA 50, Building 69; TA-54, Building 38; and TA-54, Area L. These applications include: LANL General Part B Permit Renewal Application, Revision 2.0 (August 2003); LANL TA-50 Part B Permit Renewal Application, Revision 3.0 (August 2002); and LANL TA-54 Part B Permit Renewal Application, Revision 3.0 (June 2003). The equipment list included in this permit modification for TA-54, Area G only covers the areas of the site that are permitted. Equipment at interim status storage areas has not been included.

Generally, the changes made to the emergency equipment listings for each of the sections are as follows:

- The listing of Hazardous Materials (HAZMAT) emergency equipment has been updated to be consistent with the most recent version of the LANL General Part B Permit Renewal Application, and to remove organization names that are no longer valid.
- Emergency equipment listed for the burning ground and the open detonation pads, at TAs 14, 15, 16, 36, & 39 have been deleted because these units are not covered by the LANL Hazardous Waste Facility Permit.
- The emergency equipment listing for the TA-50 Room 117 storage area has been deleted because this unit has been approved for closure by the New Mexico Environment Department (NMED).
- The HSE-7 controlled emergency equipment listing has been deleted because this list and the list for the permitted units at TA-54, Area G were redundant.
- The listed emergency equipment for TA-54, Area L was updated to include structure numbers, general descriptions of capabilities, and describe the most current information for the site.
- Additions to the TA-54, Building 69 emergency equipment listing have been made to describe the capabilities of equipment for consistency with the other unit listings and describe the most current information for the site.
- Changes to the equipment listing at TA-54, Building 38 were made for consistency with the other unit listings and describe the most current information for the site.
- Equipment at TA-54, Area G for 54-226, 54-229, 54-230, 54-231, 54-232, and Pad 10 were modified so the most current information for the site was represented.

- The supplemental emergency equipment listing for the Los Alamos County Fire Department was reformatted to be consistent with the most recent revision of the LANL General Part B Permit Renewal Application.
- The supplemental emergency equipment listed for Johnson Controls World Services Inc. was deleted because Johnson Controls World Services Inc. no longer provides contractor support at LANL. This listing was replaced with supplemental emergency equipment available from the current contractor, KBR-Shaw-LATA.
- The listing for the Occupational Medicine Clinic was revised to be consistent with the most recent LANL General Part B Permit Renewal Application, remove invalid organization names, and update the current location of the clinic.

APPENDIX D-1
Emergency Equipment

APPENDIX D-1 EMERGENCY EQUIPMENT^a

Hazardous Materials (HAZMAT) Vehicles and Associated Emergency Equipment:

~~Hazardous Materials (HAZMAT)~~ vehicles and trailers are located at Technical Area (TA) 64, Building 39 (TA-64-39). They are available to the ~~Environment, Safety, and Health (ESH) Division~~ Hazardous Materials Response Group (~~ESH-10~~) for emergency response to all of the TAs at Los Alamos National Laboratory (LANL). ~~ESH-10-HAZMAT~~ 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:

- ~~a~~ Assorted personal protective equipment, T-shirts, and gloves;
- ~~s~~ Safety goggles, ~~and safety~~ glasses; ~~boots~~ and ~~booties~~; face shields;
- ~~t~~ Totally encapsulating suits and boots;
- Level A and B suits;
- ~~f~~ Flash suits;
- ~~s~~ Self-contained breathing apparatus (SCBA) and SCBA bottles;
- Respirators and cartridges
- ~~h~~ Hazardous chemical reference books and other reference materials;
- ~~s~~ Shovels;
- ~~s~~ Siphon pumps;
- ~~a~~ Assorted spill kits and absorbents;
- Neutralizing solutions: acids, bases, and caustic~~chemical burn and neutralizing solutions~~;
- ~~t~~ Two-way radios, cellular phones, facsimile, and communication equipment;
- ~~b~~ Bottles of leak detector; and leak repair kits;
- ~~e~~ Emergency repair packs;
- HAZMAT bags;
- ~~g~~ Gas detectors and chemical ~~detectors; respirators and cartridges; radiological monitoring~~ equipment;
- Radiological monitoring equipment
- ~~s~~ Sponges and cleaners
- ~~;~~ ~~w~~ Warning signs and barricade tape;
- ~~t~~ Traffic control barriers;
- ~~f~~ Flashlights;
- ~~e~~ Cameras and film;
- ~~k~~ Knives;
- ~~p~~ Portable power supplies;
- ~~w~~ Warning and signal horns;
- ~~h~~ Harnesses and belts;
- ~~portable emergency oxygen; d~~ Decontamination equipment
- ~~;~~ ~~s~~ Sampling equipment;

**APPENDIX D-1
EMERGENCY EQUIPMENT^a
(continued)**

Lifting equipment and vetter bags
aAssorted tools, tape, and other supplies.
Non-sparking tools

**APPENDIX D-1
EMERGENCY EQUIPMENT^a
(continued)**

**Hazardous Materials (HAZMAT) Vehicles and Associated Emergency Equipment
(continued):**

Biological detection equipment

Chemical vacuums

Sandia foam

Plugging and diking equipment

Sample van equipped with a glovebox and analysis equipment

APPENDIX D-1
EMERGENCY EQUIPMENT^a
(continued)

~~EMERGENCY EQUIPMENT AT THE BURNING GROUND AND
THE OPEN DETONATION PADS, TAs 14, 15, 16, 36, AND 39~~

~~Fire Control Equipment~~

- ~~— Fire Extinguisher in each vehicle used to transport HE material~~
- ~~— Fire Extinguisher in each control bunker~~

~~Description of General Capabilities:~~

- ~~— These are portable units of approximately 9 to 15 pounds capacity used in wet-chemical laboratory applications. May be used by any employee in case of fire. Fire extinguishers are never used to put out controlled fires at the burning grounds.~~

~~Communication Equipment~~

- ~~— Telephones~~
- ~~— Two-way radios~~

~~Description of General Capabilities:~~

- ~~— Telephones for internal communication at the Laboratory and off-site communication with federal, state, county, and other agencies are available. A Centrex telephone system and a private telephone line (if Centrex fails) are available for use by all employees.~~
 - ~~— Located in each control bunker, in the control building at the burning ground, and at the waste water treatment facility at the burning ground. Radios allow communication between each vehicle.~~
-

APPENDIX D-1
EMERGENCY EQUIPMENT^a
(continued)

~~EMERGENCY EQUIPMENT AT THE TA-50
ROOM 117 STORAGE AREA~~

Fire Control Equipment

- ~~— 13 fire extinguishers (9C-CO; 4 A-water)~~
- ~~— Description of General Capabilities:~~
 - ~~— These are portable units of approximately 9 to 15 pounds capacity used in wet-chemical laboratory applications. May be used by any employee in the event of fire.~~
 - ~~— Manually operated fire alarm may be activated by any employee in the event of fire to notify Central Alarm Station.~~
 - ~~— The sprinkler system is an automatic system which delivers a maximum of 200 psi of water spray through shower heads placed at locations which maximize fire suppression range capability. In the event of fire, this system should function automatically, requiring no manual assistance.~~
 - ~~— Halon Extinguishing Systems are indicated to supplement automatic sprinkler systems which protect high value equipment, or suppress special hazardous operations or occupancies.~~

Location:

- ~~— 1 Room 117~~

~~11 Fire Alarm Pull Boxes connected to the CAS~~

Location:

- ~~— 1 Mechanical Equipment Room 111~~
 - ~~— 1 High Bay Room 112~~
 - ~~— 2 South of Library and Conference Room~~
 - ~~— 2 High Bay Room 114~~
 - ~~— 1 East of women's changing room~~
 - ~~— 1 Process Engineering Laboratory~~
 - ~~— 1 Office Area Room 202~~
 - ~~— 2 Room 21~~
-

**APPENDIX D-1
EMERGENCY EQUIPMENT^a
(continued)**

- ~~— Automatic thermal alarm on inlet and exhaust of ventilation system~~
- ~~— Automatic thermal sprinkler system throughout offices~~

4 Fire Hydrants

Location:

- ~~— 1 Northeast corner of Building 84~~
- ~~— 1 West of Building 69~~
- ~~— 1 Northeast of Building 37~~

Communication Equipment

- ~~— Telephones throughout building with building wide paging system~~
- ~~— Description of General Capabilities:~~
- ~~— Telephones for internal communication at the Laboratory and off-site communication with federal, state, county and other agencies are available. A Centrex telephone system and a private telephone line (if Centrex fails) are available for use by all employees.~~
- ~~— Radio located in Room 202~~

Spill Control Equipment

- ~~— Absorbent kept onsite~~
 - ~~— PCB room is bermed to handle all liquids stored~~
 - ~~— Have Spill Prevention and Containment Plan~~
 - ~~— Description of General Capabilities~~
 - ~~— Containment is designed to handle all liquids stored. Absorbent is used in the event of a small spill.~~
-

**APPENDIX D-1
EMERGENCY EQUIPMENT^a
(continued)**

Decontamination Equipment

~~— Showers~~

~~— Emergency eye wash~~

~~— Description of General Capabilities~~

~~— Safety showers and eye washes are used by personnel who receive a chemical splash to skin or eyes. Specific material safety data sheets for the chemical should be obtained prior to working with the chemical to determine if the application of water is indicated for decontamination.~~

APPENDIX D-1
EMERGENCY EQUIPMENT^a
(continued)

~~EMERGENCY EQUIPMENT - HSE-7 CONTROLLED~~

~~Spill Control Equipment: Located at TA 54, Area G~~

~~— Heavy equipment available for emergencies may include~~

~~— 2 scrapers~~

~~— 1 bulldozer~~

~~— 1 tractor (front end loader)~~

~~— Shovels~~

~~— Absorbents (vermiculite) in combustibles storage shed~~

~~— Description of General Capabilities:~~

~~— The following pieces of heavy equipment will be used in the event of large spills. Small spills will be absorbed with absorbent.~~

~~Decontamination Equipment~~

~~— Small decontamination pit for heavy equipment~~

~~— Showers (MD-11)~~

~~Other~~

~~— Change room with protective clothing (MD-11)~~

~~— 2-3 dozen respirators (particulates) (MD-11)~~

~~— 2 self-contained, portable air masks (MD-11)~~

~~— 2 emergency generators, portable~~

~~— 3 vehicles are available for evacuation of personnel:~~

~~— 2 sanfu~~

~~— 2 Jeep (with emergency equipment, e.g., coveralls, booties, tape, rope)~~

**APPENDIX D-1
EMERGENCY EQUIPMENT^a
(continued)**

APPENDIX D-1
EMERGENCY EQUIPMENT^a
(continued)

EMERGENCY EQUIPMENT AT TA-54, AREA L

Fire Control Equipment

- ~~2~~ fire hydrants located ~~30 feet south of~~ near the main site entrance to Area L and site at the southeast corner of TA-54-62 inside Area L
- ~~6~~ ~~Class ABC and BC rated~~ fire extinguishers are located ~~inside a trailer at west end of site (B, C)~~ Area L
- ~~1~~ ~~CO fire extinguisher located inside storage shed (B, C)~~ Class D rated fire extinguishers are available at Area L if combustible metals are being managed
- ~~2~~ freeze-proof faucets are located ~~immediately east of shed~~ TA-54-31
- 1 dry-pipe sprinkler system is located at TA-54-215
- 3 Dry chemical fire-suppression systems are located in storage sheds TA-54-68, TA-54-69, and TA-54-70

Description of General Capabilities:

The fire hydrants supply water at an adequate volume and pressure to satisfy the requirements of the New Mexico Administrative Code, Title 20, Chapter 4, Part 1 Subpart V, 264.32, revised October 1, 2003.

~~These are portable units of approximately 9 to 15 pounds capacity used in wet chemical laboratory applications~~ The 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 Los Alamos County Fire Department (LACFD) are alerted when this system has been activated.

Spill Control Equipment

- Shovels
- Oversized drums
- Absorbent ~~inside storage shed~~ (various locations at Area L)
- Heavy equipment from Area G available for any emergencies at Area L
- Bermed storage area
- Spill kits are located throughout Area L

Description of General Capabilities:

~~The following pieces of heavy equipment from Area G will may be used in the event of large spills. Small spills will be absorbed with absorbent.~~

Spill kits may include items such as: bags of absorbent, absorbent pads or socks, caustic neutralizer, acid neutralizer, and an inventory of tools and supplies for clean up of small spills.

APPENDIX D-1
EMERGENCY EQUIPMENT^a
(continued)

EMERGENCY EQUIPMENT AT TA-54, AREA L (continued)

Communications Equipment

- Alpha numeric emergency pagers are given to employees working in the area
- 2-way radios are available to all personnel when in area
- 2-way radios are in all vehicles used for moving hazardous waste
- Telephones located inside TA-54-32, TA-54-55, TA-54-62, and TA-54-1058 trailer
- Fire alarm pull boxes are located at TA-54-215
- Emergency paging system-loud speakers located throughout the site
- Evacuation alarms are located adjacent to the fence line crash gates at Area L, at the northeast end of TA-54-32, the exterior west end of TA-54-215, and at TA-54-62
- Additional equipment includes two-way radios and cellular phones

Description of General Capabilities

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

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

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

The evacuation alarm is a pulsating sound that can be heard throughout Area L.

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

Decontamination Equipment

Emergency shower and eye wash stations are located immediately east of shed TA-54-31, in TA-54-215, next to TA-54-35, west of TA-54-216, and inside TA-54-39

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

Description of General Capabilities:

Safety showers and eye washes are used by personnel who receive a chemical splash to skin or eyes.

Specific material safety data sheets MSDS for the chemical should be obtained prior to working with the chemical to determine if the application of water is indicated for decontamination.

Other Personal Protective Equipment

Personal 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

APPENDIX D-1
EMERGENCY EQUIPMENT^a
(continued)

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: ~~2 self-contained, portable air masks located inside trailer~~ gloves, goggles, safety glasses, coveralls, and face shields.

APPENDIX D-1
EMERGENCY EQUIPMENT^a
(continued)

TA-50

Emergency equipment at TA-50-69, the Waste Characterization, Reduction, and Repackaging Facility (WCRRF):

FIRE CONTROL EQUIPMENT:

Two ~~carbon dioxide~~ fire extinguishers are located in ~~the WCRRF TA-50-69~~.
A fire extinguisher is located ~~within 20 feet of the WCRRF at the TA-50-69~~ Outdoor Container Storage ~~Area Unit (CSAU)~~.

Description of General Capabilities:

~~Fire extinguishers may be used by any qualified employee in the event of a small fire. They are ABC or BC rated. These portable, manually operated units are available for use by technicians and/or firefighters.~~

~~Three~~ fire alarm pull stations are located in ~~the WCRRF TA-50-69~~. ~~Personnel working at the WCRRF Outdoor CSA may use the pull stations in the WCRRF in the event of a fire.~~

A wet-pipe sprinkler system is located in ~~the WCRRF TA-50-69 and in the large glovebox in the WCRRF~~. ~~The sprinkler system is heat activated.~~

~~A fire hydrant is located west of TA-50-69 inside the fenced yard~~

Description of General Capabilities:

~~Personnel working at the TA-50-69 Outdoor CSU may use the pull stations at TA-50-69 in the event of a fire.~~

~~Fire alarms may be activated by any employee in the event of a fire to notify the CASLACFD and security personnel. Upon activation, fire alarm horns and strobes provide audible and visual signals for personnel notification.~~

~~The sprinkler system is heat activated at 100°C (212°F).~~

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

~~A fire hydrant is located approximately 55 feet west of the WCRRF.~~

SPILL CONTROL EQUIPMENT:

Spill control kits are located in ~~the WCRRF TA-50-69~~ and at the ~~WCRRF TA-50-69~~ Outdoor CSUA.

Description of General Capabilities:

~~The spill kits may contain items such as absorbents (e.g. pillows, pads, and pigs) or weighted tarps that can be used in the event of a small spill.~~

**APPENDIX D-1
EMERGENCY EQUIPMENT^a
(continued)**

COMMUNICATION EQUIPMENT:

Telephones with public address (PA) capabilities for internal and external communication are available for use by any employee. The PA system can be heard at the TA-50-69 Outdoor CSU. Personnel working at TA-50-69 will have immediate access to emergency communication equipment either directly or through visual or voice contact with another employee.

COMMUNICATION EQUIPMENT:

- ~~— Three telephones with PA capabilities are located in the WCRRF. The PA system can be heard at the WCRRF Outdoor CSA. Personnel working at the WCRRF Outdoor CSA may use the telephones in the WCRRF. When working at the CSAs, the buddy system will be employed.~~
- ~~— The fire alarm is a pulsing sound.~~
- ~~— The evacuation alarm is a wailing sound that can be heard throughout the WCRRF and at the WCRRF Outdoor CSA.~~
- ~~— Continuous air monitors are connected to a computer system in the vehicle airlock entrance of the WCRRF.~~

**APPENDIX D-1
EMERGENCY EQUIPMENT^a
(continued)**

Emergency equipment at TA-50-69, the Waste Characterization, Reduction, and Repackaging Facility (WCRRF), (~~c~~Continued):

COMMUNICATION EQUIPMENT (continued):

Additional communication equipment may include cellular phones

Description of General Capabilities:

Telephones with PA capabilities for internal and external communication are available for use by any employee. Fire alarms are activated in the event of a fire.

~~Description of General Capabilities:~~

~~Telephones with PA capabilities for internal and external communication are available for use by any employee. Fire and evacuation alarms are activated in the event of a fire or in case an evacuation is required.~~

DECONTAMINATION EQUIPMENT:

A safety shower is located in the main room of ~~the WCRRFTA-50-69~~, and a personnel shower is located adjacent to the change room in ~~the WCRRFTA-50-69~~.

An eyewash station is located in the main room of ~~the WCRRFTA-50-69~~.

A portable eyewash station will be available during active waste management operations at the Outdoor CSU if waste with free liquids is being managed~~The safety shower and eyewash in the WCRRF may be used by personnel working at the WCRRF Outdoor CSA.~~

MSDS are ~~located in the WCRRF~~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 MSDS 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:

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 or at various locations throughout the site~~Protective clothing (Level D with thermoluminescent dosimeters [TLD]) will be worn when working at the WCRRF Outdoor CSA. Inside the WCRRF, workers wear anti-C coveralls, surgical gloves,~~

APPENDIX D-1
EMERGENCY EQUIPMENT^a
(continued)

~~booties, and respirators when unpackaging a waste item, cutting open a waste box, and during large bag out efforts. Workers wear surgeon's gloves, lab coats, booties, and TLDs while working through enclosure gloves. Workers inside the enclosure airlock must wear anti-C coveralls, surgical gloves, booties, TLDs, and respirators. Workers inside the cutting enclosure wear at least two layers of anti-C coveralls, surgical gloves, booties, TLDs, and air-purifying respirators with supplied breathing air. Every visitor wears an anti-C lab coat, a TLD, safety glasses, and booties.~~

OTHER:

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

APPENDIX D-1
EMERGENCY EQUIPMENT^a
(continued)

TA-54 West

Emergency equipment at TA-54-38, the Radioassay and Nondestructive Testing (RANT) Facility:

FIRE CONTROL EQUIPMENT:

~~Five fire extinguishers~~

~~Locations:~~

~~4 Halon ABC rated fire extinguishers are located inside available at TA-54-38; 2 in the high bay, and 2 in the low bay and at the loading dock, adjacent to:~~

~~1 Halon fire extinguisher is located at the Outdoor CSUA.~~

Description of General Capabilities:

~~Fire extinguishers may be used by any qualified employee in the event of a small fire. These portable, manually operated units are available for use by technicians and/or firefighters.~~

~~Four fire alarm pull boxes are located inside TA-54-38 at: 1 in the main entrance, 2 in the high bay near each fire extinguisher, and 1 in the low bay near the exit to the loading dock.~~

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

Description of General Capabilities:

~~Fire alarms may be activated by any employee in the event of a fire to notify the CASLACFD and security personnel. Security personnel and LACFD are alerted when the automatic dry-pipe sprinkler system has been activated.~~

~~The dry pipe sprinkler system is heat activated in the high bay and at the loading dock. It is smoke activated in the low bay.~~

~~One fire hydrant is located approximately 220 feet west of TA-54-38 near the entrance to TA-54 West.~~

~~Three freeze-proof faucets are located on the northwest, southwest, and southeast sides of TA-54-38. A wall hydrant is located on the northwest side of the building.~~

SPILL CONTROL EQUIPMENT:

APPENDIX D-1
EMERGENCY EQUIPMENT^a
(continued)

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

APPENDIX D-1
EMERGENCY EQUIPMENT^a
(continued)

Emergency equipment at TA-54-38, the Radioassay and Nondestructive Testing (RANT) Facility, (~~c~~Continued):

COMMUNICATION EQUIPMENT:

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

~~Three telephones with PA capabilities are located on the first floor of TA-54-38; 1 in the high bay, 1 in the low bay, and 1 outside the main entrance. An emergency paging telephone is also located outside the main entrance.~~

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

~~Additional equipment includes cellular phones.~~

~~The fire alarm is a double slow whoop sound.~~

~~The evacuation alarm is a high pitched wailing sound that can be heard throughout TA-54-38 and TA-54-34.~~

Description of General Capabilities:

~~The evacuation alarm provides an audible alarm that can be heard throughout TA-54-38 and TA-54-34.~~

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

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

~~Telephones in the high bay and low bay have public address with (PA) capabilities for internal and external communication and are available for use by any employee.~~

~~Fire and evacuation alarms are may be activated in the event of a fire or in case an evacuation is required.~~

DECONTAMINATION EQUIPMENT:

~~Two safety showers and two portable eyewash stations are available located at TA-54-38; 1 of each is located in the high bay and 1 of each is located on near the loading dock. The portable eyewash stations will be present during active waste management operations involving free liquids at these locations.~~

~~Material Safety Data Sheets (MSDS) are located at the TA-54-38 muster area (approximately 120 feet northwest of TA-54-38) and in the TA-54-38 main entry area available hard copy or via online database.~~

Description of General Capabilities:

APPENDIX D-1
EMERGENCY EQUIPMENT^a
(continued)

Safety showers and eyewashes are used by personnel who receive a chemical splash to the skin or to the eyes. Specific MSDS 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.

APPENDIX D-1
EMERGENCY EQUIPMENT^a
(continued)

Emergency equipment at TA-54-38, the Radioassay and Nondestructive Testing (RANT) Facility, (continued):

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 or at various locations throughout the site or at adjacent TA-54 facilities. ~~Gloves and steel-toed shoes will be worn when working in the container storage areas. Coveralls may also be worn.~~ Gloves and goggles are available in the spill kit located at TA-54-38. All workers located within the operating limits of a ~~Special~~ crane (fixed or mobile) ~~equipment operators will wear hard hats when moving waste containers in the high bay.~~

APPENDIX D-1
EMERGENCY EQUIPMENT^a
(continued)

TA-54

Emergency equipment at TA-54-226, TA-54-229, TA-54-230, TA-54-231, TA-54-232, and Pad 10:

FIRE CONTROL EQUIPMENT:

~~ABC and/or BC rated f~~Fire extinguishers will be located in TA-54-226, TA-54-229, TA-54-230, TA-54-231, TA-54-232, and ~~within 300 feet of on~~ Pad 10.

Description of General Capabilities:

These portable, manually operated units are available for use by technicians and/or firefighters in the event of a small fire. Security personnel and the LACFD are alerted for larger fires.

~~Fire and heat~~Flame or smoke detection ~~alarm systems equipment~~ and fire alarm pull stations will be located within structures at TA-54-226, TA-54-229, TA-54-230, TA-54-231, and TA-54-232, and at Pad 10.

~~Dry pipe sprinkler systems will be installed in TA 54 226 and TA 54 229.~~

Description of General Capabilities:

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

The sprinkler systems will automatically activate in the event of a fire.

~~Five~~Several fire hydrants ~~will be~~are located in ~~the vicinity of the container storage areas~~ Area G.

Description of General Capabilities:

The fire hydrants will supply water at adequate volume and pressure (i.e., approximately 800 gallons per minute and 90 pounds per square inch) to satisfy the requirements of the New Mexico Administrative Code, Title 20, Chapter 4, Part 1, Subpart V, 264.32, revised ~~November 1, 1995~~October 1, 2003.

SPILL CONTROL EQUIPMENT:

~~A 6 inch asphaltic concrete curb will be installed around the interior floor perimeter of TA 54 226, TA 54 229, TA 54 230, TA 54 231, and TA 54 232 to contain any potential liquids from fire suppression activities. Pads 2 and 4 are surrounded by a 6 inch high, 6 inch wide curb to contain any potential liquids from precipitation. Spill control kits will be located near the main entrance to each structure. TA 54 230 is lined with high density polyethylene and has an emergency secondary containment system.~~Spill control stations and/or portable spill kits

APPENDIX D-1
EMERGENCY EQUIPMENT^a
(continued)

are located at TA-54-226, TA-54-229, TA-54-230, TA-54-231 and TA-54-232. Spill kits may include items such as: bags of absorbent, absorbent pads or socks, and an inventory of tools and supplies.

**APPENDIX D-1
EMERGENCY EQUIPMENT^a
(continued)**

Emergency equipment at TA-54-226, TA-54-229, TA-54-230, TA-54-231, TA-54-232, and Pad 10 (Continued):

COMMUNICATION EQUIPMENT:

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

Emergency paging system- loud speakers located throughout the site.

Additional equipment includes A pole mounted telephone for communication outside of TA-54, Area G, is located at TA-54-226. Public address (PA) capabilities will be located at TA-54-226, TA-54-229, TA-54-230, TA-54-231, TA-54-232, and Pad 10. The PA system may be used locally to notify personnel of an emergency within TA-54, Area G. When handling waste in these container storage areas, personnel are provided with cellular telephones and two-way hand-held radios capable of summoning assistance from the EM&R Office in case of an emergency and the buddy system is employed.

Evacuation alarm buttons are located at or near TA-54-226, TA-54-229, TA-54-230, TA-54-231, TA-54-232, and Pad 10

- ~~— Fires and evacuations are announced via the building paging system.~~
- ~~— The fire alarm is a double slow whoop sound.~~
- ~~— The evacuation alarm is a high pitched wailing sound.~~

Description of General Capabilities:

PA telephones may be used for internal communication and are available for use by any employee. External telephones may be used to notify LANL support agencies outside of Area G and are also available for use by any employee. Fire and evacuation alarms are activated in the event of a fire or in case of an evacuation. When activated, the fire alarm notifies the Central Alarm Station. Telephones and alarms are located throughout Area G. Evacuation alarms have horns mounted on telephone poles throughout Area G. The evacuation alarm is an audible alarm that can be heard throughout Area G. Employees can be notified of an emergency situation and appropriate response actions through the use of a text message sent on the emergency alpha-numeric pagers.

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

DECONTAMINATION EQUIPMENT:

A trailer equipped with a change room and showers will be available onsite during retrieval, characterization, and drum venting operations. A portable eyewash station is available at TA-54-230 during active waste management operations involving free liquids in this location will also be available onsite during these operations.

APPENDIX D-1
EMERGENCY EQUIPMENT^a
(continued)

Material Safety Data Sheets (MSDS) are available ~~at TA-54-2, TA-54-11, TA-54-22; in Storage Domes 48 (TA-54-48), 49 (TA-54-49), and 153 (TA-54-153); and in the Drum Prep Facility (TA-54-33). They will also be available in Storage Domes 224 (TA-54-224) and 283 (TA-54-283) hard copy of via online database.~~

Description of General Capabilities:

Showers and/or eyewashe stations are used by personnel who receive chemical exposure to the skin or to the eyes. Specific MSDS 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.

**APPENDIX D-1
EMERGENCY EQUIPMENT^a
(continued)**

Emergency equipment at TA-54-226, TA-54-229, TA-54-230, TA-54-231, TA-54-232, and Pad 10 (~~c~~Continued):

PERSONAL PROTECTIVE EQUIPMENT:

~~Appropriate personal protective equipment (PPE) (specified in a Health & Safety Plan) 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 or at various locations throughout the site. Gloves and goggles or safety glasses are available in many of the spill kits located throughout the siteretrieval, characterization, and drum venting operations at TA 54-226, and Pad 10. Personnel involved in waste handling at TA 54 229, TA 54 230, TA 54-231, and TA 54 232 will be required to wear protective coveralls and steel toed shoes. Hard hats and gloves will be worn as prescribed in the Health & Safety Plan. Protective clothing and respirators are available in TA-54-157.~~

OTHER:

~~Continuous air monitors, giraffe monitors, or other appropriate air monitoring equipment (as determined by health physics personnel) 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, and front-end loader. Vehicles are also available to evacuate personnel from Area G (all-terrain vehicles, pick-up trucks, flat-bed trucks, micro trucks and vans).~~

**APPENDIX D-1
EMERGENCY EQUIPMENT^a
(continued)**

**Supplemental emergency equipment and personnel available from the
Los Alamos County Fire Department (~~9-911~~LACFD):**

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

~~Fire Engines—1,250 gallons per minute~~

~~—Engines 1, 3, 4, 5, 6, 10, and 40~~

~~Engine 50 (Reserve)—1,000 gallons per minute~~

~~Mini-pumperstankers with compressed air foam capability~~

~~—MT 1, 3, 4, and 5~~

~~Modular ambulances~~

~~—3 First line—M1, M3, M4~~

~~—1 Reserve Unit—M10~~

~~Rescue vehicles~~

~~—1 First Line~~

~~—1 Newly Purchased~~

~~Crash-Fire-Rescue (CFR) units~~

~~—CFR-6~~

~~—CFR-60 (small, fast attack unit)~~

~~Water tankers with compressed air foam capability~~

~~SCBA units~~

~~SCBA air tanks~~

~~Remote air system for confined space rescue—105-foot tower~~

~~—Ladder—with truck with pump—1,500 gallons per minute~~

~~Personnel with 120 hours Hazardous Material First Response Operational Level Training~~

~~Personnel with Basic Emergency Medical Technician training~~

~~Personnel with Advanced Life Support training~~

~~Water tankers~~

~~—T 1 = 1,500 gallons~~

~~—T 3 = 2,500 gallons~~

~~—T 4 = 3,000 gallons~~

~~—T 5 = 2,500 gallons~~

~~—T 50 = 1,500 gallons~~

APPENDIX D-1
EMERGENCY EQUIPMENT^a
(continued)

Supplementary emergency equipment and personnel available from
~~Johnson Controls World Services Inc. (667-6191)~~ KBR-Shaw-LATA (KSL):

Supplemental emergency equipment available from KSL 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:

~~Road grader, Cat, self-propelled blade, with radio~~
~~Graders, John Deere, self-propelled, with radio~~
~~Loaders, bucket, Melroe, Bobcat, 1/3 cubic yards~~
~~— Loader, bucket, Cat, 2-3/4 cubic yards, with radio~~
~~— Loader, Fiat Allis, 3 cubic yards~~
~~— Loader, bucket, Cat, 2-1/2 cubic yards~~
~~— Loader, bucket, Cat, 3-1/4 cubic yards~~
~~— Loader, bucket, Yale, 3 cubic yards, with radio~~
~~— Loader, bucket, backhoe, Case, 1-1/2 cubic yards~~
~~— Loaders, bucket, backhoe, Case, 7/8 cubic yards~~
~~— Loader, backhoe, Ford, 1 cubic yard~~
~~— Loader, bucket, backhoe, JCB, 7/8 cubic yards~~
~~Snowplows and snow blowers, Bombardier, with blade~~
~~— Bulldozer, D-8, Crawler~~
~~Bulldozers, TD-25, International~~
~~Scrapers, Terex, self-propelled~~
~~— Scraper, Fiat Allis, self-propelled~~
~~— Bulldozer, 280, rubber-tired, with radio~~
Semitrailers Semi trailers
Chain saws
~~Street Flushers, street, 3,000-gallon truck, tanker, 500-gallon, FMC~~
Mobile transceivers ~~(2-way, KOB-753)~~
Generators
Handsets (2-way)
Pageboys (1-way)
Welders, ~~mounted on trailers and trucks~~
Mobile site logistics support equipment/associated heavy equipment

APPENDIX D-1
EMERGENCY EQUIPMENT^a
(continued)

- Fully equipped spill response unit
- Utilities equipment and emergency utility support
- Fuel trucks
- Light banks
- Dumps trucks
- Backhoes
- Potable water trucks
- Cranes
- Forklifts

APPENDIX D-1
EMERGENCY EQUIPMENT^a
(continued)

Supplementary emergency equipment and personnel available from
~~Johnson Controls World Services Inc. (667-6191)~~ KBR-Shaw-LATA (KSL), (continued):

TRAINED PERSONNEL:

Heavy equipment operators

~~Clerks~~

~~—Dispatchers~~

Mechanics

Power saw operators

Radio and telephone operators

Truck drivers

Rodent/Pest Control personnel

HAZMAT response/cleanup personnel

Welders

Electricians

OTHER EQUIPMENT:

~~—Portable toilets~~

~~—Light bank set 2/3 kilowatt generator~~

~~—Hand held two way radios~~

~~—6" x 8" landscape timbers~~

~~—15 ton dump truck~~

~~—8 ton dump truck~~

~~—Fuel truck 3,000 gallons (diesel)~~

~~—Service truck (petroleum, oil, lubricant)~~

~~—Combination fuel truck (392 gallons diesel) (392 gallons gasoline)~~

SNOW REMOVAL EQUIPMENT:

~~—Truck mounted snow plows~~

~~—Motor graders w/wing plow attachment~~

~~—Truck mounted sand/salt spreaders~~

~~—Sand/salt spreader/plow~~

~~—Front end loaders~~

~~—Rubber tired bulldozer~~

~~—Farm tractors w/blade attachments~~

~~—Skid steer loaders~~

~~—Rubber tracked bombardiers~~

~~—Hand operated snow blowers~~

~~—Road configured snow blower~~

**APPENDIX D-1
EMERGENCY EQUIPMENT^a
(continued)**

~~Wheel Horses w/blade attachments~~

**APPENDIX D-1
EMERGENCY EQUIPMENT^a
(continued)**

**~~Supplementary emergency equipment and personnel available from
Johnson Controls World Services Inc. (667-6191), (continued):~~**

~~SNOW REMOVAL PERSONNEL:~~

- ~~— Laborers~~
- ~~— Teamsters~~
- ~~— Operators~~
- ~~— Mechanics~~
- ~~— Supervisors~~

~~SPILL RESPONSE EQUIPMENT:~~

- ~~— Spill trailer~~
- ~~— Material storage shed~~
- ~~— Submersible pump~~
- ~~— Acid/caustic pump~~
- ~~— Wet/vacuums~~
- ~~— Vacuum~~

~~SPILL RESPONSE MATERIAL:~~

- ~~— Sorbent sheets~~
- ~~— Zorbball (sacks)~~
- ~~— 55-gallon barrel w/bung~~
- ~~— 55-gallon barrel w/o bung~~
- ~~— 3" x 96" spill booms~~
- ~~— Sand bags~~
- ~~— Gallon ND-165 degreaser~~
- ~~— White mop heads w/handles~~

~~PERSONNEL:~~

- ~~— Teamsters~~
- ~~— Operators~~
- ~~— Laborers~~
- ~~— Supervisors~~

**APPENDIX D-1
EMERGENCY EQUIPMENT^a
(continued)**

~~Supplementary emergency equipment and personnel available from
Johnson Controls World Services Inc. (667-6191), (continued):~~

~~UTILITIES EQUIPMENT:~~

- ~~— Line truck (digger derriek)~~
- ~~— Basket truck~~
- ~~— Backhoe~~
- ~~— Boom truck~~
- ~~— Dump truck~~
- ~~— Sewage trucks~~
- ~~— Potable water truck~~
- ~~— Trailer mounted generator 110-volt~~
- ~~— Truck mounted welders~~
- ~~— Thawing machine~~

~~UTILITIES PERSONNEL:~~

- ~~— Operators~~
- ~~— Pipefitters~~
- ~~— Laborers~~

APPENDIX D-1
EMERGENCY EQUIPMENT^a
(continued)

Emergency equipment and personnel at the ~~Central Medical Facility~~ Occupational Medicine Clinic, Occupational Medicine Group (ESH-2) (667-7251):

At TA-3 (SM-4091411) Central Clinic:

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

PERSONNEL:

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

SPECIAL EQUIPMENT-PORTABLE:

Multi-channel emergency receiver-base station
—Two-way radio on the State Med Net,
———~~the~~The LANL Emergency Management channel, and the —LANL Health-Safety Net
Cardiac monitors and defibrillators
Crash cart emergency equipment with E-tank oxygen (O₂)
Portable physicians' bag with medications
Portable suction unit
Portable stretchers (ambulance, gurney, folding)
Wheelchairs
O₂ tanks
Manual resuscitators
Intravenous (IV) stands
IV solutions
Otoscope/s/ophthalmoscopes
Portable sphygmomanometers
Stethoscopes
Anticontamination apparel
Eye ~~irritation~~ irrigation solution
~~Industrial f~~First-aid kits
Extrication and cervical collars, crutches, canes
Suture sets
Protective apparel

APPENDIX D-1
EMERGENCY EQUIPMENT^a
(continued)

Morgan lens ~~and~~ irrigation sets
Decontamination equipment (portable)

APPENDIX D-1
EMERGENCY EQUIPMENT^a
(continued)

Emergency equipment and personnel at the ~~Central Medical Facility, ESH-2 Occupational Medicine Clinic~~ (667-7251) (continued):

At TA-3 (SM-4091411) Central Clinic (continued):

SUPPLIES-GENERAL:

Bedding/pillows
Rescue blankets
Burn blankets
Thermal/icing pouches
Multi-trauma 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, ~~etc.~~

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 LACFD-Los Alamos County Fire Department trunked radio system.

^a Equipment types and locations are subject to change.

APPENDIX D-1
Emergency Equipment

APPENDIX D-1 EMERGENCY EQUIPMENT^a

Hazardous Materials (HAZMAT) Vehicles and Associated Emergency Equipment:

HAZMAT vehicles and trailers are located at Technical Area (TA) 64, Building 39 (TA-64-39). They are available to the Hazardous Materials Response Group for emergency response to all of the TAs at Los Alamos National Laboratory (LANL). HAZMAT 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
- 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 absorbents
- Neutralizing solutions: acids, bases, and caustics
- Two-way radios, cellular phones, facsimile, and 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

APPENDIX D-1
EMERGENCY EQUIPMENT^a
(continued)

**Hazardous Materials (HAZMAT) Vehicles and Associated Emergency Equipment
(continued):**

Biological detection equipment

Chemical vacuums

Sandia foam

Plugging and diking equipment

Sample van equipped with a glovebox and analysis equipment

**APPENDIX D-1
EMERGENCY EQUIPMENT^a
(continued)**

EMERGENCY EQUIPMENT AT TA-54, AREA L

Fire Control Equipment

- 2 fire hydrants located near the main site entrance to Area L and at the southeast corner of TA-54-62 inside Area L
- 6 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
- 2 freeze-proof faucets are located east of TA-54-31
- 1 dry-pipe sprinkler system is located at TA-54-215
- 3 Dry chemical fire-suppression systems are located in storage sheds TA-54-68, TA-54-69, and TA-54-70

Description of General Capabilities:

The fire hydrants supply water at an adequate volume and pressure to satisfy the requirements of the New Mexico Administrative Code, Title 20, Chapter 4, Part 1 Subpart V, 264.32, revised October 1, 2003.

The 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 Los Alamos County Fire Department (LACFD) are alerted when this system has been activated.

Spill Control Equipment

- Shovels
- Oversized drums
- Absorbent (various locations at Area L)
- Heavy equipment from Area G available for any emergencies at Area L
- Bermed storage area
- Spill kits are located throughout Area L

Description of General Capabilities:

Pieces of heavy equipment from Area G may be used in the event of large spills.

Spill kits may include items such as: bags of absorbent, absorbent pads or socks, caustic neutralizer, acid neutralizer, and an inventory of tools and supplies for clean up of small spills.

**APPENDIX D-1
EMERGENCY EQUIPMENT^a
(continued)**

EMERGENCY EQUIPMENT AT TA-54, AREA L (continued)

Communications Equipment

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

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

Emergency paging system-loud speakers located throughout the site

Evacuation alarms are located adjacent to the fence line crash gates at Area L, at the northeast end of TA-54-32, the exterior west end of TA-54-215, and at TA-54-62

Additional equipment includes two-way radios and cellular phones

Description of General Capabilities

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

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

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

The evacuation alarm is a pulsating sound that can be heard throughout Area L.

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

Decontamination Equipment

Emergency shower and eye wash stations are located immediately east of TA-54-31, in TA-54-215, next to TA-54-35, west of TA-54-216, and inside TA-54-39

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

Description of General Capabilities:

Safety showers and eye washes are used by personnel who receive a chemical splash to skin or eyes.

Specific MSDS for the chemical should be obtained prior to working with the chemical to determine if the application of water is indicated for decontamination.

Personal Protective Equipment

Personal 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.

**APPENDIX D-1
EMERGENCY EQUIPMENT^a
(continued)**

TA-50

Emergency equipment at TA-50-69, the Waste Characterization, Reduction, and Repackaging Facility (WCRRF):

FIRE CONTROL EQUIPMENT:

Two fire extinguishers are located in TA-50-69
A fire extinguisher is located at the TA-50-69 Outdoor Container Storage Unit (CSU)

Description of General Capabilities:

Fire extinguishers may be used by any qualified employee in the event of a small fire. They are ABC or BC rated units.

Three fire alarm pull stations are located in TA-50-69
A wet-pipe sprinkler system is located in TA-50-69
A fire hydrant is located west of TA-50-69 inside the fenced yard

Description of General Capabilities:

Personnel working at the TA-50-69 Outdoor CSU may use the pull stations at TA-50-69 in the event of a fire.

Fire alarms may be activated by any employee in the event of a fire to notify the LACFD and security personnel. Upon activation, fire alarm horns and strobes provide audible and visual signals for personnel notification.

The sprinkler system is heat activated at 100°C (212°F).

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

SPILL CONTROL EQUIPMENT:

Spill control kits are located in TA-50-69 and at the TA-50-69 Outdoor CSU.

Description of General Capabilities:

The spill kits may contain items such as absorbents (e.g. pillows, pads, and pigs) or weighted tarps that can be used in the event of a small spill.

COMMUNICATION EQUIPMENT:

Telephones with public address (PA) capabilities for internal and external communication are available for use by any employee. The PA system can be heard at the TA-50-69 Outdoor CSU. Personnel working at TA-50-69 will have immediate access to emergency communication equipment either directly or through visual or voice contact with another employee.

**APPENDIX D-1
EMERGENCY EQUIPMENT^a
(continued)**

Emergency equipment at TA-50-69, the Waste Characterization, Reduction, and Repackaging Facility (WCRRF), (continued):

COMMUNICATION EQUIPMENT (continued):

Additional communication equipment may include cellular phones

Description of General Capabilities:

Telephones with PA capabilities for internal and external communication are available for use by any employee. Fire alarms are activated in the event of a fire.

DECONTAMINATION EQUIPMENT:

A safety shower is located in the main room of TA-50-69 and a personnel shower is located adjacent to the change room in TA-50-69

An eyewash station is located in the main room of TA-50-69

A portable eyewash station will be available during active waste management operations at the Outdoor CSU if waste with free liquids is being managed

MSDS are available hard copy or via online database

Description of General Capabilities:

Safety showers and eyewashes are used by personnel who receive a chemical splash to the skin or to the eyes. Specific MSDS 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:

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 or at various locations throughout the site.

OTHER:

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

APPENDIX D-1
EMERGENCY EQUIPMENT^a
(continued)

TA-54 West

Emergency equipment at TA-54-38, the Radioassay and Nondestructive Testing (RANT) Facility:

FIRE CONTROL EQUIPMENT:

ABC rated fire extinguishers are available at TA-54-38 in the high bay, the low bay and at the loading dock, adjacent to the Outdoor CSU.

Description of General Capabilities:

Fire extinguishers may be used by any qualified employee in the event of a small fire.

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

A dry-pipe sprinkler system is located throughout TA-54-38, including the loading dock area.

Description of General Capabilities:

Fire alarms may be activated by any employee in the event of a fire to notify the LACFD and security personnel. Security personnel and LACFD are alerted when the automatic dry-pipe sprinkler system has been activated.

The dry pipe sprinkler system is heat activated in the high bay and at the loading dock. It is smoke activated in the low bay.

One fire hydrant is located west of TA-54-38 near the entrance to TA-54 West.

Freeze-proof faucets are located on the west, south, and east sides of TA-54-38. A wall hydrant is located on the west side of the building.

SPILL CONTROL EQUIPMENT:

A mobile response kit is located at TA-54-38. The kit includes items such as: absorbent socks, pillows, and sheets; and plastic bags.

**APPENDIX D-1
EMERGENCY EQUIPMENT^a
(continued)**

Emergency equipment at TA-54-38, the Radioassay and Nondestructive Testing (RANT) Facility, (continued):

COMMUNICATION EQUIPMENT:

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

Telephones are located in TA-54-38 in the high bay, in the low bay, and outside the main entrance. An emergency paging telephone is also located outside the main entrance.

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

Additional equipment includes cellular phones.

Description of General Capabilities:

The evacuation alarm provides an audible alarm that can be heard throughout TA-54-38 and TA-54-34.

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

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

Telephones in the high bay and low bay have public address (PA) capabilities for internal and external communication and are available for use by any employee.

Fire and evacuation alarms may be activated in the event of a fire or in case an evacuation is required.

DECONTAMINATION EQUIPMENT:

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

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

Description of General Capabilities:

Safety showers and eyewashes are used by personnel who receive a chemical splash to the skin or to the eyes. Specific MSDS 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.

**APPENDIX D-1
EMERGENCY EQUIPMENT^a
(continued)**

Emergency equipment at TA-54-38, the Radioassay and Nondestructive Testing (RANT) Facility, (continued):

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 or at various locations throughout the site or at adjacent TA-54 facilities. Gloves and goggles are available in the spill kit located at TA-54-38. All workers located within the operating limits of a crane (fixed or mobile) wear hard hats.

**APPENDIX D-1
EMERGENCY EQUIPMENT^a
(continued)**

TA-54

Emergency equipment at TA-54-226, TA-54-229, TA-54-230, TA-54-231, TA-54-232, and Pad 10:

FIRE CONTROL EQUIPMENT:

ABC and/or BC rated fire extinguishers will be located in TA-54-226, TA-54-229, TA-54-230, TA-54-231, TA-54-232, and on Pad 10.

Description of General Capabilities:

These portable, manually operated units are available for use by technicians and/or firefighters in the event of a small fire. Security personnel and the LACFD are alerted for larger fires.

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

Description of General Capabilities:

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

The sprinkler systems will automatically activate in the event of a fire.

Several fire hydrants are located in Area G.

Description of General Capabilities:

The fire hydrants will supply water at adequate volume and pressure (i.e., approximately 800 gallons per minute and 90 pounds per square inch) to satisfy the requirements of the New Mexico Administrative Code, Title 20, Chapter 4, Part 1, Subpart V, 264.32, revised October 1, 2003.

SPILL CONTROL EQUIPMENT:

Spill control stations and/or portable spill kits are located at TA-54-226, TA-54-229, TA-54-230, TA-54-231 and TA-54-232. Spill kits may include items such as: bags of absorbent, absorbent pads or socks, and an inventory of tools and supplies.

**APPENDIX D-1
EMERGENCY EQUIPMENT^a
(continued)**

Emergency equipment at TA-54-226, TA-54-229, TA-54-230, TA-54-231, TA-54-232, and Pad 10 (continued):

COMMUNICATION EQUIPMENT:

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

Emergency paging system- loud speakers located throughout the site.

Additional equipment includes cellular telephones and two-way radios.

Evacuation alarm buttons are located at or near TA-54-226, TA-54-229, TA-54-230, TA-54-231, TA-54-232, and Pad 10

Description of General Capabilities:

Telephones and alarms are located throughout Area G. Evacuation alarms have horns mounted on telephone poles throughout Area G. The evacuation alarm is an audible alarm that can be heard throughout Area G. Employees can be notified of an emergency situation and appropriate response actions through the use of a text message sent on the emergency alpha-numeric pagers.

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

DECONTAMINATION EQUIPMENT:

A portable eyewash station is available at TA-54-230 during active waste management operations involving free liquids in this location.

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

Description of General Capabilities:

Showers and/or eyewash stations are used by personnel who receive chemical exposure to the skin or to the eyes. Specific MSDS 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.

**APPENDIX D-1
EMERGENCY EQUIPMENT^a
(continued)**

Emergency equipment at TA-54-226, TA-54-229, TA-54-230, TA-54-231, TA-54-232, and Pad 10 (continued):

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 or at various locations throughout the site. Gloves and goggles or safety glasses are available in many of the spill kits located throughout the site.

OTHER:

Continuous air monitors, giraffe monitors, or other appropriate air monitoring equipment (as determined by health physics personnel) 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, and front-end loader. Vehicles are also available to evacuate personnel from Area G (all-terrain vehicles, pick-up trucks, flat-bed trucks, micro trucks and vans).

**APPENDIX D-1
EMERGENCY EQUIPMENT^a
(continued)**

**Supplemental emergency equipment and personnel available from the
Los Alamos County Fire Department (LACFD):**

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

- Fire engines
- Mini-tankers with compressed air foam capability
- Modular ambulances
- Rescue vehicles
- Crash-Fire-Rescue (CFR) units
- Water tankers with compressed air foam capability
- 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

**APPENDIX D-1
EMERGENCY EQUIPMENT^a
(continued)**

**Supplementary emergency equipment and personnel available from
KBR-Shaw-LATA (KSL):**

Supplemental emergency equipment available from KSL 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
Semi trailers
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
Dumps trucks
Backhoes
Potable water trucks
Cranes
Forklifts

APPENDIX D-1
EMERGENCY EQUIPMENT^a
(continued)

**Supplementary emergency equipment and personnel available from
KBR-Shaw-LATA (KSL) (continued):**

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

**APPENDIX D-1
EMERGENCY EQUIPMENT^a
(continued)**

Emergency equipment and personnel at the Occupational Medicine Clinic (667-7251):

At TA-3 (SM-1411) Central Clinic:

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

PERSONNEL:

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

SPECIAL EQUIPMENT-PORTABLE:

Multi-channel emergency receiver-base station
Two-way radio on the State Med Net, The LANL Emergency Management channel and the LANL Health-Safety Net
Cardiac monitors and defibrillators
Crash cart emergency equipment with E-tank oxygen (O₂)
Portable physicians' bag with medications
Portable suction unit
Portable stretchers (ambulance, gurney, folding)
Wheelchairs
O₂ tanks
Manual resuscitators
Intravenous (IV) stands
IV solutions
Otosopes/ophthalmoscopes
Portable sphygmomanometers
Stethoscopes
Anticontamination apparel
Eye irrigation solution
First-aid kits
Extrication and cervical collars, crutches, canes
Suture sets
Protective apparel
Morgan lens irrigation sets
Decontamination equipment (portable)

**APPENDIX D-1
EMERGENCY EQUIPMENT^a
(continued)**

**Emergency equipment and personnel at the Occupational Medicine Clinic (667-7251)
(continued):**

At TA-3 (SM-1411) Central Clinic (continued):

SUPPLIES-GENERAL:

Bedding/pillows
Rescue blankets
Burn blankets
Thermal/icing pouches
Multi-trauma 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.

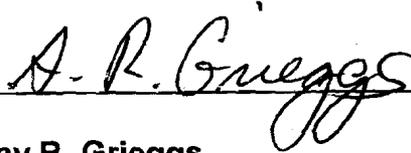
COMMUNICATION:

Base station on State Medical Net and LACFD trunked radio system.

^a Equipment types and locations are subject to change.

INTERNAL CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.



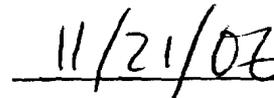
Anthony R. Grieggs
Group Leader
Water Quality and RCRA Group
Environmental Protection Division
Los Alamos National Laboratory



Date Signed



Victoria A. George
Division Director
Environmental Protection Division
Los Alamos National Laboratory



Date Signed

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Kenneth M. Hargis

Kenneth M. Hargis
Division Leader
Waste Services Division
Los Alamos National Laboratory

10/15/06

Date Signed

Andrew K. Phelps

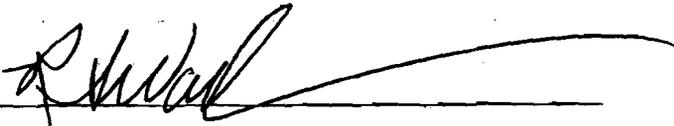
Andrew K. Phelps
Associate Director
Environmental Programs
Los Alamos National Laboratory

16 Nov 06

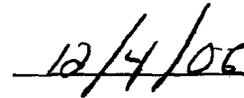
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Richard S. Watkins
Associate Director
Environment, Safety, Health and Quality
Los Alamos National Laboratory
Operator



Date Signed

Edwin L. Wilmot
Manager, Los Alamos Site Office
National Nuclear Security Administration
U.S. Department of Energy
Owner/Operator

Date Signed